The (Im)mediate Animal: Interspecies Entanglements in Early Enlightenment Transactions

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Abstract

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This dissertation excavates, manipulates, and questions the intimate relations between political and epistemic ecologies formalized within modes of performance as interspecies constitutions in England from the seventeenth to the eighteenth century. Many scholars have attempted to turn the narrative of the Cartesian beast-machine hypothesis into *the* standard account of epistemic rupture in transspecies associations during the early modern period. Against such unencumbered intellectual histories, I argue that, because nonhuman animals invite an ineradicable sociality, subtle changes to material and ontological framings occurred within a dialectical structure of socio-political spaces for the development of novel interspecies epistemologies and the momentum of nascent colonial-capitalist ecological exhaustion and its counterpart of domestic agricultural intensification. Distinctly transspecies epistemological contours prevalent in Interregnum opera, Royal Society science(-in-the-making), Restoration theatre, and early modern domesticity (mediated by print and public performance of the self) instantiated unaccustomed sociological valorizations of nonhumans and gained political legibility hand in hoof with a burgeoning modern political economy that reductively revalued and more intensely de-

animalized nonhuman species. Older social structures of being-with-animal-others did not so much dissolve in early English globalism as they did transform into *aporias* or states of exemption, neither completely intelligible in stodgy manorial frameworks or the liquid logic of transatlantic capital flows, but nevertheless highly visible in modes of performance where public and counter-public visions of the social became entangled in the psychosomatic promises of and relations to the animal. What I offer is an embodied history of human-animal relations in seventeenth-century England (primarily) that takes seriously the agential capacities of other-than-humans and the layers of co-constructivity present in any transspecies engagement. Relying solely upon intellectual histories of interspecies contact during the early Enlightenment period often disregards the rich semiotic worlds, interests, and active capabilities of other-than-humans to realign the terms of interaction and shape knowledge production. The methodology of my project is grounded in performance studies and examines the public face of these interactions in various modes – juridical-penal exhibition in Barbados and the English provinces, scientific demonstration of the Royal Society, theatrical and civic production, popular sports, periodical publication – but the project also challenges conceptions of performance as a purely mimetic (and thus uniquely human) operation. Tracing micro interspecies entanglements within a macro-ecology of global transformation in the early modern period, this dissertation reframes processes of historical and epistemic change as multispecies, interagential network transactions and thus disturbs both an anthropocentric enfranchisement of historical executors and the Cartesian reductionism rampant in animal studies, all the while expanding the critical apparatus for performance studies along transspecies, intersubjective vectors.

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Prologue: Problem Defined

"The Specter That Haunts Human-Animal Studies"

The Problem

A specter haunts the field of human-animal studies. This specter wears the vestments of humanism and the mask of Cartesian mechanical philosophy, but these are just its outer replaceable trappings. This specter is the weight of embodied history – its thick muddiness rarified into spectrality by the ecological, ethical, and, one could argue, disciplinary urgency of the present. But meeting the demands of the contemporary moment is rarely aided by losing patience with and flattening the rough topography of the past. My dissertation is a refusal to blanket seventeenth-century interspecies economies with intellectualist accounts of Descartes's animal automatism (*la bête-machine*) and an untextured, thin veneer of humanism, whose current, typical usage tends to collapse and aggregate historical particularities into ideological or rhetorical ballasts. This negative account of my project is not entirely original. In 2013 Erica Fudge made a similar renunciation of weak posthumanist paradigms: "In assuming that humanist philosophical ideas are all that there is in the past, posthumanist thinkers . . . miss out on an alternative history that might offer an important early iteration of their own ideas."[1] The fact that there are alternative histories to those widely circulated is not foreign to most, but as Fudge points out, this fact has remained a neglected stranger to the burgeoning discourse of critical animal studies. The positive contribution of my dissertation is a historiographic corrective for this reduction of past interspecies encounters into a Cartesian/Humanist postlapsarianism.

What I propose is an embodied history (Fudge would call it an alternative history) of human-animal relations in seventeenth-century England (primarily) that takes seriously the

[1] Erica Fudge, "The Animal Face of Early Modern England," *Theory, Culture & Society* 30, no. 7/8 (2013): 177.

agential capacities of other-than-humans and the layers of co-constructivity present in any transspecies engagement. Relying solely upon intellectual histories of interspecies contact during the early Enlightenment period often disregards the rich semiotic worlds, interests, and active capabilities of other-than-humans to realign the terms of interaction and shape knowledge production. The methodology of my project is grounded in performance studies and examines the public face of these interactions in various modes – juridical-penal exhibition, scientific demonstration, theatrical or popular production, periodical publication – but the project aims to challenge conceptions of performance as a purely mimetic (and thus uniquely human) operation. As Michael Taussig defines it, "the mimetic faculty carries out its honest labor suturing nature to artifice and bringing sensuousness to sense . . . granting the copy the character and power of the original, the representation the power of the represented."[2] Mimesis is the repeated capture of the implacable "natural" within the symbolic, or what Stephen Halliwell might call fixing "a likeness" of that which resists fixity.[3] Aristotle's *Poetics* formulates the mimetic as the "imitation of an action" but it is concomitantly a mode of embodied mediation. It is the previous and regulated encounter, the institutional protocol, the ingrained narrative, the generic constraints, or the behavioral repertoire resurfacing in transferable, communicative codes. In most cases the mimetic in cross-species transactions is responsible for turning the non-human other into a medium for human relations. How the animal is and can be mediated shapes the epistemological and relational possibilities between species **and** between human individuals. Degrees and modes of mediation enclose the animal within epistemic boundaries prior to flesh-to-flesh encounters. True, new interactive possibilities can be birthed through new media, but they are always

[2] Michael T. Taussig, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993), xviii.
[3] See Stephen Halliwell, *The Aesthetics of Mimesis: Ancient Texts and Modern Problems* (Princeton: Princeton University Press, 2002).

triangulated between subjects (or object and subject) and medium. In sum, ways of viewing and sensing alter horizons of "being with" others.

According to Nicholas Ridout in *Stage Fright, Animals and Other Theatrical Problems*, the animal onstage is in excess of our mimetic signification while unavoidably signifying as an expense and inconvenience.[4] The animal always carries the potential to break the artificial dramatic framework or the code, simply by looking back.[5] For Ridout and myself, the problem with purely mimetic mediations is that they fail to capture the shared history of humans and animals. Thus, I am nudging performance in considerations of interspecies entanglements toward Vinciane Despret's concept of "attunement" or Donna Haraway's "becoming with," which capture a cross-species, more-than-human co-production of possibilities. Such a state of performance is not the imposition of human constraints or symbology upon "raw nature," but a relational, interactive choreography based on reciprocity and adjustment.[6] For literary turned dance scholar Andrew Hewitt, any social choreography effects two poles between which the "performers" oscillate. The first is the "performative" in which pure relationality triumphs over imposed visions of totality or final arrangements; totality is embodied and created in concert. The second is the "mimetic" model of totality, "in which a representation is sectioned off and made to stand for something else."[7] Totality at the mimetic pole is preceded and reified by prior models, whereas the performative ushers in new social arrangements and political realities. I retain this dialectic of performance in my work because it captures the fluidity and potentiality of

[4] Nicholas Peter Ridout, *Stage Fright, Animals, and Other Theatrical Problems* (Cambridge: Cambridge University Press, 2006), 106.
[5] Ibid., 128.
[6] See Vinciane Despret, "The Becomings of Subjectivity in Animal Worlds," *Subjectivity: International Journal of Critical Psychology* 23 (2008), 123-139.
[7] Andrew Hewitt, *Social Choreography: Ideology as Performance in Dance and Everyday Movement* (Durham, NC: Duke University Press, 2005), 21.

interspecies politics enabled by a move toward the open plurality of the performative and away from the representative closure of the mimetic.[8]

The Argument and Method

During the seventeenth century in England, the transition from notions of divine monarchy to forms of popular sovereignty based upon natural rights was reciprocally related to and formed by new entanglements with non-human species. In the movement from theological mandates of monarchy toward a shared (if equally fictional) sovereignty of the people,[9] new universal, natural foundations were sought and formulated, often through direct and indirect encounters with non-humans and foreign ecologies.[10] Swirling around these encounters were debates of what constituted humanity, the natural, and the essence of law and right; all of which transplanted "natural beasts" from comfortable Biblical-mimetic or Greco-Roman natural

[8] Stefka Mihaylova has suggested unpacking the notion of "transaction" in my title and linking it to current thoughts on 'Trans' as a frame for theorizing inter and intra-agential action. Claire Colebrook provides a fruitful definition in her essay "What Is It Like to Be a Human?" stating that "'in the beginning is *trans*': that what is original or primary is a not-yet differentiated singularity from which distinct genders, race, species, sexes, and sexualities are generated in a form of relative stability. Rather than the animal or the transindividual being a special test case that might provide the normal and normative with a basis for a renewed sense of its own difference, we should think the contrary: any dialogue between human and animal is preceded, conditioned, and haunted by a condition of transitivity." Colebrook's critical apparatus is further extended by C. Riley Snorton who, in matters of race and transgenderism, imposes "exchange as a critical frame for understanding transitivity's multiple meanings." Claire Colebrook, "What Is It Like to Be a Human?" *TSQ: Transgender Studies Quarterly* 2, no. 2 (2015): 228; and C. Riley Snorton, *Black on Both Sides: A Racial History of Trans Identity* (Minneapolis: University of Minnesota Press, 2017), 6.

[9] Edmund Morgan tracks the rise of popular sovereignty as the replacement of one fiction, "divine monarchy," with another, "the people." Stuart endorsements of divine status, which held the king to an impossible model of behavior, were displaced in the first half of the seventeenth-century by Parliament's invocation of the people and popular will. The people, however, was empty nomenclature that propped up an older and unevenly distributed form of representative assembly once beholden to the king, but now elevated in authority above his individual will. No longer was there any identifiable material being possessing sovereign status, but an immaterial abstract deployed by biased MPs from select shires. "With the fictional people suddenly supreme, actual people, as embodied in local communities found their traditional rights and liberties in jeopardy from a representative body that recognized only a fictional superior." See Edmund S. Morgan, *Inventing the People: The Rise of Popular Sovereignty in England and America* (New York: Norton, 1988), 53.

[10] Anna Tsing has commented upon the paradoxical nature of universality, that "It can only be charged and enacted in the sticky materiality of practical encounters." Any aspiration toward universal claims means inserting particular interests and genealogies. In order to participate in or redirect global flows of capital and knowledge one is always obligated to contend with existing universals, and altering those universals means filtering them through a set of embodied, "sticky" practices. See Anna Lowenhaupt Tsing, *Friction: An Ethnography of Global Connection* (Princeton: Princeton University Press, 2005), 1.

historical codes and hierarchies into novel epistemological paradigms and empirical engagements.[11] For manifold apologies of political, social, or economic boundary formations, animals became the ground of absolute difference or, as was more often the case, a biological similitude resting alongside new formulations and markers of difference. The result was a convergence of species *continuity* (the material and functional equivalence identified across species) and physical *proximity* (the retention of previous domestic-animal and human encounters) made possible by new ways of seeing, knowing, and working with animal life. In sum, the general pattern of human-animal assemblages moved with the political from (1.) a subsistence-based financial economy and a social limited by sovereign oversight or set status to (2.) a proto-capitalist intensification/surplus interwoven with a social consisting of private political agents who could claim exemption and contractual obligation for (and contingency upon) chosen members of specific species.[12] This temporal scheme accords with Habermas's identification of the seventeenth-century development of a "rationalized lifeworld," or "spheres of social interaction [which] are removed from guidance by unquestioned tradition."[13] While I choose not to grapple with the degree of consensus or rationality present in such spheres (as many others have, often by misrepresenting Habermas's claims), I do think it beneficial to

[11] Though I disagree with her termination point, I echo Laurie Shannon's highly detailed illustration of the fifteenth and sixteenth-century schema of human-animal relations as dominated by Genesis narratives and the classical natural history of Pliny (which informed most bestiaries). In Shannon's opinion these two resources crafted what she calls "the creaturely dispensation" of mutual membership (along the Great Chain) prior to Cartesian dualist reductionism. See Laurie Shannon, *The Accommodated Animal: Cosmopolity in Shakespearean Locales* (Chicago: University of Chicago Press, 2013), 2.

[12] Although my study focuses much more on the imbrication of politics and global capitalism in human animal relations, anyone writing about paradigm shifts of "the natural" in this period is indebted to Keith Thomas's *Man and the Natural World* (first published in 1983), which pulls together evidence from historical, literary, and visual sources to argue that between "1500 and 1800 there occurred a whole cluster of changes in the way in which men and women, at all social levels, perceived and classified the natural world around them." Paying attention to nomenclature and classification of animals as boundary markers, Thomas's text is original in its attempt at an illustration of early modern epistemic changes to Biblical/Theistic foundationalism. Keith Thomas, *Man and the Natural World*: *Changing Attitudes in England, 1500-1800* (New York: Oxford University Press, 1996), 15.

[13] Stephen K. White, "Reason, Modernity, and Democracy" in *The Cambridge Companion to Habermas*, ed. Stephen K. White (Cambridge: Cambridge University Press, 1995), 8.

reassert that these public spheres are supported by **and** exist in tension with subsystems regulated through or coordinated by money and administrative power. Within such a frame there is always the potential for *invasion by* and *resistance to* the dominant financial and juridical structures. It is my estimation that these publics and counter-publics were populated and made possible by the communication, interaction, and co-production of numerous species. They were in fact hybrid, enmeshed spaces of interspecies entanglements oscillating between understanding and exploitation, but nevertheless multiplying as global capital expanded and administrative capacities developed away from the singular sovereign toward complex bureaucratic systems.[14]

The current study is about the intimate relations between political and epistemic ecologies formalized as interspecies constitutions in England from the seventeenth to the eighteenth century. Many scholars have attempted to turn the narrative of the Cartesian beast-machine hypothesis into *the* standard account of epistemic rupture in transspecies associations during the seventeenth century. Against such drily myopic and unencumbered intellectual histories, I argue that, because nonhuman animals invite an ineradicable sociality, subtle changes to material and ontological framings occurred within a dialectical structure of socio-political spaces for the development of novel interspecies epistemologies and the momentum of nascent colonial-capitalist ecological exhaustion and its counterpart of domestic agricultural

[14] Thomas King claims that by the eighteenth century a "new alliance of aristocrats, educated and leisured landowners, mercantilists, and professionals consolidated hegemony by displacing the demonized publicity of aristocratic bodies onto a male body figured as outside privacy: the theatrical, effeminate, and finally queer male body . . . As the other against which this emergent, privatized political nation defined itself . . . the eighteenth-century liberal public sphere consolidated itself through its representations of the gendered pleasures (or "feeling") of private men and women." Prior to the end of the seventeenth and the beginning of the eighteenth century, the public performance of power was judged by the proximity of one (a male) to the monarch (King calls this "pederastic sociality"). Gender was, before the instantiation of the private individual, based on a dominant submissive model of male hierarchy. Additionally, Peter Earle identifies the end of the seventeenth-century as the period that established the "middling sort" characterized by "accumulation" of capital and "improvement" of the self through labor and home. See Thomas A. King, *The Gendering of Men, 1600-1750: The English Phallus* (Madison, WI: University of Wisconsin Press, 2004), 6; and Peter Earle, *The Making of the English Middle Class: Business, Society and Family Life in London, 1660–1730* (Berkeley and Los Angeles: University of California Press, 1989), 5.

intensification. Distinctly transspecies epistemological contours of Interregnum opera, modern domesticity, science(-in-the-making), and Restoration theatre instantiated unaccustomed sociological valorizations of nonhumans and gained political legibility hand in hoof with a burgeoning modern political economy that reductively revalued and more intensely de-animalized nonhuman species. Older social structures of being-with-animal-others did not so much dissolve in early English globalism as they did transform into *aporias* or states of exemption, neither completely intelligible in stodgy manorial frameworks or the liquid logic of transatlantic capital flows, but nevertheless highly visible in modes of performance where public and counter-public visions of the social became entangled in the psychosomatic promises of and relations to the animal.

To prove this thesis, it is necessary to track human-animal relations in both their material and semiotic substrates, which are always co-implicated. The animal, as Nicole Shukin in her book *Animal Capital: Rendering Life in Biopolitical Times* has asserted, exists in a double valence as "material and metaphorical currency," allowing discourses to vacillate between the two senses.[15] For the seventeenth century I outline the dialectic between these two (not-so-distant) poles of flesh-and-blood animals and figuration: between (1) post-feudal transspecies intimacy and (2a) alterations in the materiality and production of animal life within a liquid logic of waste (the intensification of livestock agriculture through the enclosure of common land and the establishment of settler colonialism in the Americas) harmonious with (2b) the necessity of abstraction of the animal into a cognizable sign in the pursuit of mobilizing knowledge claims. The term I have deployed for such a move of abstraction is *dis-substantiation*, defined as a process in which the substance's *potentia* and agency as material is sublimated into a cultural

[15] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis: University of Minnesota Press, 2009), 5.

sign or new contractual arrangement between members of an organization. As a new site of production, the natural body became a tool in fashioning novel social arrangements and then, as often was the case, was transformed into waste. Materials once used to claim space and allegiance (i.e. the King's Body, the church building, the artifact) were divested of a certain potency in the course of the seventeenth century and then transformed into social contracts, maps, signed documents, *Philosophical Transactions* of the Royal Society, or periodical news confirmed by its production of readership. In short, recalcitrant materials were stabilized as immaterial signs. The mobility and reproducibility of the abstracted sign manifested the "truth" of a group's social reality or validity claims. Between these two poles lay the encounter with the individual animal, and animals can be the most recalcitrant of materials. The intermediate zone of contact (one necessary for empirical justifications) was rife with the potential for rupture, that is, for the animal's performative immediacy to explode physical and mimetic enclosures.

The frame of this performance study, then, is a historical political ecology that is off-kilter from typical anthropocentric iterations. If the aim of the field is to politicize the global economics of social and material production on and within shared environments (e.g. the impact of capitalist development, conservationism, and the production of new ecosystems, habitats, and species), this dissertation does not reject that objective (or its topics), but disturbs the uni-directionality that pervades its ecological politics.[16] By injecting phenomenological speculation and ethology into the scaffolding of political ecology, I am following anthropologists such as Tim Ingold and Ana Cristina Ramírez Barreto who rummage within a frame of *interagentivity* that "crucially looks upon human beings not as a singular creative development *locus* but as the continuously unfolding within the field of interactions among diverse agents – not all of them

[16] For an elaboration on the structuralist aims of new approaches to political ecology, see Richard Peet, Paul Robbins, and Michael J. Watts, eds., *Global Political Ecology* (New York: Routledge, 2011), 24.

human."[17] As Leo Cabranes-Grant states, "Once we realize that hybridity is not an exception, but the constitutive tissue of life, we are able to ask why we spend so much work hiding it under generic nouns like societies, nations, races, and genders."[18] It is more suitable, then, to examine sociality and social performance as emergent across porous bodies and within a series of network actions functioning as "translational engines that are constantly in motion and passing from one form to another."[19] To situate performance within a network that explores the ways in which humans and other animals disparately cognize and form their respective worlds **and** communicate across those dwellings in the production of sociality is to re-envisage performance (in general) in a non-mimetic register. Performance defined as an optically oriented theatricalization of relations or as public spectacle is insufficient when stretching that embodied presence across diverse sensational and affective economies. Performance in this sense is a convergence of worlds but perhaps without complementarity or rational dramaturgy.[20]

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[17] Ana Cristina Ramírez Barreto, "Ontology and Anthropology of Interanimality: Merleau-Ponty from Tim Ingold's Perspective," *Revista de Antropología Iberoamericana* 5, no. 1 (2010): 89.

[18] Leo Cabranes-Grant, *From Scenarios to Networks: Performing the Intercultural in Colonial Mexico* (Evanston: Northwestern University Press, 2016), 5.

[19] Ibid., 25.

[20] To a moderate extent I explore species phenomenology through cognitive ethology, but this dissertation, due to financial, geographical, and social constraints, is primarily archival. Both Louisa Mackenzie and María Elena García caution me about the deficit between my aspirations to, in the words of Jean-Christophe Bailly, get to "the animal side" and the actual history I have written. Although I believe this document puts forth intense flashes of capturing Bailly's interspecies discursive experience in which "there is no supremacy, neither of humans nor of beasts, that there are only passages, fleeting sovereignties, occasions, escapes, encounters," I fail to consummately explore the ethological terrain of the various species I discuss, which would mean following particular animals through their own history while collaborating with specialists in the fields of animal behavior and cognition. My history is instead about the co-constructed and reticulate nature of changes to epistemology and political ecologies in primarily seventeenth-century England. Contained in the following pages are certainly moments and episodes of legitimate animal histories that Éric Baratay stresses require an "abandon[ment of] the cultural constructed Western notion of animals as passive beings and see[ing] them instead as feeling, responding, adapting, and suffering. In other words, we need to start with the hypothesis that animals are not only actors that influence humans, but that they are also individuals with their own specific set of characteristics; they are even people with their own behaviors; in short, they are subjects." Overall, however, due to the previously mentioned limitations, this work does not qualify as a completely respectful history of animal subjects. Jean-Christophe Bailly, *The Animal Side*, trans. Catherine Porter (New York: Fordham University Press, 2011), 2; and Éric Baratay, "Building an *Animal* History," trans. Stephanie Posthumus, in *French Thinking about Animals*, ed. Louisa Mackenzie and Stephanie Posthumus (East Lansing, MI: Michigan State University Press, 2015), 4.

Additionally, this dissertation is a response to two recent animal-focused studies in the field of English literature. Tobias Menely's *The Animal Claim: Sensibility and the Creaturely Voice* (2015) is a deft configuration of the poetics of sensibility and their influence upon humanitarian advocacy and animal rights legislation in late-eighteenth and early-nineteenth-century Britain, culminating in Martin's Act (1822) against domestic animal abuse. Conceiving of rights as "a communicative transaction, a claim that begins before the law and yet is only realized in the law," Menely locates the desire for creaturely communication in the sympathetic and affective capacities of late Georgian poetry and Enlightenment philosophy.[21] Rather than an era of rigid contractualism he sees literary language loaded with transspecies "communicative reciprocity," which reinforces a desire for more compassionate encounters actualized through legislation.

Laurie Shannon's *The Accommodated Animal: Cosmopolity in Shakespearean Locales* (2013) also tackles legal discourse and its intersections with poetic treatments of animal life. Shannon places the "political, a constitutionalist sense of legitimated capacities, authorities, and rights that set animals within the scope of justice and the span of political imagination," in opposition to a Cartesian mechanism that supplants it.[22] She does not conceive of the arrangement of humans and other creatures as equitable, but does hear a strong avowal of animal interests in writings from Montaigne to Descartes. For Shannon, that avowal instantiates the presence of an interspecies cosmopolity that eventually succumbs to the overwhelming assault of dualist philosophy.

[21] Tobias Menely, *The Animal Claim Sensibility and the Creaturely Voice* (Chicago: University of Chicago Press, 2015), 13.
[22] Shannon, *The Accommodated Animal*, 3.

These books amass a wealth of primary material and are cogent in their arguments, but I am looking for the embodied practices of that literature, the disciplinary and performative operations of commerce, natural history, governance, and pet-keeping as bases for theorizing natural rights and novel conceptions of sovereignty. There is also the tendency, especially in Shannon's work, to mobilize Descartes as the demarcation of an epoch and to characterize that which preceded his philosophy as a prelapsarian condition, a division that in my view is unsupportable. The next two centuries following Descartes were characterized by the slow depletion of metaphysical justifications for man's dominion over animals and, with the collapse of confessional unity (or in some cases religiosity), the proliferation of bitter controversies over realizations of mutual materiality.

Time Period

My project begins with the alteration (and intensification) of geographical and economic mandates made visible in wider discourse and social transactions in the first half of the seventeenth century. According to Gary B. Nash, 1612 marked a transition in Anglo-Indian relations for the Virginia Company, moving from a paradigm of trade toward one of settler colonialism. After 1619 "the availability of land became a critical question for the first time in the colony's existence."[23] The encroachment of English plantations further into indigenous hunting and foraging grounds led to a bloody retaliation in 1622, forever altering the former relatively amicable relations. Rather than retreading Nash's work in the Americas (Virginia itself only minutely factors into my study), I am going on an excursus back along the network of early capitalist liquid logic from which the Virginian and other colonial encounters spawn. I do not

[23] Gary B. Nash, "The Image of the Indian in the Southern Colonial Mind," *The Wild Man Within: An Image in Western Thought from the Renaissance to Romanticism*, ed. Edward J. Dudley (London: University of Pittsburgh Press, 1972), 69.

interpret it as merely coincidental that at this same time (1620) the term "domestic" was first applied to animals to both nominate them as tame (not wild) and associate them with the *domus* or household. According to the *OED*, previous uses of "domestic" were reserved for "the position of the [human] inmate of the house" or someone of the household.[24] Richard Bulliet states that the new usage was "rooted in the idea of animals and humans living together" but also implied "tameness [as] a species characteristic" brought about by interaction and cohabitation with humans.[25] Not only did the household economy become inseparable from thinking about species difference, it circulated in parlance to establish a racialized difference of human-animal relations: the hunter-gather nomadism of Virginian tribes did not resemble a domestic arrangement in English settler consciousness and thus disqualified the natives from valid property claims. Given the subsequent development of linkages between property, commerce, and aggressive governmentality in England and her colonies, the political implications of the mutual occurrence of these two terms is not adventitious. They are integral to the overall discourse and economy of "improvement" prevalent in England during the seventeenth century. Arguably, the verbal formulation of this political economy, at least in the guise of political science, found its most complete expression in Locke's labor theory of property at the end of the seventeenth century. Therefore, my analysis terminates in the early decades of the eighteenth century, when Locke's social contractarian discourse both reified into household affective-economic forms sufficient to challenge paternal power (now interpreted as parental power) and had been extended by some radicals (e.g. Thomas Tryon) to animals in an interspecies political

[24] "Domestic, adj. and n.", *OED Online*, June 2016, Oxford University Press, http://www.oed.com.offcampus.lib.washington.edu/view/Entry/56663?redirectedFrom=domestic#eid, (accessed July 23, 2016).
[25] Richard W. Bulliet, *Hunters, Herders and Hamburgers: The Past and Future of Human-Animal Relationships* (New York: Columbia University Press, 2005), 44.

frame, though many, through the mechanisms of the theatre, popular literature, iconography, and the periodical, had incorporated exempted species representatives into more companionate domestic arrangements. Modes of sentimentality and living with animals became common features used to regulate the proper performance of private political subjects under ascendant Whig policies that favored wealth produced through industry over wealth inherent in land. This dissertation project thus spans approximately 100 years of transforming socio-political dynamics between humans and animals.

The Theoretical Apparatus

The theoretical inflections detailed below are either explicitly employed in this study or at least inform my prejudicial reading of events. They undergird or surface in this work to forfend the asphyxiating effects of factual, narrative, and subjective closure. The modes of communication I am seeking are, in many instances, non-verbal; they start where language fails, or precede it, or stroll hand-in-hand with it. Moving beyond the ocular to capture multispecies interactions in their full sensory and cross-cultural entanglements is really "messy" business, but such a move is necessary to glean the legal and disciplinary conceptions of "the natural" that arose from the situated practices of natural history and animal experimentation at the end of the seventeenth century.

ANT and Posthumanism

Actor-Network Theory (ANT) is best worked out in Latour's *Reassembling the Social* where he avers that the "theory" is first and foremost a method of "how" to go about collecting and redistributing the interaction of *actants* (agents) in the extensive plural. With the term *actants* Latour is referring to entities and things that retain a capacity to do, to perform, to contribute, and to assist in causation. This would include animals, plants, flat-screens, dopamine,

etc. ANT is interested in the network, the indefinite associations that make agency possible (e.g. I enjoy my private property I call *my* car because it persists in a vast network of petroleum extraction, wars, taxes for highway construction, strips of asphalt, atmospheric absorption of emissions and levels of governmental toleration, etc). ANT is a commitment to militate against a former models of discursive foreclosure, especially in the identification of what counts as a subject or where an object's borders lie. What Latour wants to avoid are universalizing claims like established facts (for which he substitutes the more open "matters of concern"), frames, the academic hubris of a bounded "I", or the social as a given background structure (a hidden force akin to Adam Smith's invisible hand of the free market).

Cary Wolfe in *What is Posthumanism?* thankfully answers his own titular question: **Poshumanism** "opposes the fantasies of disembodiment and autonomy inherited from humanism itself."[26] In this framework the human is decentered, untethered from its moorings in individual subjectivity and corporeal wholeness. Posthumanism is not really post in the manner of only coming after humanism; it pre-dates humanism, stands alongside it in many indigenous ontologies, and is now coming after it within dominant epistemologies.[27] In Wolfe's opinion it is

[26] Cary Wolfe, *What is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010), xv.

[27] Louisa Mackenzie warns that by thickening the archive on interspecies transactions in England during the seventeenth century, I might be flattening other archival repositories, specifically non-English Renaissance posthumanist writings (and their attendant secondary sources), and historical through present-day ecological interpretations of the period under surveillance. Mackenzie, by asking "What can early modern French literature do for ecocriticism?", cautions ecocrtical scholars about the pro forma implementation of contemporary theoretical frames that neglect to first examine the unique slants on ecology present in early modern French thought and how a re-evaluation of those angles could alter the shape and persistent questions of the current community of ecocriticism heavily indebted to studies in English history and literature. Kenneth Gouwens, in Campana and Maisano's edited collection *Renaissance Posthumanism*, makes a similar point about historical and regional negligence in current posthumanist thought when he argues that critical animal studies scholar Cary Wolfe sets up humanism as a foil, because, in actuality, "Renaissance thinkers, despite their near-universal acceptance of there being a clear boundary between humans and animals, at times explored the theoretical possibility of that boundary being permeable – a move that was in fact integral to their revival of ancient thought, not a rejection of that heritage." Both Mackenzie and Gouwens remind readers that period writings have much to say about the early modern era's thoughts about nature, animals, and their entanglement with humanity – thoughts that go against current, contrary assumptions or reveal them to be patently false. Pauline Goul and Phillip John Usher, eds., *Early Modern Écologies: Beyond English Ecocriticism* (Amsterdam: Amsterdam University Press, 2020), 11; and Kenneth Gouwens, "What Posthumanism Isn't: On Humanism and Human Exceptionalism in the Renaissance," in *Renaissance Posthumanism*,

not problematic that the Enlightenment was rational, "but that it was not rational enough." Truly rational thought would see the world not as configured by, for, and solely in relation to the human, but as an endless number of temporarily stable interlocking systems in constant flux.[28]

Biosemiotics and Affect Theory

The Estonian Jakob von Uexküll is best known for his biophilosophical concept of the *umwelt*, the perceptual environment of particular species and how individual organisms (phenomenologically) negotiate that environment. Based on initial studies of various species' (ticks, jellyfish, sea urchins, etc.) sensory organs and communicative pathways, Uexküll expanded his zoological investigations into a general theory of biosemiotics, or sign-systems of organisms rooted in non-linguistic messaging circuits and stimuli. **Biosemiotics**, like any thorough semiotic system, borrows from phenomenology and takes into consideration a subject

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eds. Joseph Campana and Scott Maisano (New York: Fordham University Press, 2016), 40. See also Bruce Boehrer, *Animal Characters and Nonhuman Beings in Early Modern Literature* (Philadelphia: University of Pennsylvania Press, 2010); Bruce Boehrer, *Environmental Degradation in Jacobean Drama* (Cambridge: Cambridge University Press, 2013); Todd A. Borlik, *Ecocriticism and Early Modern English Literature: Green Pastures* (New York: Routledge, 2011); Todd A Borlik, ed., *Literature and Nature in the English Renaissance: An Ecocritical Anthology* (Cambridge: Cambridge University Press, 2019); Lynne Bruckner and Dan Brayton, eds., *Ecocritical Shakespeare* (London and New York: Routledge, 2011); Jeffrey Jerome Cohen, ed., *Prismatic Ecology: Ecotheory Beyond Green* (Minneapolis: University of Minnesota Press, 2013); Gabriel Egan, *Green Shakespeare: From Ecopolitics to Ecocriticism* (New York: Routledge, 2006); Jean E. Feerick and Vin Nardizzi, eds., *The Indistinct Human in Renaissance Literature* (New York: Palgrave Macmillan, 2012); Ken Hiltner, *Milton and Ecology* (Cambridge: Cambridge University Press, 2003); Ken Hiltner, ed., *Renaissance Ecology: Imagining Eden in Milton's England* (Pittsburgh: Duquesne University Press, 2008); Ken Hiltner, *What Else is Pastoral? Renaissance Literature and the Environment* (Ithaca: Cornell University Press, 2011); Louisa Mackenzie, "It's a Queer Thing: Early Modern French Ecocriticism," *FLS* 39 (2012): 15-42; Louisa Mackenzie, *The Poetry of Place: Lyric, Landscape, and Ideology in Renaissance France* (Toronto: University of Toronto Press, 2011); Steve Mentz, *At the Bottom of Shakespeare's Ocean* (London and New York: Bloomsbury, 2009); Steve Mentz *Shipwreck Modernity: Ecologies of Globalization, 1550–1719* (Minneapolis: University of Minnesota Press, 2015); Vin Nardizzi, *Wooden Os: Shakespeare's Theatres and England's Trees* (Toronto: University of Toronto Press, 2013); Vin Nardizzi and Tiffany Jo Werth, eds., P*remodern Ecologies in the Modern Literary Imagination* (Toronto: University of Toronto Press, 2019); Keith Pluymers, *No Wood, No Kingdom: Political Ecology in the English Atlantic* (Philadelphia: University of Pennsylvania Press, 2021); Jeffrey S. Theis, *Writing the Forest in Early Modern England: A Sylvan Pastoral Nation* (Pittsburgh: Duquesne University Press, 2009); Robert N. Watson, *Back to Nature: The Green and the Real in the Late Renaissance* (Philadelphia: University of Pennsylvania Press, 2006); Thomas Hallock, Ivo Kamps, and Karen L. Raber, eds., *Early Modern Ecostudies: From the Florentine Codex to Shakespeare* (New York: Palgrave Macmillan, 2008).

[28] See Manuel Delanda, *A Thousand Years of Nonlinear History* (New York: Zone Books, 1997); and *Assemblage Theory* (Edinburgh: Edinburgh University Press, 2016).

situated in a world of meaning bounded by perceptual limitations. One of Uexküll's best known examples, and the one to which Agamben is drawn, is the tick's *umwelt* composed of three primary "perception marks": body temperature, the "odor" of butyric acid, and the tactile sensation of mammalian hair. Uexküll's theories have influenced many twentieth-century philosophers, including Ernst Cassirer, Martin Heidegger, Maurice Merleau-Ponty, and Giorgio Agamben, all of whose work is based in or indebted to phenomenological analyses.

Affect Theory is a hydra-headed (and overworked) monster, but I have found two theorists particularly useful for critical animal studies and discussions of animal agency. 1. Teresa Brennan in the *Transmission of Affect* has noted the ability of pheromonal and extra-ocular communication to transmit and produce affect, "a physiological shift accompanying a judgment."[29] Judgments are not just the result of higher cognitive processes but occur at the level of chemical sharing. Such a movement across membranes and interstitial spaces is invasive and automatically involves the affective judgment of one with the corporeality of the self and other. Affect is thus a communicative pattern of direct material contact – the chemical residue of the other rests within one's own para-linguistic judgments. 2. Drawing on Gregory Bateson, Brian Massumi in *What Animals Teach Us about Politics* discusses the ability of animals to live out abstraction and improvisatory intuition corporeally through the mode of play. His unique twist on Bateson's theory is to posit two simultaneous poles of affect, vitality affect and categorical affect, between which animals oscillate in modes of play. The oscillation between the two allows for, in the words of Raymond Ruyer, an *aesthetic yield* or the surplus value of life – gestures that are in excess of instrumentality but from which primary significations can be drawn. The activity of improvisatory play is non-mimetic in the sense that there is no model to be replicated or

[29] Teresa Brennan, *Transmission of Affect* (Ithaca: Cornell University Press, 2004), 5.

directions to be executed; only the signification of the play event generated through the interaction of its participants.[30]

Rancière and Dissensus

Jacques Rancière calls the distribution of the sensible "the system of self-evident facts of sense perception that simultaneously discloses the existence of something in common and the delimitations that define the respective parts and positions within it."[31] Thus, an aesthetic event (such as any performance) suggests "forms of community," modes, and discursive practices that construct that community. Not just the content that is received but also the manner of reception identifies and constructs the network of relations, and therefore participates in the formation of political arrangements. The shared experience of a participatory aesthetic event also holds the promise of pleasurable *affect* on a grand scale, which creates a consensual community of participants in constant dialogue with the shapers of the event, but never objecting to the event itself or straying outside of the rules of proper "aesthetic participation." *Dissensus*, contrarily, opens up a gap in the existent communal awareness, "invents new forms of collective enunciation; it re-frames the given by inventing new ways of making sense of the sensible, new configurations between the visible and the invisible, and between the audible and the inaudible, new distributions of space and time – in short, new bodily capacities."[32] The animal given as (im)mediate is that which dissents from prior mediation and may in turn clear the path for new media, new epistemologies, new bodily abilities, and new relations to corporeality.

[30] See Brian Massumi, *What Animals Teach Us About Politics* (Durham, NC: Duke University Press, 2014).
[31] Jacques Rancière, *The Politics of Aesthetics: The Distribution of the Sensible* (New York: Continuum, 2004), 12.
[32] Jacques Rancière, *Dissensus: On Politics and Aesthetics* (New York: Continuum, 2010), 139.

The Cases / Chapters

The dissertation is divided into two parts. **Part I** surveys the global transitions in interpersonal and interpspecies relations that culminated in or coincided with the mid-seventeenth-century revolutionary ruptures in England. In **Chapter One** I follow the seventeenth-century circular logic of waste: from uncultivated land considered waste in the English imaginary to agricultural/monocultural intensification resulting in soil depletion, species extinction, and ecosystemic disruption. The chapter weaves politico-utopian narratives, specifically Harrington's *The Commonwealth of Oceana,* with the practices of external and internal colonial expansion based upon livestock concentration and symbols of enclosure with a focus on the island of Barbados and the English countryside.[33] Amid this backdrop are set three cases that highlight how practices of ecological improvement and early capitalist acceleration informed usages and conceptions of bodies: the participation of animals in the punishment of criminals at the Halifax Gibbet in Yorkshire, the regicide of Charles I, and the beheading of a slave in Barbados. Nonhuman animals were specifically and frequently called upon to demarcate the epistemic and physical perimeters (and parameters) of association, whether that association be social, political, or geographic in nature. When examined closely with an eye sensitive to the crosshatched lived experiences of human and nonhuman animate life, the history of seventeenth-century interspecies relations becomes pockmarked with micro-counter-utopian spaces – no-places of transspecies associations (sometimes violent, sometimes affable) that were neither

[33] Both Patricia Seed and Virginia DeJohn Anderson have explored how the English in particular relied on visible markers such as hedges, fences, agriculture, livestock and buildings to indicate possession of land. This idea of setting up a dwelling was essential for property claims in English law, since it was integral to the overarching concept of improvement. As the seventeenth century progressed, the process of domestication was extended to representing the possession of once feral creatures. See Patricia Seed, *Ceremonies of Possession in Europe's Conquest of the New World, 1492-1640* (Cambridge: Cambridge University Press, 1995); and Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford and New York: Oxford University Press, 2004).

intelligible in traditional, manorial frameworks or concordant with the foreshadowed logic of capitalist industrialization.

Chapter Two foregrounds the urge toward a non-Biblical universal political sanction for English colonialism in William Davenant's *The Cruelty of the Spaniards in Peru* (1658). Contained within the masque is an anti-Spanish alliance struck between baboons, apes, and the English, and one resting upon formal recognitions of English sovereignty based in natural law. The anachronistic encounter between European nations in *Cruelty's* imaginary Peru has been explored for its Hobbesian influence and its valorization of Cromwell's designs on Spanish territory in the Caribbean (aiming for Hispaniola but settling for the easier conquest of Jamaica in 1656), but the interspecies compacts have been disregarded.[34] The question "Why the baboon or ape?" still lingers. Thus, this chapter reads Davenant's opera and its production against (1) Cromwellian expansionist agendas buttressed by theological and providential justifications, (2) John Bulwer's texts *Chirologia* and *Chironomia*, which sought to establish and elaborate a universal language of gesture largely influenced by human-animal communications, (3) the public fascination with primates in Europe (while those in Jamaica and Barbados were killed with impunity), and (4) the Interregnum multiplicity of clashing political models that molded or drew on human-animal accords and animal representations. Groups like the Ranters, Adamites, Brownists, and Levellers (among others) enacted imaginary cosmopolities and assaulted Cromwell's figure as a transgressor of universal mandates, specifically by casting him as a tyrannical predator threatening naturalized harmony. In this chapter I seek to uncover why,

[34]See Kristen Block, *Ordinary Lives in the Early Caribbean: Religion, Colonial Competition, and the Politics of Profit* (Athens, GA: University of Georgia Press, 2012), 109-118; Janet Clare, "The Production and Reception of Davenant's *Cruelty of the Spaniards in Peru*," *The Modern Language Review* 89, no. 4 (1994): 832-841; Elizabeth Maddock Dillon, *New World Drama: The Performative Commons in the Atlantic World, 1649-1849* (Durham, NC: Duke University Press, 2014), 31-59; Dale B.J. Randall, *Winter Fruit: English Drama, 1642-1660* (Lexington, KY: University Press of Kentucky, 1995); and Susan Wiseman, *Drama and Politics in the English Civil War* (Cambridge: Cambridge University Press, 1999).

within this sweltering fracas of aggressively contradictory socio-political models, Davenant proposed a paradigm of affiliative colonialist aesthetics that relied on attunement (in various degrees of embodiment) across species divides.

Part II contains four linked chapters that illuminate some entanglements around the culturally disconcerting activities of the Royal Society (founded 1662), which redundantly and performatively transmuted *material nature* into actionable but equivocal political contracts authorizing its own institutional legitimacy. A tattered warp and weft of interwoven anxieties surrounded debates over the limits of human sensation, the origins of political sovereignty, and the epistemic potential of non-human materiality, and these debates were more often than not enacted through the littered, fuzzy, and conjoined territories of theatre and experimental philosophy. **Chapter Three** initiates from the correlation between William Davenant's *A Proposition for the Advancement of Moralitie* (1653) and Abraham Cowley's *The Advancement of Experimental Philosophy* (1661) to assert that, in a mutually reinforcing way, Davenant's operatic sensorium and Cowley's experimental philosophical college transgressed the bounds of raw anthropocentric sensation and crafted both knowledge production and the reduction of civil discord as an instrumental intercession into the workings of *naturalia*. In comprehending the Royal Society emphasis on the palliative of praxis, it is necessary to understand the multiplicity of sometimes chafing political virtual politics proliferating during the unsettled years of the Interregnum. In them we detect, along the lines of Davenant's and Cowley's propositions, political implications for diagraming social convalescence though the conjoint action of humans and sensibly objectified nature, and how the coexistence of these various manifestos concurrently hobbled and enabled interspecies contracts for social action. In short, **Chapter Three** is an analysis of the virtual and phenomenological politics cross-pollinating the

manifestos of pre-Restoration theatre and science, and how these politics would eventually shape institutional bodies around sensible objects. **Chapters Four and Five** dissect the performative protocols and scientific institutional management of human and non-human life in the Royal Society and its network associations with outlying experimental communities, all of which materially benefitted from overseas trade and colonization of the Americas explored in previous chapters.[35] It is my working assumption that experimental procedures, repositories, and modes of exhibition for living and dead matter were shaped by specific organizational relations to sovereign power, and that a trial-and-error manufacture of experimental domains and repositories molded epistemologies and the possibility of interspecies communicative acts. Modes of institutional conduct, assent formation, public performance, and spatio-discursive ways of obtaining, displaying, and being with non-human material life altered (if subtly) epistemological parameters and the actualization of extra-human agency. In **Chapter Six** I map out anxieties surrounding the encroachment of non-human materiality on anthropic domains by reading the ontological queasiness prevalent in Thomas Shadwell's satirical play *The Virtuoso* (1676) and then tracking nodes of contention with the developments of a proto-liberalized public sphere and national resistance to arbitrary government associated with the events of 1688-89. Standing alongside David Zaret I cite experimental philosophy's role in the creation of anti-dogmatic public knowledge/reason and law anchored to natural religion, but my concern is with brambled implications of its more-than-human necessity.[36] I believe wading into the interpenetrating socio-performative domains of Restoration theatre and Royal Society can lay bare and clarify the

[35] When expanding to a book, I would like to embed in this section a comparative analysis of the Royal Society and Academie des Sciences. As the unit stands now, that explicit contrast is not present. This is not to assert that absolute differences in experimental method and philosophy resulted in each locale. They did not. But modes of institutional conduct, assent formation, and spatio-discursive ways of obtaining, displaying, and being with non-human material life altered (if subtly) epistemological parameters and the actualization of extra-human agency.
[36] See David Zaret, "Religion, Science, and Printing in the Public Spheres in Seventeenth-Century England," *Habermas and the Public Sphere*, ed. Craig Calhoun (Cambridge, MA: MIT Press, 1992), 212-235.

political potency of non-human life as a supple yet strained band in the social connective tissue between performance and experimental philosophy.

The Epilogue follows questions about performativity, science, and transspecies accords lingering from previous chapters by sorting through the representation and circulation of animal mediators in the early eighteenth-century conduct of masculinity, sentimentality, and domesticity. Around 1700, with the rise in popularity of the periodical, the exhibitory publicness of raw and saturated experimental science began to conflict with the blossoming sentimentalism of the domestic-private political subject. Anita Guerrini contends that popular demonstrations of vivisections and anatomical dissections began to decline about this time eventuating in their move behind sealed disciplinary doors.[37] My argument is that material and symbolic constructions of human-animal relations had resulted in the impetus to declare a state of domestic and intimate exemption for certain privileged species by the beginning of the eighteenth century. This declaration finds an affinity with the work of scholars such as Susan Dwyer Amussen, Lawrence Stone, Peter Earle, Thomas King, and Kathryn Shevelow who argue that after the Glorious Revolution the proper performance of political subjectivity became increasingly associated with "middling" domesticity and sexual complementarity rather than proximity to the sovereign head of state. By cross-reading John Locke's *Two Treatises of Government* with early periodicals (*Athenian Mercury, Tatler, Spectator*) and an array of post-Restoration iconography and early Georgian dramas (e.g. Shadwell's *A True Widow*, Steele's *The Tender Husband*, Fielding's *The Modern Husband*) I chart the growing anxieties around affective human-animal bonds commensurate with proper political subjectivity.[38]

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[37] Anita Guerrini, "Natural History, Natural Philosophy, and Animals, 1600-1800," in *A Cultural History of Animals in the Age of the Enlightenment* (Oxford and New York: Berg, 2007), 135.

[38] A good example of a transspecies application of social contract theory is Thomas Tryon's *The Knowledge of a Man's Self* (1702-1704). In this document he proclaims that "all Sensible Beings" should "fully enjoy all the Rights

Representations of gentry households in theatre and print became the touchstone for testing the normative conduct of gentility and enfranchised personhood, and in many cases newly deemed "pets" served to mediate the sexed performance of domesticity. This domestic human-pet assemblage transformed expectations and interactive capacities of being with animals into a form of polite knowledge that exhorted new modes of decorum as challenges to traditionally "gentlemanly" methods of manufacturing knowledge with and across animal bodies. The Epilogue, then, situates interspecies constitutions on a novel, forward-looking point on the performative-mimetic axis in which a public humanness was defined in large part by modes transspecies sociality caught somewhere between post-feudal relationality and capitalist intensification, but in no way synonymous with the specter of Cartesian reductionism.

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and Priveleges [sic] granted them by the Grand Creator." The rhetoric does not encapsulate a hierarchical Great Chain of Being but rather a proto-liberal emphasis on inalienable individual rights and liberties shared by all sentient creatures. See Thomas Tryon, *The knowledge of a man's self the surest guide to the true worship of God, and good government of the mind and body. In Opposition to Tradition, Custom and Bigottry, the Governors of the Present, and all Preceding Generations. Or, the second part of the way to long life, health and happiness* (London, 1703).

Part I: Global Political Ecology and Interspecies Aesthetics

Chapter One

"The Triangulation of Liquid Logic and Interspecies Intimacy in Seventeenth-Century English Globalism"

"Parodos"

Strophe

As it spilled onto the agglomerated stones of the market dais, the blood of John and Abraham Wilkinson and Anthony Mitchell marked a place. Or, more accurately, their involuntary offering on that spring day in 1650 outlined the impending absence of a place – a hole in a chain of contiguous and permanent placements that constituted a medieval political ecology. The executioners releasing the heavy iron blade were two colts: one black, the other gray; both equally offended. What prompted this equine on hominid violence was the transgression of place, or again more accurately, the disruption of an intractable relationality. Before the reader's imagination runs away, let me state plainly that this was not a case of transspecies abuse or zoophilia. The Wilkinson brothers and Mitchell had been found guilty of theft in the liberty of Halifax, Yorkshire. As early as the time of King Edward I (if not earlier), the Lord of the Manor of Wakefield had taken it as his sacred right and duty to oversee the beheading of any perpetrator found guilty of stealing more than thirteen pence one half-penny's worth of property within the liberty and its environs. Accused by Samuel Colbeck of filching sixteen yards of russet-colored Kersey cloth, and accused by Paul Johnson of absconding with his two colts (one black, the other gray), the malefactors had stolen goods valuing approximately £5, 17s, a sum well over the 13 and a half pence requirement for the death penalty. Conforming to both historical precedent and written law, the criminals were felled on the first bustling market day in the expected spectacular fashion, but the ancient volume of warning and promise

contained in the execution dropped along with their heads. The death of the unfortunate triptych marked the final exhibition and performance of the Halifax guillotine. After more than three hundred years of customary enactment, parliament succeeded in neutralizing the comparatively harsh gibbet law through legal proceedings culminating in the Tenures Abolition Act of 1660. The names of the men and the residue of biography that clings to names are, for the purposes of this rumination, not the anecdote's most salient aspects. It is the structuration of blood, human, and beast (that triptych) that holds the present work and its historical claims in place.

Antistrophe

On the morning of January 30, 1649, while Charles I of England was busy consulting with Thomas Herbert, his groom of the stool, in a locked chamber at St. James's Palace, the leaders of the Parliamentary Commission for his trial and execution were on a desperate search for a proper and willing candidate to wield the fatal axe.[1] Hugh Ross Williamson reports that thirty-eight sergeants who formed the ranks of Hugh's, Hacker's, and Fairfax's Republican armies were gathered "and then offered 100 pounds and the promise of rapid preferment in the army to any two sergeants who would come forward as volunteers for the post of headsman and headsman's assistant. All the sergeants refused, though not with the same emphasis." [2] Grudgingly accepting this unanimous refusal, the Commissioners then approached and threatened Richard Brandon, the common hangman, to assume the distasteful role. Though fearful for his safety, "Brandon . . . refused absolutely to do what was asked of him."[3] (Some scholars contend inconclusively that Brandon's refusal was only a public ruse to cloak a deed that was undertaken anonymously.) The identities of the two masked men who ultimately agreed

[1] The following paragraph is taken from my master's thesis, Scott Venters, "Beeston's Boys and Negotiations of Sovereignty in Late Caroline Drama," (master's thesis, Oklahoma State University, 2012), 1-2.
[2] Hugh Ross Williamson, *The Day They Killed the King* (New York: Macmillan, 1957), 80.
[3] Ibid., 81.

to sever the sovereign's head from his body are still shrouded in conjectural mystery, although many theories that implicate Richard Brandon, William Hulet, and George Joyce, among others, have been submitted. The actual name of the headsman, however, is not of primary importance here. Of more significance are the instances of denial both to enact and publicly claim responsibility for regicide. These reveal that on the eve of the kingdom's dissolution, Charles's corporeal being was still received by many as a reification of state power, as the natural, immovable head of state and locus of an indefinable sacrosanct authority, despite his being found guilty of treason.[4]

Epode

Around the same time Parliament was executing Charles I, another head was being removed from its body in order to reinforce a social arrangement based on forced labor. Richard Ligon's *True and Exact History of the Island of Barbadoes*, first published in 1657 and then again in 1673, relates the natural history of the island, its settlement by the English, and his personal encounters as a sugar planter between 1647 and 1650. Touching upon the religion of the "Negro" servants on the plantations, Ligon recalls that their belief in "Resurrection" as a return to their homeland had instituted "an ordinary practice, upon any great fright, or threatening of their Masters, to hang themselves." Seeing the loss of their property, this practice caused so much anxiety amongst the planters that one

> Colonel Walrond having lost three or four of his best Negroes this way, and in a very little time, caused one of their heads to be cut off, and set upon a pole a dozen foot high; and having done that caused all his Negroes to come forth, and march around about this head, and bid them look on it, whether this were not the head of such an one that hang'd himself. Which they acknowledging, he then told them, That they were in a main errour, in thinking they went into their own Countreys, after they were dead; for, this mans head was here, as they all were witnesses of, and how was it possible, the body could go without a head. Being

[4] Venters, "Beeston's Boys," 1-2.

> convinc'd by this sad, yet lively spectacle, they changed their opinions; and after that, no more hanged themselves.[5]

If the reader can move past the grotesque vision and racist justifications for violence, one is struck by the legal terminology in which the "spectacle" and its coercive force is couched. It is an ineluctable paradox that the body of the slave is objectified as property and evidence, while those slaves who culturally identify with the remains are treated as subjects – a jury of peers within English law (which *by law* they were not). The formal procedures of the march, acknowledging the head's identity, and bearing witness to the event culminate in a unanimous judgment that the empirical evidence provided by the master proves the validity of his legal standing on their own cultural beliefs in resurrection. Of course, what the "Negroes" actually thought of the "sad, yet lively spectacle" can never be ascertained completely in this existing record, but it is astounding that Walrond's performance and Ligon's own textual negotiation of the event are bedecked with juridical ornamentation. An aspect of the negotiation Ligon fails to acknowledge is the actual materiality of the slave body as valuable substance for the community; that the corpse of the slave from the Gold Coast of Africa is used similarly to any corpse of most cultures: to claim space and solidify communities by establishing a sense of place through burial. As Joseph Roach observes in *Cities of the Dead*, "One of the important elements that gave meaning to a particular place – that made it a particular place – was the gregarious presence of the dead."[6] Even though just one page earlier Ligon recounts that on Sundays slaves enact "Musick playes" on their own provisional grounds, and that "When any of them dye, they dig a grave, and at evening they bury him, clapping and wringing their hands, and making a doleful sound with their voices," he neglects to reflect back upon this practice and the slaves' desires for

[5] Richard Ligon, *A True & Exact History of the Island of Barbadoes* (London, 1673), 51.
[6] Joseph Roach, *Cities of the Dead: Circum-Atlantic Performance* (New York: Columbia University Press, 1996), 50.

their own remains as a part of their community.[7] The funerary practice is an altogether different type of bearing witness to cultural and geographical property from the legalistic jargon that lades Walrond's display and affirmation of the body's metaphysical failure sans head.

"Episode: Expositio"

To comprehend the phenomenological conflicts and stakes in these three violent examples (the felling of the thieves, the execution of a king, the beheading of a slave) and to grasp how they are intimately connected, I do not think noting the similar use of legal mandates to quash meta-legal (i.e., metaphysical) belief or citing the disparate conceptions of presence and materialities is sufficient. Absences and promises of temporal fulfillment must be accounted for to understand how the performative violence erupts from a rough spatializing of divergent senses of being-in-time with others. By embodying divergent epistemo-ontological structures in discourses of legal immanence, what Ligon's history, the brief survey of Charles' execution, and the gibbetting of the Halifax thieves neglect to consciously acknowledge is the incommensurability of spatio-temporal dimensionalities between clashing parties. Enveloping the event in Barbados is the discordant texture of clashing ontological positions that the colonials try to smooth over with corporal violence and material evidence. Overlaying the regicide of Charles I is an irreconcilable dispute over the potency and indeterminacy of royal materiality that his public beheading attempts to quell. And substantiating the horse-driven human executions in Halifax is a sense of place in which proximal quadrupeds factor into certifiable communal negotiations and enactments of justice. On one level, the public decapitations are clashes over immediate rights to physical personhood and political positionality, but on another, they are

[7] Ligon, *True & Exact History*, 50.

epistemic conflicts that reach across the expanse of spatio-temporal imaginaries – in sum, struggles for control over utopian and customary paradigms of community and their enactments.

Since Habermas's landmark essay in political philosophy, *The Structural Transformation of the Public Sphere*, the coffeehouse has become one such utopian paradigm metonymic for the public sphere and the formation of bourgeois epistemologies. A host of works indebted or responding to the demographic and delimitations of Habermas's spherical zone have appeared, typically challenging the sphere's notion of inclusivity or offering counterpublic models, but all the while leaving intact the geometric conceptual horizon of the ovoid container. Instead, I would insist that the "public sphere" that arose in seventeenth-century England was a roving node resigning in a network of private, political, and public zones contingent on the redefinition and performative use of material and bodily excess, funneled through a liquid logic. By excess, I mean not only a surplus of material goods circulating in the market, but those excesses and wastes both attached to and produced by the body necessary for generating those goods and the new modes of socialization supported by them. Before the public sphere could manifest, the location of sovereignty had to shift mid-century, and this was accomplished by the redefinition of certain "natural" materialities within the body politic in order to constitute a new form of socio-political association. In essence, epistemologies for apprehending nature and the "body natural" underwent a change indebted to an English Protestant emphasis taken to its Puritanical conclusions of the 1640s and 50s, which resulted in a new assemblage – the Commonwealth (and its aftermath). The actual materials used to claim space (i.e. the King's Body, the church building, the artifact) were divested of a certain potency during a process of adjudication in which materials were ultimately discarded to become social contracts, signed documents, philosophical transactions of the Royal Society, or periodical news confirmed by its

production of readership. Space was no longer rigidly demarcated by materials and decrees emanating from God and King on down, but by the mobile association of men and the production of their signs as text.

Here, it is useful to incorporate the central idea of Michel Serres' book *Malfeasance: Appropriation through Pollution?* Serres historically traces the use of hard pollution, "urine, sperm, blood, corpses . . . to mark the extension of appropriated space – nest, farm, city, country" into a soft pollution of "signs, writing, advertising, money" to appropriate even wider expanses of space.[8] To gain a certain reach and credibility for delimiting space, the corpse must be sublimated to the icon on the dollar or the name in writing. But for any political association the corpse and the originary violence associated with it always lingers in the background behind the soft signs of appropriation. Eugene Thacker characterizes this situation when he asserts that "The body politic is constituted on its dissolution, the shaping of a collective, living body that always exists in relation to the corpse (nekros)."[9] In this chapter, I hope to make those corpses and the hard ecological pollution derived from them more visible. In these three interconnected "performances" at Whitehall, the Barbadian plantation, and Halifax, sovereignty proved slippery and shifted along a network of public, private and political zones. All of these hyperbolic demonstrative events were performative in an Austinian sense in that once accomplished in front of an assembly of 'constituents,' they constituted a new reality. The material of the body went through a process of what I am calling *dis-substantiation*, wherein the substance's *potentia* and agency as material was sublimated into a cultural sign or new contractual arrangement between

[8] Michel Serres, *Malfeasance: Appropriation through Pollution* (Stanford: Stanford University Press, 2011), 35.
[9] Eugene Thacker, "Necrologies; or, the Death of the Body Politic*," Beyond Biopolitics: Essays on the Governance of Life and Death* (Durham, NC: Duke University Press, 2011), 151. See also Achille Mbembe, *Necropolitics* (Durham, NC: Duke University Press, 2019); and Francisco Ferrandiz and Antonius C. G. M. Robben, eds., *Necropolitics: Mass Graves and Exhumations in an Age of Human Rights* (Philadelphia: University of Pennsylvania Press, 2015).

members of an organization. As a new site of production, the natural body became a tool in fashioning a new arrangement and then was, oftentimes, transformed into supplementary, biopolitical waste.

I would like to dwell for a chapter-length moment on the epistemological-material entanglements undergirded by interspecies relationality present in the example of the Halifax gibbet and its relation to Whitehall (core) and Barbados (periphery). The situation is exemplary of an obstinate structure that wends itself through the seismic upheavals of the mid to late seventeenth century. Nonhuman animals were specifically and frequently called upon to demarcate the epistemic and physical perimeters (and parameters) of association, whether that association be social, political, or geographic in nature. Animals were not just "good to think," as is often quoted from Levi-Strauss remarking on Radcliffe-Brown's thesis; they were not solely "a perceptible reality permit[ting] the embodiment of ideas and relations conceived by speculative thought," but were social figures in and of themselves whose presence or absence in some perceivable, sensible way defined a particular mode of humanness.[10] As Peter Hulme relates, a lack of domesticated animals was one factor that prompted Christopher Columbus to evacuate the Guanahani of "cultural resistence" and remark that "they should be good and intelligent servants."[11] The conspicuous element of the horse at the Halifax seat of justice and punishment throws into relief the cognitive and material conditions of interpersonal affiliation

[10] Claude Levi-Strauss, *Totemism*, trans. Rodney Needham (Boston: Beacon Press, 1963), 89.
[11] Peter Hulme, "Tales of Distinction: European Ethnography and the Caribbean," in *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters between Europeans and Other Peoples in the Early Modern Era*, ed. Stuart B. Schwartz (Cambridge: Cambridge University Press, 1994), 165; Christopher Columbus, *The Diario of Christopher Columbus' First Voyage to America: 1492-1493*, eds. Oliver Dunn and James E. Kelley (Norman, OK: University of Oklahoma Press, 1989), 69. The link between an absence of domestication and conquest is also discussed in Eric Wolf, *Sons of the Shaking Earth* (Chicago: University of Chicago Press, 1959), 197; Charles H. Parker, *Global Interactions in the Early Modern Age, 1400-1800* (Cambridge: Cambridge University Press, 2010), 158; and David A. Nibert, *Animal Oppression and Human Violence: Domesecration, Capitalism, and Global Conflict* (New York: Columbia University Press, 2013), 43-69.

founded upon a transspecies sociable excess. The horses did not factor into conditions of physical necessity – the colts were not required to exert punitive force – but their material presence was integral to maintaining a certain epistemic consistency and communal validity. By their very nature of being sociable creatures within a market village sociality, the colts held a cognitive and communal identarian purchase on the transformation of material relations – freemen to malefactors, living bodies into dead ones, human circulatory blood into nourishment for the soil. I am not trying to flatten an unavoidable species hierarchy into Edenic postures here, but I do think that a transspecies sociability conforming to seventeenth-century constraints impacted the bounds of epistemic-material relations and social imaginaries – that social place was and is persistently bound to a stubborn interspecies structuration spanning psychosomatic (cognitive and material) categories of being in the world with others. Erica Fudge might summarize this structural influence as "the shared embodiedness of humans and animals . . . the lived – dance – relations between the species."[12] This older structuration, however adaptable, was insistent in the determination of new domains of socio-political validity that would arise over the course of the seventeenth and early eighteenth century. Domains like science-in-the-making, expansionist state opera, Restoration theatre, affective domesticity, virtual politics, and colonial utopian imaginaries were indebted to, in one form or another, the agential crosscurrents of transspecies sociability. "Man," was not just conforming to his role of political animal, but also making a politics of animals while animals defined the politics of human association. When examined closely with an eye sensitive to the crosshatched lived experiences of human and nonhuman animals, the history of seventeenth-century interspecies relations becomes pockmarked with micro-counter-utopian spaces – no-places of transspecies associations

[12] Erica Fudge, "The Animal Face of Early Modern England," *Theory, Culture & Society* 30, no. 7/8 (2013): 183.

(sometimes violent, sometimes affable) that were neither intelligible in traditional, manorial frameworks or concordant with the foreshadowed logic of capitalist industrialization.

"Episode (core): Regicide"

To speak of these differential zones of association as micro-counter-utopian is to designate them as a dialectical process – simultaneously constrained by utopian outlooks but also socio-somatically resistant to narrative and economic foreclosure. David Harvey, in *Spaces of Hope*, says of the *classic* utopian narratives, those such as More's *Utopia* and Bacon's *New Atlantis*, that the ability of their respective communities to achieve a perfected spatial form entails the repression of the "dialectic of social process," that is, the social as it unfolds in time toward an end point. Thomas More, to expurgate the baleful forces of money, private property, and capital accumulation, reaches back to a mythological golden age and freezes the image; while Francis Bacon tightly regulates the intellectual and physical composition of his Solomon's House in order to imagine the unlimited progress of knowledge (yet only within an already perfected social order).[13] The dynamic production of synthesis from contrary forces is lacking in both visions of harmonious sociality, albeit existing in lesser or greater degrees of communal stasis. An ineluctable laterality of utopian predicative politics, as Goodwin and Taylor emphasize, molts the multiplicity of converging and diverging lines of causality that collide in the present moment, and ultimately negates the past, while halting their immediate and future syncretic actions.[14] But no matter how much proponents of utopian rhetorical, practical, and ideational experiments attempt to liberate phenomena from the present, utopian mechanics are tethered to "some sort of space within which [they] can function" – an imaginary space perhaps

[13] David Harvey, *Spaces of Hope* (Berkeley: University of California Press, 2000), 160.
[14] Barbara Goodwin and Keith Taylor, *The Politics of Utopia: A Study in Theory and Practice* (Oxford: Peter Lang, 2009), 11.

in part, but one also embedded in a context of socio-cultural signs and subtly coordinated by economic transactional habits of an existing political economy.[15] An epistemology for the creation of ideal politics is confined by a shared, communicative apparatus situated in the phenomena of actualized relations.

The king's body was a material thorn, bramble, and rupturing thistle in the laterality of creative parliamentary utopianism.[16] It would be hard to imagine that King Charles's person could be rhetorically and univocally maintained as a polarized site of popular antipathy in the midst of such ambivalence about his body and execution. Charles's chief nemesis in the civil wars, General Thomas Lord Fairfax, could not endorse the proceedings against the King and recused himself from the trial where his wife was heard to expostulate that not "half or a quarter" of the people of England accused Charles of high treason and that "Oliver Cromwell is a traitor."[17] And the events of 1641 provide evidence to support Lady Fairfax's asseveration of the King's innocence. Just seven years prior on the 25th of November, Charles ceremonially processed through the streets of London to massive encomium in an entertainment entitled *England's Comfort and London's Joy*: "the people responded with loud and joyful acclamations, crying God Bless and long live King Charles and Queen Mary, and their majesties reciprocally and heartily bless[ed] and thank[ed] the people with as great expressions of joy."[18] On the eve of large-scale sectarian strife, Charles's corporeal being was still received by most on the ground as the natural, immovable head of state and locus of religious authority. Yet, in the midst of the common counter argument that the King was being misled by "evil, popish counselors," was an

[15] Harvey, *Spaces of Hope*, 177.
[16] Pages 35-37 contain verbatim material from Venters, "Beeston's Boys," 2-3.
[17] Williamson, *Day They Killed the King*, 40.
[18] Quoted in Richard Cust, *Charles I: A Political Life* (London: Pearson, 2005), 314.

effort by a cadre of MPs to distinguish and separate loyalty owed to the body politic from the loyalty owed to the King's natural person:

> Acts of justice and protection are not exercised in his [the king's] own person, nor depend upon his pleasure, but by his courts and ministers who must do their duty therein though the king in his own person should forbid them; and therefore if judgements [sic] should be given by them against the king's will and personal command, yet they are the king's judgments.[19]

This line of argumentation aimed to abrogate the medieval doctrine of the "King's Two Bodies" as characterized by Kantorowicz; a doctrine in which "The King's Two Bodies thus form one unit indivisible, each being fully contained in the other."[20] Whatever impurities or imperfections that are contained in the body natural are purged by the body politic, and the two form a purified whole. Charles I issued from a Stuart suzerainty that continually stressed the Divine Right of Kings, and thus clung closely to a form of sovereignty similar to the Two Bodies concept (though perhaps encapsulated best in Robert Filmer's biblical-political doctrine of *Patriarcha*). He responded to rhetoric against the authority invested in his corporality by stating, "allegiance [of] all our good subjects . . . is due unto the natural person of their prince, and not to his crown or kingdom distinct from his natural capacity."[21] The difficulty in finding an executioner as late as 1649 would seem to suggest that the idiom of naturalized personal sovereignty endorsed by Charles had deep, recalcitrant roots for many English subjects. The King was, to many, still a king, and one sensible only in a Jacobean-Caroline adumbration of divinity. However, the gathering momentum of an alternative enunciation of bureaucratic sources of sovereign

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[19] John Rushworth, *Historical Collections of Private Passages of State*, 7 vols (London, 1659-1701), 3:588.
[20] Ernst H. Kantorowicz, *The King's Two Bodies: A Study in Mediaeval Political Theology* (Princeton: Princeton University Press, 1957), 9.
[21] J.F. Larkin, *Royal Proclamations of King Charles I*, vol. 2 of *Stuart Royal Proclamations* (Oxford: Clarendon, 1983), 773-74.

authority, subtended by the marriage of non-dynastic economic and political power, proved forceful enough to dematerialize the obstructive place of the King's *corporeal* regality.

The chief executors of the trial against the King derived not from the peers in the House of Lords or from the plebeians below them, but from the House of Commons (those in the gentry), and they had tendrils reaching widely over the press. Even though historian Sean Kelsey avers that the final decision of the judges was postponed until the trial's conclusion on January 27th, Amos Tubb opines that Charles was condemned and expected to be executed by the majority of the print world prior to the beginning of the trial on January 20th.[22] This middling group of independent parliamentary men, the back-benchers as Trevor-Roper calls them,[23] knew that, as distasteful as it was, for the Commonwealth to begin, the materiality of Charles's body had to be severed from the sovereignty of the throne. The union of political imaginaries of radicals and independents could not occur in a space and time polluted by the king's physical person. A conception of the "public interest" and "the people" united by law in Parliament could not be actualized if the presence of a king, self-elevated above the constitution, infected that Parliament.[24] In December Charles had vociferated "that no Law can judge a King, or rightly make him to suffer death by any power."[25] According to Charles, the sovereign was, in fact, tantamount to his body which was itself in supreme excess of the body politic and inviolable by any law. Agamben's identification of the "homo sacer (sacred man) who may be killed and yet

[22] Amos Tubb, "Parliament Intends 'To Take Away the King's Life': Print and the Decision to Execute Charles I," *Canadian Journal of History* 41 (2006): 481.
[23] Trevor-Roper writes of Cromwell's fellow independents as "the backwoods gentry who, in 1640, sat on the back benches of Parliament, but who, as war and revolution progressed, gradually broke through the crumbling leadership which had at first contained them." H.R. Trevor-Roper, *The Crisis of the Seventeenth Century: Religion, the Reformation and Social Change* (New York and Evanston: Harper and Row, 1968), 346-347.
[24] See footnote 8 in "Prologue: Problem Defined."
[25] Charles Stuart, *His Majesties Last Proposals to the Officers of the Armies* (London, 1648), 1-2, E 536 (13), quoted in Tubb, "Parliament Intends," 472.

not sacrificed" is applicable in this instance.[26] For the very notion of sovereignty attaches to one who can suspend law and create a state of exception; the one who has the right to exercise biopower, that is, to decide who should live or die. This invariably excludes the sovereign entity from political life (*bios*) but in a different capacity than someone who resides outside the community, a bare life in the state of nature (*zoe*). The sovereign exists as an *aporia* in the social order, establishing political life yet not contained within it, and so he has an affinity with a bare life that may be killed in a state of exception but not sacrificed for and within the functions of the State. Thus, to accomplish their mission, in a decree of 6 January 1649, the Commons radically altered the materiality of sovereignty and gave legislative precedence to Hobbes's later philosophical mathematics of the Commonwealth. Their edict reads,

> The Commons of England in Parliament assembled being chosen by, and representing the people [hold] the supreme power in the Nation . . . whatsoever is Enacted or Declared for Law by the houses of Commons assembled in Parliament, hath the force of Law. And all the people of this Nation are concluded thereby: Although the consent and concurance of the King, or House of Peers, be not had thereunto.[27]

As king, Charles's divine right had no place within the contractual arrangement of people and representatives who only symbolically embodied the law as a multiplicity. The actual Law was the covenant. Hobbes reiterated this contractual formulation just several years later in his massive political tract *Leviathan*: "A Common-wealth is said to be Instituted when a Multitude of men do Agree, and Covenant every one, with every one, that to whatsoever Man, or Assembly of Men shall be given the major part, the Right to Present the Person of them all, (that is to say, to be their Representative)."[28] Outside of this covenant was the state of nature, bare life, "that

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[26] Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life* (Stanford: Stanford University Press, 1998), 8.
[27] *A Declaration of the House of Commons in Parliament Assembled* (London, 1649), preface, E 537 (18), quoted in Tubb, "Parliament Intends," 473-74.
[28] Thomas Hobbes, *Leviathan*, ed. CB Macpherson (London: Penguin, 1985), 228.

condition which is called Warre."[29] This "natural" basis for social contractarianism was, of course, completely artificial, but given the epistemic limits of the epoch, there was no other space to ensconce the materiality of a sovereign who refused to submit to the sovereignty of the plurality. The once potent corpus of the king was the abject that "disturb[ed] identity, system, order," a pollution that must be disposed of, *dis-substantiated*, and transformed into the multi-bodied Leviathan-Protectorate whose authority rested on contract.[30] The transformative process, of course, had to be performed publicly in order to usher in a new socio-political modality. And thus on the 30th of January 1649, on a scaffolding outside the Palace of Whitehall, the King's head was struck from his living body, and his sovereignty severed from his material flesh so that the work of fleshing-out republican utopianism could ensue.

"Episode (periphery): Barbados"

James Harrington's *The Commonwealth of Oceana*, published in 1656, draws heavily on the classic utopian form but divagates from that model in its blatant political interventionism. Intended for Oliver Cromwell's consumption as a justification for and improvement upon Commonwealth organization, Harrington primarily looks backwards to three non-hereditary kingships and non-Christian social models – Israel, Sparta, and the Roman Republic – to amalgamate the perfected island polis of Oceana. The no-place of Oceana is not a realm of free-roving popular sovereignty, but a highly regulated nation in which inhabitants are distributed into citizens and servants, young and old, cavalry and foot soldiers, parishes, hundreds, and tribes; all of which function internally to choose electors by lots who then elect leaders and legislators from a pool of qualified candidates. The major innovations proffered by Harrington are a citizen army (modeled on Machiavelli's treatment of the subject), and an agrarian land law that abolishes the

[29] Ibid., 185.
[30] Julia Kristeva, *Powers of Horror: An Essay on Abjection* (New York: Columbia University Press, 1982), 4.

practice of primogeniture. It should not be overlooked, however, that what maintains the coherency, "steady genius," and interpersonal felicity of Harrington's republic of modest land owners, is the existence of two subjugated extra-national lands: the northern land of Marpesia and the island of Panopea. Marpesia provides "an inexhaustible magazine of auxiliaries" while Panopea, "the soft mother of a pusillanimous people," is depopulated for shaking its paternal yoke, and "replanted with a new race" willing to submit to Oceana's hegemony.[31] Panopea is both the place to receive Jews, who, if fully embraced by the Commonwealth "would maim it," and a pressure valve or a sluice for depositing dissatisfied sons with no lands, vagrants, and those not fit for full citizenship in Oceana. Harrington is under no happy illusion concerning the demands of domestic political tranquility. Firmly ensconced within the colonialism of his time (first Ireland and then the Americas), the disciplined social order of his quasi-fictional island functions pragmatically only through its reliance upon subjugated and radically altered foreign landscapes. *Oceana* purports a novel social contractarian view of politics maintained by a rejection of divine, inheritable kingship and its attendant Christian time-scape (a Boethian view of theodicy and God's viceregent until the Christ's return), and the displacement of time into a static coupling of an agrarian-based Commonwealth and interminably labile colonies.

Utopian political desires such as Harrington's mapped easily onto the mid-seventeenth-century English ventures in the West Indies. Thomas Hobbes viewed the New World as ahistorical, an apolitical time out of time identical to his state of nature, and Locke did not demur in his assessment stating that "in the beginning all the World was *America*."[32] A common interpretation since Richard Hakluyt and one ponderously formulated in Locke's labor theory of

[31] James Harrington, *The Commonwealth of Oceana and a System of Politics*, ed. J.G.A. Pocock (Cambridge: Cambridge University Press, 1992), 6.
[32] John Locke, *Two Treatises of Government*, ed. Peter Laslett (Cambridge: Cambridge University Press, 1960), 301.

value was that the uncultivated domains of the Americas were "vacant" wastelands, *res nullius (empty things)*, best "improved" by the implantation of a colony: "Land that is left wholly to Nature, that hath no improvement of Pasturage, Tillage, or Planting, is called, as indeed it is, *wast*; and we shall find the benefit of it amount to little more than nothing."[33] Those who added value to the land with the addition of their labor, those, who by their industry and attention reaped the greatest yield from the land, could and should claim proprietary rights. Barbados, as one of the first uncultivated (and uninhabited) islands to draw the attention of the English, was simultaneously a tabula rasa on which to inscribe political and economic desires, and a receptacle for England's own undesirables. The settlement of Barbados in the 1640s was accomplished by private individuals, who themselves were exiles as a result of the English Civil War and sought to create both a for-profit exploitation of the island's resources and a cohesive, striated political community. That community was comprised of indentured servants (mostly from Ireland and prisons), political exiles, merchants, and West African slaves. Since its founding in 1627 the island was a cacophonous blend of retrogressive feudal overlordship, economically grounded in servitude and slavery (evinced in the Earl of Carlisle's patent from Charles I and 1636 laws mandating servant to acreage ratios), and an orientation toward a futurity of capital accumulation. Morgan Godwin contended that making a profit "was the most operative and universally owned principle" in Barbadian society.[34] To ensure this profit, between the 1620s and 50s masterless men and royalist patriots, when they could not escape detection or flee England securely, were rounded up and shipped to the island as unfree labor placed in the service of well-backed entrepreneurs or sent to work alongside those escaping the burden of

[33] Ibid., 297.
[34] Morgan Godwin, *The Negro's and Indian's Advocate* (London, 1680), 81, quoted in Gary A. Puckrein, *Little England: Plantation Society and Anglo-Barbadian Politics, 1627-1700* (New York: NYU Press, 1984), 13.

debt. Ligon himself, "having lost (by Barbarous Riot) all that [he] had gotten by the painful cares and travels of [his] youth," attached himself to Thomas Modyford, a wealthy Royalist exile and intended purchaser of a sugar plantation.[35] It is Keith Sandiford's position that a confluence of "war, exile, social and economic dislocation thr[e]w individuals together indiscriminately, disrupting the old rigid structures of class and race that once held them apart."[36] Added to the glutinous list could be plague and disease, which was ravaging the land at the time of Ligon and Modyford's arrival in 1647. Ligon reinforces Sandiford's identification of a colonial desire for political harmony when he relates that the transplants "made a Law amongst themselves, that whosoever nam'd the word Roundhead or Cavalier, should give to all those that heard him, a Shot and a Turky [sic], to be eaten at his house that made the forfeiture."[37] The precious commodities of turkey and conviviality helped regulate the transactions of a political economy that demanded the erasure of old, mutually destructive distinctions. But subtending these negotiations was a larger redefinition of sovereignty grounded in the command over ecology and biology. Ultimately, it was the desire for sweetness that shaped the social body. Sugar was the new social adhesive.

If the English Commonwealth had to transmogrify the corporality of Charles I into necrotic pollutants in order to appropriate the residue of sovereignty that clung to his skin, then the sovereignty necessary for the elision of political discord in the construction of an island utopia on Barbados had to undergo a similar process of redefinition and de-substantiation. The colony, existing as both a capitalist venture of plantation privateers and a refuge for political undesirables, demanded governmentality shorn of its homeland failures. Neither a facsimile of

[35] Ligon, *True & Exact History*, 1.
[36] Keith Sandiford, *The Cultural Politics of Sugar: Caribbean Slavery and Narratives of Colonialism* (Cambridge: Cambridge University Press, 2000), 27.
[37] Ligon, *True & Exact History*, 57.

the English model nor the confession of Republican or Royalist allegiance would increase the productive capacity of the land. Only the drive toward capital accumulation had the power to alter political arrangements, and that meant the imposition of a new mode of speculative time based on increasing production from lesser to greater goods (cotton to sugar) and higher yields. The discovery of the profitability of sugar reduced the densely wooded island to fields of monoculture, just as it reduced the nuances of political association to a market-determined assembly of proto-capitalist planters.

Concomitantly, the effects of sovereign power were transferred from the realm of interpersonal association to that of ecology in order to eviscerate and revitalize environment in the service of accelerated commodity production. In the modern context of global warming, Mick Smith terms such an attitude "ecological sovereignty," but the designation is equally applicable to the Caribbean colonial milieu of the seventeenth century.[38] Nature was interpreted as something that was absolutely other to the anthropocentric. It was both hostile to the human in the guise of its plagues and predators, and it was present for humankind's exploitative use with its sugar crop easily exchanged for other forms of capital. This definition of sovereignty was upheld on Barbados by a regulatory apparatus of the body that placed white English planters atop a biological hierarchy in which such organisms as hogs, trees, and African slaves were categorized as raw nature incapable of full participation in human affairs.

The first steps in taming the 166 square mile "wild" island were deforestation and hog domestication. Although the English had been settled in Barbados since 1625, when Henry Colt visited in 1631 he claimed that the island was "soe full of woode & trees, as I could not finde any

[38] Mick Smith, *Against Ecological Sovereignty: Ethics, Biopolitics, and Saving the Natural World* (Minneapolis: University of Minnesota Press, 2011), xiii.

place wher to trayne 40 musketeers,"[39] and he complained that the land was not being "adequately exploited."[40] When sugar was "discovered" as a viable cash crop in the mid-1640s, this picture quickly changed and by 1665 there was no mention of "woode and trees" in any record, and timber for construction had to be imported from Surinam.[41] The motivation to capital accumulation through sugar production meant that bodies were grist for the machinery of ecological subjugation and intensive cultivation. Cattle, horses, and slaves alike were equipment of domination through production. Their material presence asserted English ascendancy over the island's indigenous ecosystem, but they were colonial fodder for infectious disease and inclement weather, and therefore the island became their ossuary. A desperate 1656 petition of merchants and planters to the Lord Protector bemoaned the surcease of production due to a loss of labor power and begged for more expendable bodies: ". . . by reason of extraordinary rains, lately fallen in the island, almost all their horses, neat cattle, negroes, and other servants, are destroyed, and their works must lie still unless speedily supplied. Pray for licence to transport thither 600 horses and 600 neat cattle."[42] The incessant "improvement" of Barbados's productive capacities with the accompanying subjection of her natural resistance required the continual arrogation of live bodies bound for mass graves. The obverse of capital improvement was a grinding wheel for the cyclic production of ecological waste. In the early 1640s approximately 10,000 landholders, several thousand indentured servants, and only 800 African slaves populated

[39] Sir Henry Colt, *The Voyage of Sir Henry Colt to the Islands Barbados and St. Christopher: May-August 1631*, ed. J. Edward Hutson (Wildey: Barbados National Trust, 2002), 17, quoted in J.R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge: Cambridge University Press, 2010), 27.
[40] Susan Dwyer Amussen, *Caribbean Exchanges: Slavery and the Transformation of English Society, 1640-1700* (Chapel Hill: University of North Carolina Press, 2007), 28.
[41] McNeill, *Mosquito Empires*, 27.
[42] "America and West Indies: November 1656," in *Calendar of State Papers Colonial, America and West Indies: Volume 1, 1574-1660*, ed. W Noel Sainsbury (London: Her Majesty's Stationery Office, 1860), 450-452. *British History Online*, accessed July 16, 2020, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol1/pp450-452.

the land. By 1660 the population had risen to 40,000 with approximately 20,000 or more Africans in the thrall of the planters.[43] By 1663 complaints were circulating that the soil was already exhausted.[44] Despite this massive nutrient depletion, the cultivation of sugar continued unabated with the result that there were not only drastic changes to the landscape (now unrecognizable from its appearance in the 1630s), but to the social topography as well. In 1679 many of the small plantations had been consolidated and the original 10,000 propertied settlers had been reduced to 2,639,[45] and by 1700 even fewer landowners controlled 134,500 slaves.[46] The overcrowding of white and African laborers under a rigidly oppressive but small plantocracy of capitalist planters had provoked a health crisis and forced the majority into a near starvation level diet. Within an eighteen month period between 1678 and 79, 107 infants were baptized while 82 children were buried in St. Michael's parish.[47] The economic disparity between the elite and those who comprised its corpus of capital had immersed nearly all life on the island in a quagmire of disease, death, and ecological emaciation. Less than one hundred years later "one-third" of Barbados, in the estimation of several plantation owners, was "waste."[48]

Regulating the boundaries between the white landowners (those fully human) and the bodies of all those non-political subjects synonymous with nature meant a continual exercise of sovereignty over base materiality, particularly over patterns of consumption and excretion. 'Performances' like the one detailed above reinforced the abject condition of exclusion from the polis through the ostensibly inverse patterns of hyper-attentiveness: the regulation of diet,

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[43] Amussen, *Caribbean Exchanges*, 29.
[44] Sandiford, *Cultural Politics of Sugar*, 11.
[45] Amussen, *Caribbean Exchanges*, 76.
[46] Sandiford, *Cultural Politics of Sugar*, 11.
[47] Richard S. Dunn, *Sugar and Slavery: The Rise of the Planter Class in the English West Indies, 1624-1713* (New York: Norton, 1972), 109.
[48] Simon P. Newman, *A New World of Labor: The Development of Plantation Slavery in the British Atlantic* (Philadelphia: University of Pennsylvania Press, 2013), 219.

reproduction, and the deposition of waste.[49] Richard Ligon is the primary source of our information on the management of black slaves prior to the standardization of slave codes in the 1670s, which suspended rights such as trial by jury and other "Laws of England" for this "brutish sort of People . . . reckoned as goods and chattels in that island [Barbados]."[50] Ligon's rhetoric concerning the "Negroes" is two-pronged and contradictory. In one sense, he essentializes the black body and African cultural practices as rooted in a radically different physiology. The men "are very well timber'd . . . and may hold good with Albert Durers rules" while the "women are faulty; for I have seen very few of them, whose hips have been broader than their shoulders . . . [and] when they become old . . . their breasts hang down below their Navels, so that when they stoop at their common work of weeding . . . at a distance, you would think they had six legs."[51] Ligon also claims that they have an essential desexualized and unaffectionate nature: "I never saw so much as a kiss, or embrace, or a wanton glance with their eyes between them."[52] In another sense, Ligon's rhetoric reveals the juridical and social channels of regulating "Negro" slave identity. Blacks were denied baptism because by the "Lawes of England . . . we could not make a Christian a slave."[53] They were also provided with very little "bone meat" (if any), and only when cattle died of disease were slaves allowed to eat the skin while the meat was reserved for white indentured servants.[54] Not even the nutritious part of that which died of disease was allowed the African; only its skin. This pattern of consumption equated the slave with the disease ridden flesh of the animal – polluting and hostile aspects of nature – while the slave could not

[49] The excluded, in this case, is the one whose corpse is denied territory and functions as an object of inquiry.
[50] "Report of Mr. Sargeant Baldwin re. Laws of Barbados," CO 29/3, 6, quoted in Amussen, *Caribbean Exchanges*, 133.
[51] Ligon, *True & Exact History*, 51.
[52] Ibid., 47.
[53] Ibid., 50.
[54] Ibid., 37.

leave even bones behind to mark that he had feasted on "flesh" and thus temporarily claimed human dominion over the animal world.

Reflecting upon Michel Serres notion that "excrement" functions as a claim on property, it is telling that the slave's fecal deposits were not his or her own. The use of human waste on Barbados was, in the final analysis, one foundation upon which liberal personhood was based. The records of Henry Drax, a major plantation owner on Barbados, relate that the black slave's feces was appropriated by the master and mixed with animal dung to form fertilizer for the sugar crop, while the master's was never relied upon in this manner.[55] The excrement of the owned was worked into an admixture that became the plant that transformed into the finances that maintained the Barbadian slavocracy. Here we are dealing with elementary traces of an organism that marks its having been there: corpses, bones of its diet, and excrement. Having appropriated these, the master appropriated not only personhood but the marks of animate existence. Thomas Thistlewood, while working as an overseer on the sugar plantation in Jamaica known as Egypt, indulged his penchant for the unusual punishment of having one slave "shit" or "piss" in another's mouth, sometimes requiring the wearing of "a gag whilst his mouth was full."[56] Thistlewood's punishment was to force the waste that was rejected back upon the individual, thus destroying the stability and perception of the self. Though Thistlewood is perhaps an extreme and sadistic example, the appropriation and redistribution of waste to generate a surplus of non-nutritive cash crops was essential to the meteoric rise of the English transatlantic economy. This was the form of sovereignty and dis-substantiation exercised in order to uphold a political ideal of free planters and, most importantly, to raise the tonnage of sugar exportation

[55] Newman, *New World of Labor*, 209.
[56] Douglas Hall, *In Miserable Slavery: Thomas Thistlewood in Jamaica, 1750-86* (London: Macmillan, 1989), 72.

from 3,750 to 9,500 in the span of just 19 years.[57] Most of this sugar supplied the salons and coffeehouses of a burgeoning public sphere, and the performance of bourgeois sensibility they sustained. For it must be noted that the money garnered from his marriage to a rich widowed owner of a sugar plantation in Barbados allowed Richard Steele the start-up funds for his periodical of manners, *The Tatler*. Participation in popular politics that outlined the bounds of the Habermasian public sphere was realized through the de-animation and dis-substantiation of enslaved and indentured bodies, literally ground and grown into the monetary fertilizer for the soft textual signs of the socially legitimating and politically abetting coffeehouse periodical.

It is within this cycle of uncultivated waste to over-cultivated waste, a cycle whose terms are only sensible within an inchoate capitalist mode of production and quantification of time, that I want to relocate the Colonel Walrond's spectacle of violent science before the community of African slaves. Walrond's demonstration relied upon the English notion of the slave body as commodity within a future of profit generation, a time generally marked by the multiplication of the 14 to 18 months it takes for sugar cane to mature, be harvested, boiled down and sold on a repeated basis to create a surplus over the initial investment. That geography of time threads through the performative manufacture of consent. The Igbo, Yoruba, and Kongo, among other ethnic divisions, had no such conception of speculative time, especially in precise quantified partitions. As John S. Mbiti relates, the common divisions of time among most Africans were and, in many cases, continue to be dyadic, comprised of a mythological past (Zamani) and Sasa, a dimension of an individual's lived experience as situated in a community. Sasa conveys the memories (both personal and communal) of a life and its immediate future, but nothing beyond the expectation of a few months.[58] Time is marked by relation to the land and other living

[57] Newman, *New World of Labor*, 65.
[58] John S. Mbiti, *African Religions and Philosophy* (New York: Anchor, 1970), 25.

entities. For example, the Ankore of Uganda describe circadian rhythms with the natural (or less human-manipulated) rhythms of cattle: feeding time, milking time, travel to watering holes, and sleep.[59] A human-cattle sociality marks time. Such a notion of time is an interspecies co-construction, a shared sense of being-in-a-common-world based on disparate, trans-species intentionalities. On the Barbados plantation, where horses, cattle, donkeys, and camels were reduced to labor power, unremittingly milling raw sugar or hauling product to the ingenio "from Munday morning at one a clock, till Saturday night . . . all houres of the day," the animal was de-animalized, just as the slave and servant were dehumanized, both extricated from a former intelligible spatio-temporality.[60] What Ligon and Walrond interpreted incorrectly as suicide with the intention of material re-animation or geographic crossing, was in actuality a transition in modes of time – from Sasa to the liminal space between Sasa and Zamami in which a tribal member lingers in living death, sustained by the utterance of that member's name upon the lips of those who remember. Entering the home through death, in this sense, was intersubjective persistence – a persistence that could not be materially spatialized. The judicial performance flattened the texture of the slaves' being-in-time-with-others (human and nonhuman) into a timescale of transatlantic capital accumulation; but it also worked in another way to bracket and manage the slave body by recalibrating the slave's physical borders with nonhuman sentient life.

The violence of regicide in the Commonwealth and the beheading on the West Indian plantation were the ineluctable outcomes of failed juridical attempts to realign sovereignty with incommensurable ontologies. They were experiments in the creation of pure utopian spaces (cleared of offending matter) which of course are never pure and never just spaces (while external dumping sites and areas of exploitation lay prostrate before the futurity of capitalist

[59] Ibid., 19-20.
[60] Ligon, *True & Exact History*, 91.

accumulation) – spaces, I might add, that required a founding act of public violence, but such a paradigm of imposed violence that nevertheless fractured against the rough surfaces of stubborn communal spatio-temporalities.

"Episode (core-periphery): England's Global Network"

This is the point at which I want to begin factoring in the communal conundrum of the Halifax gibbet into a grand interspecies dialectic of English globalism, and I must request the reader's patience for the trek will be a little lengthy and circuitous. Events at Halifax were situated at one node in a comprehensive network of global transactions, and being such, they were emblematic of both a domestic expression of distant-intimacy with colonial mercantilism and the subsumption of old transspecies relationalities into nascent epistemologies, now granted social space by an expanding global political ecology. The English revolution and Interregnum experiments of the 1640s and 50s catalyzed the slow (but never complete) dissolution of stable socio-economic arrangements bound to hierarchical relations of communities and an antique, landed gentry. Customary procedures, such as those of the Halifax gibbet, that invoked communitarian ethics in the management and interpretation of nonhuman agential capacity, were under duress. As I have already mentioned, Atlantic colonies and the English Isles were closely united by a logic of waste cultivation sustained by utopian visions like that of Harrington's *Oceana*. Interspecies and interpersonal relations in the English homeland were much affected by and only intelligible within this expanding sense of political and ecological physico-imaginary space in the colonies – an artificial channel for affective, social, and economic surplus or those relations deemed unimaginable and ineffable on native English soil.

The borders of political ecology were quite porous and unstable, sensitive as they were to massive shifts in mercantile arrangements and the dehiscence of new imaginaries spurred by the

Revolutionary situation and state expansion. A 1653 collocation of "Proposals for the Improvement of Waste Ground" captures many of the recurring socio-economic sentiments expounded in response to what most interpreted as the natural momentum of contemporaneous historical circumstances. The tract, unlike its more staid and sober predecessors, takes on the rhapsodic tones of a manifesto, with perfervid flashes of righteous belief in the moment's own emancipatory progress: " . . . now our hopes are that such as are now set in the throne of authority will not only be the repairers of some breaches, but will also convert the desolate wastes into fruitful fields, and our wide howling wildernesses into comfortable habitations, that in this (as well as in other things) we may enjoy at last some benefit by all our revolutions, transplantings, and overturnings in authorities."[61] Some itemized actions for improvement conveyed by the "Proposals" are that "the vacant waste lands . . . (like a deformed chaos) . . . be effectually thought upon for their best improvement by enclosing, tilling, planting"[62] to effect an "increase in cattle," "augmentation of timber," "the suppression of many robberies,"[63] and "the employing and setting to work many thousands of persons that are now idle."[64] According to the manifesto's writer, Parliament would be the supreme authority in requisitioning, improving, possessing, and distributing the reformed wastes to increase state revenue (a position formerly "assumed by the late King") and maintain "a military force at land and a naval force at sea."[65] The author assertively envisions a rectification of previous lackadaisical and non-existent land reclamation projects under the king's prerogative by replacing a contiguous line of noble to common tenant relations with a marriage of Parliament and individual capital. This new form of

[61] B.M., "Proposals for the Improvement of Waste Ground, 1653" in *17th Century Economic Documents*, eds. Joan Thirsk and J.P. Cooper (Oxford: Clarendon Press, 1972), 135.
[62] Ibid.
[63] Ibid., 136.
[64] Ibid., 137.
[65] Ibid., 139.

tenancy is a domestic colonial paradigm driven by the utility of state expansion. Property will be rented to those who can generate the greatest yield by intensifying agriculture and animal husbandry, and concomitantly, through rents, augment the coffers of Parliament, thus leading to that permanent state of militarization necessary for the subjugation and management of recalcitrant foreign regions. What is novel in this land recovery model is not its diagnostic assertion that common fields are the "seedplots of contention" and "nurseries of beggary," but rather its salutary structure that funnels domestic territorial recuperation and intensification directly into a global political economy and the aims of a non-regal expansionist ideology.[66]

The major fen drainage projects of the Civil War-Interregnum era (The Hatfield Level, Lindsey Level, Bedford, or Great, Level, and the Ancholme Level) had their origins in the efforts of various adventurers operating with or under Charles I in the 1620s and 30s. It is no accident that these massive undertakings coincided with colonial ventures in the Americas, as both relied on the same mechanisms of population displacement and extensive land appropriation through environmental manipulations resulting in enclosure and cultivation. Keith Lindley has identified these levelling projects as a mode of "internal colonization" that simultaneously served "the national interest" and satisfied "profit motive."[67] While maybe not adopting Lindley's stridently provocative language, most social and agricultural historians of the period agree that fen drainage schemes were ecological attempts to eradicate a subsistence or micro-pastoral economy of the commons and replace it with a large-farm model of agrarian intensification that inexorably necessitated an enormous investment of capital.[68] Sir William Killigrew drew on his lands in

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[66] A similar contemporary tract, "Arguments Against Common Fields, 1656," contains these quoted phrases, but, unlike the "Proposals," it lacks an international and colonial rationale for domestic enclosure projects. See Pseudonismus, "Arguments Against Common Fields, 1656," in *17th Century Economic Documents,* eds. Joan Thirsk and J.P. Cooper (Oxford: Clarendon Press, 1972), 145.

[67] Keith Lindley, *Fenland Riots and the English Revolution* (London: Heinemann, 1982), 4.

[68] See Keith Lindley, *Fenland Riots and the English Revolution* (London: Heinemann, 1982); R.A Butlin, "The Enclosure of open fields and extinction of common rights in England, circa 1600-1750: a review," in *Change in the*

Bermuda to fund the manifold wage laborers required for the Lindsey Level and labor costs were calculated at £95,000 for the Great Level undertaking.[69] During the privatization of the common fens, investors expurgated offensive commoners, sometimes with compensation or by funneling them into a growing system of wage labor, but generally doing so under agreements generated without their consent and that rated peasant stock as disposable vagrants. The fenland reclamations of the seventeenth century are perhaps the most illustrative example of primitive accumulation, a Marxist term for the process by which feudal producing classes such as peasants and artisans were "dispossessed and deprived of the means of economic production by which they sustained themselves and thus became available for employment as landless or 'free' labor."[70] The scale and scope of seventeenth-century drainage operations were unlike any forms of enclosure that preceded them and therefore they hastily glutted the available pool of destitute, exploitable laborers.

If commoners believed that Parliament would respect their peasant rights after it proved victorious in the civil wars, they were soon to realize the full extent of their disillusionment. Joan Thirsk, argues that "the conviction that improvement of the wastes and forests was the first priority in agriculture persisted if anything more strongly during the Interregnum than under the early Stuarts."[71] The use of military personnel to guard irrigation networks and suppress riots in the fens became habitual, and Protector Cromwell made active resistance to improvement of the wastes and forests a felony while, through an ordinance of 26 May 1654, awarding double

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Countryside: Essays on Rural England, 1500-1900, eds. H.S.A. Fox and R.A. Butlin (London: Institute of British Geographers, 1979); Joan Thirsk, *The Rural Economy of England: Collected Essays* (London: The Hambledon Press, 1984), 206; Margaret Spufford, *Contrasting Communities: English Villagers in the Sixteenth and Seventeenth Centuries* (Cambridge: Cambridge University Press, 1974), 53; J. A. Yelling, *Common Field and Enclosure in England*, 1450-1850 (Hamden, CT: Archon, 1977).

[69] Lindley, *Fenland Riots*, 3.

[70] Richard Halpern, *The Poetics of Primitive Accumulation: English Renaissance Culture and the Genealogy of Capital* (Ithaca: Cornell University Press, 1991), 1.

[71] Thirsk, *Rural Economy*, 206.

damages to the projects' investors.[72] One thing that had been lost with the destruction of the monarchy and the House of Lords was a strong, coercive form of opposition to enclosure and engrossing (the consolidation of farms and estates). The Tudors used commissions of enquiry and the royal prerogative to stanch the flow of enclosures and revert many lands forcibly placed under tillage back to commonable fields. The number of anti-enclosure statutes had decreased under James, who launched his last large-scale enquiry in 1607, and thereafter, according to Thirsk, "[the government] abandoned all opposition to the principle of enclosure," degenerating punitive measures against offenders "into a revenue-raising device and little else."[73] Charles I made overtures to suppress enclosers and halt improvement of the fens in the 1630s, but these were toothless, hollow threats to quickly drum up finances during the period of his personal rule. By 1666, as Butlin asserts, all official opposition to enclosure and improvement of the wastes had ceased.[74] In the period of the Interregnum the reigning monarch's voice of opposition to projector-improvers in support of common rights, however feeble and empty in its final years, had been silenced. Parliament, with its multiplicity of members holding conflicting vested interests now oversaw the improvement of domestic "wastes" and judged how redistribution and repurposing of land would best serve the "national" interest.[75]

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[72] Lindley, *Fenland Riots*, 183-84.
[73] Joan Thirsk, *The Agrarian History of England and Wales*, vol. 4, *1500-1640* (Cambridge: Cambridge University Press, 1967), 213.
[74] R.A. Butlin, "Enclosure of Open Fields," 77.
[75] Andrew McRae charts a similar shift in national and social perspectives on waterways by reading the alterations in semantic and discursive content in the first through fifth editions (1653-1676) of Isaak Walton's *The Compleat Angler*. In early additions, according to McRae, Walton "dared to describe a nation within which men of indeterminate status might roam at will across the countryside, catching fish not only for themselves but for pooer members of the local society." By the time of Charles Cotton's 1676 supplemental edition, notions of itinerant access to free waters were replaced by an ideology in which "only the landed gentleman" may legitimately claim access to and derive pleasure from riparian sport. Andrew McRae, "The Pleasures of the Land in Restoration England: The Social Politics of *The Compleat Angler*," in *Essays in Memory of Richard Helgerson: Laureations*, eds. Roze Hentschell and Kathy Lavezzo (Newark: University of Delaware Press, 2012), 180.

Henry Robinson's 1652 tract *Certain Proposalls in Order to the Peoples Freedome and Accommodation in Some Particulars* is a linchpin for the emblematic, microcosmic relationship between the waste recovery schemes and the larger currents in England's mid-seventeenth-century political economy. Robinson takes advantage of the revolutionary sea change in the source of English authority and pivots from specific economic policy prescriptions for land recovery, agriculture, and trade to requirements for governmental organization most aligned with maintaining a distending global economy. He proposes that fens should be drained with "stragling Tenements" cleared[76] at the same time foreign plantations in "Barberie, East and West Indies" shall be "enlarged" in order to compete fiscally with Spain, Portugal, and the United Provinces.[77] Additionally, Parliament needs to increase the number of free ports in England, protect wool for domestic cloth manufacturers,[78] entice foreign trade by granting immunities and privileges of citizenship,[79] establish a bank to stymie the outward flow of specie,[80] encourage new manufactures, trades, and handicrafts,[81] erect workhouses,[82] and make education public.[83] All of these policies, in Robinson's estimation, should issue from a salaried Parliament and a system of professional public employees that is most aptly suited to support the development of international commerce and territorial expropriations.[84] For Robinson, citizens across the spectrum of status are not just symbolic of a nation's wealth in the "abstract," but rather occupy a mechanism of place not, as in former days, based primarily on lineage and land, but on how

[76] Henry Robinson, *Certain Proposalls in Order to the Peoples Freedome and Accommodation in Some Particulars* (London, 1652), 9.
[77] Ibid., 11.
[78] Ibid.
[79] Ibid., 12.
[80] Ibid., 18.
[81] Ibid., 22.
[82] Ibid., 23.
[83] Ibid., 24.
[84] Ibid., 4.

England as a global financial unit in competition with other burgeoning nation-states functions on the world economic stage. What is unique in Robinson's tract and English history at this time, as I discern the matter, is that the pamphlet's author takes advantage of the revolutionary disavowal of certain prevenient institutions (like the king) and works backwards in an almost neoliberal manner from a vision of a healthy global political economy to a form of governance that properly maintains it. Prior pamphlets, like those of Gerard de Malynes, Thomas Mun, or Edward Misselden, were either functionally apologies for merchants or advocated more or less central regulation in commerce. Statements concerning the economic impact on governance were generally oblique, such as Misselden's individualistic rhetorical query "What else makes a Common-wealth but the private-wealth . . . of the members thereof in the exercise of *Commerce* amongst themselves, and with forriane Nations?", or directed at influencing specific trade policy.[85] But what did precede the structured economic thought of Robinson et al. in the mid-century debates on commerce was a logic in trade that cast doubt on the functional necessity (perhaps even intimating the anti-functional detriment) of the sovereign, seen clearly, as Joyce Appleby argues, in Misselden's writings of 1622 and 23.[86] To advocate, as Misselden did, that private wealth in the form of commodity exchange predetermined public wealth, removed the fixed point of authority over monetary value from the king and his mint, with its emphasis on executive sanctioned exchange rates and the weight and purity of specie, and set it on an international liquid circuit of exchangeable goods impeded or assisted in their flow by the speculative and boots on the ground apparatus of merchants. Misselden's crabwise challenge was inseparable from his argument for free trade, and, although he did not explicitly denounce

[85] Edward Misselden, *The Circle of Commerce, or The Ballance of Trade in Defence of Free Trade* (London, 1623), 17.
[86] See Joyce Appleby, *Economic Thought and Ideology in Seventeenth-Century England* (Princeton: Princeton University Press, 1978), 41-48.

unfettered sovereign authority over the economy, he (and others like Thomas Mun) interpenetrated the rhetorical structures of economic writing with implicit countermands to monarchical oversight – structures within which economists of the mid-seventeenth-century revolution could recommend institutional reforms aimed principally at buoying global market exchanges. Before the period of civil wars and Interregnum, rarely had there been ponderously direct overtures to political-fiscal reorganization like those contained in Robinson's *Proposalls* or Worsley's *The Advocate*, which worked backwards from England's commercial competition with the Dutch to prescriptions for major economic and mild governmental restructuring.[87]

Lawrence Stone has infamously said that "England in 1660 was barely distinguishable from England in 1640," that, in essence, the more constant political trappings of English governance were left unaltered by the revolutionary upheavals of the two intervening decades; but, in league with Immanuel Wallerstein, I assert that the alterations existing after the Restoration were predominantly socio-economic, not pro-forma political, and that a panoramic view of this nascent, burgeoning state of relations must include sentient non-humans that oscillated, sometimes disarmingly, between the poles pure economics and unencumbered sociality.[88] The events of the mid-seventeenth century more closely aligned England's political machinery with the rising bourgeoisie whose status in state bureaucracy had been uncertain but who were already providing the lion's share of the nation's capital necessary for the economic expansion of the sixteenth and early seventeenth centuries. There are several long-term and

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[87] See Benjamin Worsley, *The Advocate: or A Narrative of the state and condition of things between the English and the Dutch Nation, in relation to Trade, and the consequences depending thereupon, to either Common-wealth* (London, 1652).

[88] Lawrence Stone, "The English Revolution" in *Preconditions of Revolution in Early Modern Europe*, eds. Robert Forster and Jack P. Greene (Baltimore: Johns Hopkins Press, 1970), 57; and Immanuel Wallerstein, *The Modern World-System II: Mercantilism and the Consolidation of the European World-Economy* (New York: Academic Press, 1980), 121-22.

immediate reasons for this alignment, and its expression took several forms, each participating in a global economic network that could challenge and eventually surpass England's Dutch rivals. The sustained causes can be traced back to policies of Tudor despotism and the fact that England was never the strong, absolutist, and thorough state engine that France was. According to Lawrence Stone, the Tudors and Stuarts, unlike other European princes, lacked a monopoly on valuable minerals and, because the bureaucracy was relatively small, could make little from the sale of offices. James I attempted to emulate the French model of bureaucratic sales in the first quarter of the seventeenth century, but profits never surmounted public disapproval. The most successful economic response to state emaciation was Henry VIII's monumental land grab as part of the Act of Supremacy and England's Protestant reformation.

> Between 1536 and 1552 the crown laid hands on the vast property of monasteries and chantries, usually reckoned (without much hard statistical evidence) to amount to at least a quarter of the country. Had this property been retained and exploited, both for the wealth it could produce and for the political and religious patronage it carried with it, it could have provided the state with overwhelming resources, which would have made it virtually independent of parliamentary taxation. But before it had even been assimilated and absorbed, the bulk of the property was sold off to pay for war, so that by 1562 the crown was left with an independent income which, with a tight rein on expenditure, was sufficient, but no more than sufficient, for peacetime purposes.[89]

The confiscation of Catholic lands, with the establishment of the crown's own courts (Star Chamber, Wards, Exchequer, Requests, Admiralty), was an effort by the Tudors to consolidate power. The courts were abolished during the Interregnum, and the confiscated lands, instead of establishing perpetual crown revenue, sparked a period of unremitting social mobility, status inconsistency and, according Wallerstein, "expanded the amount of land available on the market, which accelerated the whole process of extension of capitalist modes of operation in a way and

[89] Ibid., 68.

to a degree that no other European country (except maybe the Northern Netherlands) was experiencing at the time."[90]

When Elizabeth I ascended a fiscally debilitated throne in 1558, she inherited a volatile religious divide between Catholics and Protestant sects, and a menacing Spanish imperial antagonist. Her solution to the first problem was a compromise in the form of middle-way Anglicanism. Wrestling with second obstacle, Elizabeth resolved to advance national interest by colonizing Ireland, granting monopolies, and working through mercantile joint-stock and corporatist structures (e.g. Virginia Company and East India Company) that could compete with the trans-oceanic presence of her Spanish competitor without the layout of crown capital. Philip Stern points out that the relationship between the State and the corporation was an unsettled, uneasy, and often blurry one, with company members frequently holding positions in local and national offices. "All of the instruments of state power used on the Company's behalf—charters and patents, action by courts, customs, and other agencies against interlopers and rivals, naval convoys, and so on—were often hard-fought, purchased with political and actual capital."[91] Not only did Elizabeth compensate for administrative weakness by increasing state reliance on corporate capital, she retrenched regal expenditure and inversely augmented Parliamentary powers and autonomy, increasing seats in the Lords and Commons from three hundred to approximately five hundred and allowing the creation of unregulated committees. The ethereal national sentiment clustered around Gloriana and evident in her iconography and the works of Spenser and Sidney was cemented at the cost of her actual state power. By dispersing centralized

[90] Immanuel Wallerstein, *The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (New York: Academic Press, 1974), 236.
[91] Philip J. Stern, "Companies: Monopoly, Sovereignty, and the East Indies" in *Mercantilism Reimagined: Political Economy in Early Modern Britain and Its Empire*, eds. Philip J. Stern and Carl Wennerlind (Oxford: Oxford University Press, 2013), 180.

authority to corporate communities with their own political structures and by ignoring tax evasion of the landed classes and the under-assessment of customs by the merchant community, Elizabeth, in Stone's view, allowed the gentry "to form corporative political institutions which could paralyze government if they came into conflict with the central authority at Westminster."[92]

Although the timing and amount of friction he personally generated between rising factions of court and country that impelled the nation toward civil war is still very much open to debate, Charles I undoubtedly amended the trajectory of state progress in ways that belied and frustrated both the expectations of and the existent socio-political protocols between the crown, commons, and members of the governing gentry.[93] The difficulties Charles encountered were partly inherited and shaped by forces outside of his agency. A period of economic expansion between 1540 and 1590, in which foodstuffs rose 167% in value, was followed by a sharp decline in cereal prices due to overproduction and the beginning of Thirty Years' War on the continent, which exacerbated difficulties by closing markets for already engrossed agricultural production and England's economic cornerstone, the cloth trade.[94] Additionally, in the first years of his reign, Charles was urged by Parliament and the nation at large to carry on costly wars against France and Spain for which he was never granted ample subsidies. Within these crosscurrents of European commercial collapse and military firestorms, Charles did much to alienate some and endear others, while nevertheless consistently and unintentionally reconstructing social networks and forums for political action or, as Stone puts it, "weld[ing]

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[92] Stone, "English Revolution," 96.
[93] Sharpe notes that practically all the revisionist historians and their critics "have tended to concur on one thing: that however serious the problems of the early Stuarts and their relations with parliaments, they were made a great deal worse by Charles I than by his father." Sharpe's work is largely a move against the historical determinism and endemic autocracy other scholars have read into the events of Charles's rule during the 1630s. Kevin Sharpe, *The Personal Rule of Charles I* (New Haven: Yale University Press, 1992), xvi.
[94] See Spufford, *Contrasting Communities*, 48.

together the naturally disparate forces of opposition."[95] L.J. Reeve, who provides a none-too flattering portrait of Charles Stuart as regent, dubs his program of governance a "new politics," defined as "the politics of a non-parliamentary England [. . .] an increasing resort to exclusive government, conspiracy and dissent at home . . . and the eventual breakdown of the critical relationship between the administration of domestic affairs and foreign policy . . . an internal assault on the customary framework of English politics."[96] In contrast, Kevin Sharpe re-characterizes what historians have called Charles's period of non-parliamentary "personal rule" as a course of "reform and retrenchment at court."[97] Freed by the assassination of the court favorite and *de facto* ruler the Duke of Buckingham in August of 1628, and reeling from a contentious, uncooperative Parliament of 1629 in which, as Charles interpreted the situation, a faction sought to "break . . . through all respects and ligaments of government, and to erect an universal over-swaying power to themselves, which belongs to us and not to them," Charles I unwittingly set off on an eleven-year stretch of instituting reformist and sometimes autocratic policies without the advice of the Commons or Lords.[98] Part of his program consisted of a reversion to the ordinances of Henry VIII and a reinstitution of aristocratic privilege. Charles displayed greater concern with distinctions and degrees, issued dictates regulating the behavior of court attendants, and became more reclusive to obsequious visitors and public appearances. He ordered gentry residing in London back to their county seats, imposed a guild structure on certain trades and crafts, issued fines for distraint of knighthood that successfully brought

[95] Stone, "The English Revolution," 100.
[96] L. J. Reeve, *Charles I and the Road to Personal Rule* (Cambridge: Cambridge University Press, 1989), 3.
[97] Kevin Sharpe, "The Personal Rule of Charles I" in *Before the English Civil War: Essays on Early Stuart Politics and Government*, ed. Howard Tomlinson (London: Macmillan, 1983), 57.
[98] Charles Stuart, "His Majesty's Declaration to all his Loving Subjects, of the causes which moved him to Dissolve the last Parliament, 10 March 1629," in *The Stuart Constitution*, ed. J. P. Kenyon (Cambridge: Cambridge University Press, 1976), 72.

£173,537 into the Exchequer,[99] prosecuted anti-enclosure statutes, dunned the higher orders for scutage (payment in lieu of military service), revived medieval forest laws, leaned more heavily on the Star Chamber to raise revenue, approved fen drainage projects promoted by early capitalist adventurers, and, even before appointing Laud Archbishop of Canterbury, sought to reinvigorate the Anglican Church with a return to more intricate ceremonial proceedings, altar railings, and vestments that struck many as a reintroduction of Catholic practices. But the most infuriating pursuits and practices of Charles's personal rule were the transformation of ship money into a recurring levy exacting £800,000 between 1634 and 1640; the build-up of military presence in Ireland as a potential staging post for an invasion of England (for which the Lord Deputy of Ireland, the Earl of Strafford was executed); and the imposition of new English liturgy and modalities of enforcement upon Scotland, which compelled Charles to fight a series of expensive Bishops' Wars without the consent of a parliament – an action which, as Conrad Russell notes had not been done since 1323, and one that ultimately forced Charles to call parliaments to raise subsidies.[100] In Anthony Fletcher's opinion, "The frustrations of a decade when the localities had no voice at Westminster and the coincidence during that decade of a series of outstandingly vexatious political programmes – ship money, war with Scotland, Arminianism – undoubtedly did much to inculcate the notion that the Stuarts did harbor some kind of overall political design which could be effectively resisted only by co-ordinated

[99] Sharpe, "Personal Rule," 68.
[100] For ship money, see Richard Cust, *Charles I: A Political Life* (Harlow, England: Pearson, 2005), 191; and Sharpe, "Personal Rule," 69-74. For the Bishops' Wars see Peter Donald, *An Uncounselled King: Charles I and the Scottish Troubles, 1637-1641* (Cambridge: Cambridge University Press, 1990); and Conrad Russell, "The Nature of a Parliament in Early Stuart England," in *Before the English Civil War: Essays on Early Stuart Politics and Government*, ed. Howard Tomlinson (London: Macmillan, 1983), 148.

action."[101] Hence, hitherto unacknowledged currents of social reorganization and mechanisms of state began to surface as Stuart hegemony (momentarily) collapsed.

These social and military-fiscal arrangements were not born of Charles's downfall, but his downfall gave them ample cultural and political space for solidification and expression. Rather, the non-linear, non-aristocratic social power dynamics of the Interregnum era and beyond were instigated by durable and slow transformations in English political economy reaching back decades but now quickened by the fractious challenges to traditional sources of authority and the dire conditions of civil war. To be certain, as B.A. Holderness declares, "aristocracy did not fall before the rampant agrarian capitalism of the new men" but it was made porous, decentered, and destabilized as a singularly vainglorious synonym with economic fortitude, for "in none save England was the fabrication of new gentry so widespread, commonplace or so much of a business enterprise."[102] Landed wealth was still the measuring rod of political participation, but the avenues to proprietary acquisition and forms of wealth had been multiplying across moneyed social divisions even before the civil war increased pressures to form inchoate but financially sound political alliances. According to Jan de Vries:

> Not only did important sectors of the bourgeoisie assume aristocratic characteristics and depend on a seigneurial economy for their profits, but many noble families became heavily involved in the bourgeois activity of capital investment. [. . .] The power of money clearly exceeded the power of birth. The upper reaches of both nobility and bourgeoisie were severed from their respective lesser comrades and bound together by their administration of large pools of capital, their involvement in crown finance, and sometimes even their participation in such activities as mining, ironmaking, and canal building.[103]

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[101] Anthony Fletcher, "National and Local Awareness in the County Communities," in *Before the English Civil War: Essays on Early Stuart Politics and Government*, ed. Howard Tomlinson (London: Macmillan, 1983), 153.
[102] B.A. Holderness, *Pre –Industrial England: Economy and Society from 1500 to 1750* (London: J.M Dent & Sons, 1976), 38, 37.
[103] Jan de Vries, *The Economy of Europe in the Age of Crisis, 1600-1750* (Cambridge: Cambridge University Press, 1976), 234.

The civil wars and political experiments of the Interregnum (republicanism, Parliament of Saints, Protectorate, and Rule by Major-Generals) introduced significant changes to the state fiscal and military apparatus that was then able to absorb and nurture to maturation the preexisting socially mobile groups already continuously amalgamating financial and political capital. As Patrick O'Brien details, the paroxysms and potential political alternatives unleashed by this short period installed lasting ideological and state structures that supported (much better than England's rivals on the continent) "the provision of internal stability, external security, and securing gains from global commerce."[104] First, the Interregnum produced a political consensus to sustain a well-funded, centralized apparatus of monarchical rule, with an independent revenue stream supplied by duties and indirect taxation. Second, the decade witnessed the augmentation of standing military and naval capacities to establish colonial outposts, protect commercial interests abroad, and promote the interleaving of mercantile and military financial networks. Third, it etched regular and thorough parliaments into the fabric of state, which, combined with the now obvious need for an expanded army and navy, immensely increased tax revenues that climbed consistently to 1800.[105] These structures found a firm foothold in English technologies of state after 1660 because they served the interests of both landed and commercial elites.[106] England began to enjoy a steady elevation in its geopolitical predation on European competitors and a domestic social rapprochement encouraging private investment, innovation, and oligarchic partnerships spanning population strata. The middle and upper sections of gentry and mercantile communities drew closer together while those in a position to deploy financial capital were

[104] Patrick O'Brien, "The Nature and Historical Evolution of an Exceptional Fiscal State and Its Possible Significance for the Precocious Commercialization and Industrialization of the British Economy from Cromwell to Nelson," *The Economic History Review* 64, no. 2 (2011): 431.
[105] Ibid., 428.
[106] See Paul Slack, *The Invention of Improvement: Information and Material Progress in Seventeenth-Century England* (Oxford: Oxford University Press, 2014), 257.

provided enough political capital to influence social life. The consequence of the mid-century "crisis" was a rapid propulsion of segments of the nation, still entangled with customary medieval practices and bureaucracy, into formations of state that would best support capitalist modes of domestic agriculture and global commercial expansion.

The resultant social matrix of the mid to late-seventeenth century was one shaped by the epoch's steep economic intensification, and thus it was riddled with interpersonal and institutional displacements belying as false (or at least geriatric and decrepit) an older "pederastic" hierarchy and social economy that tracked power as a linear outflow from the court and gauged cultural-economic salience by a proximity to the king.[107] Center-out, superstructural proclamations like the divine right of monarchs, non-parliamentary ship money taxation, and the court masque (e.g., Carew's *Coelum Brittanicum* or Davenant's *Salmacida Spolia*) did not chime with the non-dynastic political and economic actualities of England's base. By mid-century, ejections from traditional manorial and patronage networks were occurring simultaneously with an alignment of the proto-bourgeoisie and political channels, leading to marked tendencies of what J.A.W. Gunn calls "anachronistic liberalism" in early modern English culture.[108] The movement of capital supporting these arising (or in some cases simply enlarging) agro-mercantile economies of scale had profound impacts on patterns of association and authority between human and nonhuman animals. Nearly all sources agree that the seventeenth century was a period of marginalization and erasure of small holdings, customary use-rights, and

[107] The use of the term pederasty is borrowed from King who uses the word to signal an economy of courtly power: "Courtiers, male and female, flaunted their subordination as the mark of their favor. They displayed, proudly, their proximity to sovereign spectacle as the sign of their preferment. I investigate the pleasures to this traditional economy as "residual pederasty," by which I mean to signal the bodily enactment and reproduction of early modern subjection and thus the discontinuity of pederasty from a modern economy of heterosexual, homosexual, and bisexual subjectivities." Thomas A. King, *The Gendering of Men, 1600-1750: The English Phallus* (Madison, WI: University of Wisconsin Press, 2004), 5.

[108] J.A.W. Gunn, *Politics and the Public Interest in the Seventeenth Century*, ed. Michael Hurst (London: Routledge and Keegan Paul, 1969), 233.

independent producers. Wallerstein, Clay, Thirsk, Kussmaul, Butlin, Mingay, McRae, and Spufford (among others) cite the cause as the growth of the large estate by methods of engrossing (combining) holdings and enclosing the commons, with the transfer of vast amounts of land into non-noble hands. Butlin opines that the "active land market favoured the initiatives of 'capitalist' farmers and the concentration of land in fewer hands."[109]According to Wallerstein, the prototypical manorial arrangement was superseded by "the prosperous tenant-farmer" who controlled "the great estate as a capitalist structure that needed intermediaries to oversee the direct producers."[110] Thirsk phrases it another way: on large arable farms "the semi-feudal conditions underlying ideals of this kind were beginning to give way to a specifically commercial nexus between masters and men."[111] And McRae states that "the meaning of agrarian England shifted accordingly from a site of manorial community and moral economy toward a modern landscape of capitalist enterprise."[112] For tenants, short-term economic rents based on transient market fluctuations tended to replace long-term rights in land. Landlords frequently replaced freeholds and copyholds with more limiting leaseholds while tenants turned to seasonal wage laborers for the bulk of their workforce.[113] For hired laborers, commercial agriculture meant increasing specialization and a narrowing of reproducible tasks.[114] G.E. Mingay states that "between 1660 and 1740 members of newly-rich families – merchants, war financiers and contractors, professional men – were trying to establish themselves among the gentry and were ready purchasers of land that would help build up an estate" and thus "the

[109] Butlin, "Enclosure of Open Fields," 75-76.
[110] Wallerstein, *Modern World-System II*, 88.
[111] Thirsk, *Agrarian History*, 440.
[112] [112] Andrew McRae, *Good Speed the Plough: The Representation of Agrarian England, 1500-1660* (Cambridge: Cambridge University Press, 1996), 7.
[113] See C.G.A. Clay, *Economic Expansion and Social Change: England, 1500-1700*, vol. 1, *People, Land and Towns* (Cambridge: Cambridge University Press, 1984), 85-99;
[114] McRae, *God Speed the Plough*, 17.

copyholders for lives or terms of years were forced out in favour of capitalist farmers who could farm for the market more productively."[115] Between 1660 and 1710, modest freeholders in Sherington, Buckinghamshire were squeezed out by insolvency as town denizens became absentee owners.[116] In the north of Hampshire prior to the civil war, farmers were already committed to large-scale agricultural production and pasturing that relied on considerable quantities of wage laborers. It is no mere coincidence that during the ensuing conflict, political commitments followed economic arrangements and the majority of Hampshire's MPs backed Parliament against the king.[117]

Ann Kussmaul has traced the survival but overall decline in the status and number of servants inversely proportional to the aggrandizement of estates and number of hired workers from 1600 to 1800. Servants, unlike hired workers, were contracted on a year-long basis of service or apprenticeship, lived on the estate, and were considered part of the master's household. Even beyond the eighteenth century servants were a necessary feature of rural agriculture, but the reduction in their numbers and minimization of status betrayed discontinuities in the pattern of paternalistic estate management.[118] A.L. Beier reinforces Kussmaul's findings noting that between 1520 and 1700 the number of "living-in workers" declined by fifty percent and accounted for only ten percent of the population (down from twenty percent).[119] As Mark Girouard highlights, these changes were reflected in the very protocols and architecture of the country manor house. Concomitant with the decreased numbers of servants

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[115] G.E. Mingay, *Enclosure and the Small Farmer in the Age of Industrial Revolution* (London: Macmillan, 1968), 28.
[116] Thirsk, *Rural Economy*, 192.
[117] See Andrew M. Coleby, *Central Government and the Localities: Hampshire, 1649-1689* (Cambridge: Cambridge University Press, 1987), 1-14.
[118] See Ann Kussmaul, *Servants in Husbandry in Early Modern England* (Cambridge: Cambridge University Press, 1981), 1-27.
[119] A.L. Beier, *Masterless Men: The Vagrancy Problem in England, 1560-1640* (London: Methuen, 1985), 23.

and slump in their social status (from elder and younger sons of gentry to those of a middling/professional class background), were two architectural innovations that sought to occlude servants from public view, and as the servants receded so did formalized ceremony. Around 1650, Roger Pratt introduced a manor house design that banished servants from their traditional place in the great hall to a 'little hall' adjoining the kitchen and controlled their once conspicuous movements from rooms of labor to the lord's chambers with the systemization of a network of backstairs. It was Pratt's opinion that country houses should be conceived in such a manner that "ordinary servants may never publicly appear in passing to and from for their occasions there."[120] Since live-in servants were the primary invested caregivers and mediators between masters and nonhuman sentient creatures, the loss of propinquity between master and servant was an index of change reflecting a tantamount loss of proximity and devaluation in ethics of care between master and nonhuman animals attached to the estate.

England's acceleration into capitalist modes of agriculture transfigured the overwhelming prevalence of small scale husbandry into biopolitical frames for classifying, managing, and reproducing nonhuman sentient life at the level of populations. Margaret Spufford avers that the "biggest single factor" in this and the intensification of large-scale agrarian endeavors in general, was "the extension of cultivated area by the clearance or reclamation of new land," of which "fen drainage schemes were the most striking example, both of this process, and also the type of improvement which demanded capital outlay."[121] Concerning the process, masses of draft animals and human wage laborers were recruited in astounding numbers, purchased by joint-stock operations, like that of Francis Russell and his son, the Fourth and Fifth Earls of Bedford

[120] Roger Pratt, *The Architecture of Sir Roger Pratt* (Oxford, 1928), 64, quoted in Mark Girouard, *Life in the English Country House* (New Haven: Yale University Press, 1978), 138.
[121] Spufford, *Contrasting Communities*, 53.

(also the developers of Covent Garden), to clear 300,000 acres of the uncultivated East Anglian "wastes" harboring vibrant, diverse ecosystems. Mammals adapted to marshy freshwater habitats, mammals such as the water vole, Daubenton's bat, and otter, were crowded into straggling, diminished peat fens, while the watery and arboreal homes of profuse fish and fowl were razed, destroying or evicting species populations of marsh-harrier, bittern, great bustard, ruff and reeve, black-tailed godwit, black tern, Montagu's harrier, Savi's warbler, bearded titmouse, grey-lag goose, spotted crake, and short-eared owl. This ecological fallout of the early modern fenland reclamation projects moved one sympathetic Cambridgeshire natural historian to lament, "Owing, however, to the gradual drainage of the Fens and consequent extension of cultivation . . . Cambridgeshire can now lay claim to but little of her ancient glory as a paradise for birds of the moor and morass."[122] Concerning the product of drainage schemes, the more intensive arable agriculture arising from recovered lands, combined with procedures of enclosure by agreement, piecemeal enclosure, and engrossing, according to Thirsk, placed a "universal pressure on grazing."[123] Smallhold farms of five acres or less slowly disappeared. Modest husbandmen on the commons who owned less than ten cattle, twenty sheep, and a few pigs were herded from the land along with cottagers and peasants dependent on their formerly protected access to once abundant fish and waterfowls.[124] In 1597 Lord Willoughby complained that the capital investment of recovery would unavoidably diminish the independence of commoners and destroy their self-sustaining environmental economies: "a poor man may . . . make more commodity of a fen full of fish, fowl, and reed, rented for little or nothing, than of ground made

[122] A. H. Evans, "The Birds of Cambridgeshire," in *Handbook to the Natural History of Cambridgeshire*, eds. John Edward Marr and Arthur Everett Shipley (Cambridge: Cambridge University Press, 1904), 75-76.
[123] Thirsk, *Agrarian History*, 205.
[124] Eric Ash, *The Draining of the Fens* (Baltimore: Johns Hopkins University Press, 2017), 33.

pasture and improved to high rent, as the charges of draining will require."[125] A model of large-scale but concentrated tillage and "high productivity pastoralism without nomadism" became the norm, as evinced by one Crowle manor husbandman who boasted of supporting 200 more cattle after drainage.[126]

Pasture farming of sheep and cattle prevailed in areas formerly devoted to a mixed corn and cattle economy because "economically it had every advantage for the large farmer."[127] Grazers began to dominate Leicestershire, the Midlands from Chiltern to Trent, and the Weald in Kent and Surrey.[128] In 1663 a duty imposed on imports of fat cattle and sheep from Ireland (which were numbering approximately 100,000 per year in 1621) initiated an incentivized program for domestic production, which found consummate protection in the Irish Cattle Act of 1667 prohibiting the importation of all Irish livestock. A peak in meat and tallow prices at the time of the Restoration followed its scarce supply during the civil wars. Prices remained high to the end of the century with more farming operations turning to fattening cattle, turkeys, geese, pigs, and sheep for slaughter.[129] A confluence of market pressures and the technological means for improving production demanded larger aggregate livestock numbers. The introduction of turnips, grown as a hitch crop for feeding animals, liberated farmers from the natural stint imposed by the seasonal, land, and capital restrictions of growing hay.[130] J.A. Yelling also notes that the enclosure and consolidation of farms into larger units created the productive capability of expanding and supplying domestic and export markets for meat, "for it was fattening pastures

[125] Lord Willoughby to the Earl of Essex, HMC, *Report on the . . . Earl of Ancaster*, 337–38 (n.d. [1597]), quoted in Ash, *Draining of the Fens*, 34.
[126] Wallerstein, *Modern World-System II*, 84; Lindley, *Fenland Riots*, 17.
[127] Thirsk, *Agrarian History*, 210.
[128] See Charles Wilson, *England's Apprenticeship, 1603-1763* (London: Longmans, 1965), 147.
[129] Wilson, *England's Apprenticeship,* 149.
[130] Clay, *Economic Expansion*, 1:131-32.

above all that the common fields and wastes did not provide."[131] Thus, an assertion of ecological sovereignty over common wastes extirpated reticulate existing ecosystems of the fens and common grasslands, and replaced them with a more extensive market for animal flesh that nudged the predominant associative links between human and bovine animals from a zone of long-term mutual sustenance and labor to an area of unidirectional, short-term fattening for ingestion. This, along with the strengthening of the woolen cloth market (and attendant restrictions on exports of raw wool), increased the overall presence of livestock "units," with the sharpest climb evident in the number of cattle in places like the Woodland District of east Worcestershire.[132] By 1699, the economist, MP, and government factotum Charles Davenant could confidently state in the reduced terms of exchange value that

> it seems more to the National Interest of England to employ its Land to the Breeding and Feeding of Cattle, than to the Produce of Corn; For as Mr. Fortrey has well noted 'The profit of one Acre of Pasture in the Flesh, Hide and Tallow of an Ox, or in the Flesh, Wools and Tallow of a Sheep, or in the Carcase of a Horse, is of so much greater value abroad, than the like Yield of the Earth would be in Corn; that the Exportation of this nation might be at least double to what it is, if rightly dispos'd.'[133]

Drawing on Samuel Fortrey's earlier tract *England's Interest and Improvement . . .* , Davenant recasts livestock animals in heightened terms of economic abstraction without internal limitations. Land does not hold entire and discrete oxen, sheep, or horses; it holds a volume of itemized commodities measured in corn prices. The entire animal is a nexus of capital. Flesh, hide, and fat are rated not for what they provide husbandmen and owners, but for their profitable fungibility on a protean, centrifugal plane of international commerce. When internal subsistence in the latter seventeenth could be met with contemporaneous levels of domestic agricultural

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[131] Yelling, *Common Field and Enclosure*, 183.
[132] Ibid., 184.
[133] Charles Davenant, *An Essay upon the Probable Methods of Making a People Gainers in the Ballance of Trade* (London, 1699), 88-89.

production, envisioning non-sentient life as pure export commodity was a quite logical and simple outcome for the London economist. As market potential encompassed Europe, the Atlantic colonies, and the East and West Indies, livestock became a form of international currency and the conceptual interloper GDP edged out a far less profitable but more intimate and restricted human-animal relationality. A ballooning export economy was supplanting benefits of numerical limit and proximity with the profit of scale and distant circulation.

A praxis and mentality that transfigured quadrupeds into globally transferable bits of capital would not have been possible in seventeenth-century England without the polygamous union of international commerce, capitalist agriculture, and state support in the forms of military aid, charters, monopolies, and policy initiatives. The nation's economic precociousness was contingent on synergy between these three fields of globalized action and how each field could manipulate and augment a continuous flow of money and liquid commodities amid an army of hostile European competitors. The English state's relation to its trade can be demarcated relatively easily into passive and active phases perceptibly divided by the 1651 Navigation Acts. The latter active phase was possible and comprehensible only through the formation of mercantilist patterns of thought in the argument on free trade and the passive support (charters, exclusive privileges, privateering, monopolies, state approved deportations) of joint stock companies in the first half of the century. It was in this early phase that fiscal oligarchies gained a managerial and colonial foothold while key theoretical points on regulated trade were contentiously formulated. In the initial decades of the seventeenth century, the nature of trade companies followed the transformations in markets and marketable merchandise and shifted from a guild model, like that of the Merchant Adventurers, to joint-stock pools of capital mobilized by vetted and contracted merchant professionals. Corporate boards of directors began

littering London and measuring growth by the number of bodies connected to a network of commodities. Dispersed investors connected with itinerant traders, not through shared expertise, regional affiliations, or mutual institutional goals, but through the fluid transfer of capital. These companies, even prior to direct state intervention, became bloated as more overseas market ventures opened up. The Levant Company (chartered 1592) had 572 members prior to 1630; the Spanish Company (1530, first iteration; 1604, second iteration), 1,096 members; the East India Company (1600) touted 1,318 members; and the Virginia Company (1606), 1,684 members. Alison Games notes that "companies contained overlapping membership, as investors diversified their portfolios" and thus sought to maximize returns without any particular creed of company loyalty or total personal investment. Thirty percent of the East India Company's membership belonged to the Levant Company, while forty-two percent of the Levant Company owned stock in the EIC.[134] Forty percent of the Virginia Company members held shares in other joint-stock operations.[135] English traders could be found around the globe functioning as emissaries and ambassadors, often serving as the only point of contact between England and distant regions like Hirado, Japan. Because joint-stock monopolies were able to consolidate and then mobilize serious amounts of capital, by the early 1620s the state's relation to joint-stock companies leapt from one of ambivalence to increasing involvement and dependence.

There were a couple of factors that solidified a closer marriage between state architectonics and the fiscal programs and infrastructural capacities of merchant armies in the third decade of the century. The first was a severe depression caused by bad harvests and the outbreak of the Thirty Years War. Every aspect of the English economy was disrupted during

[134] Alison Games, *The Web of Empire: English Cosmopolitans in an Age of Expansion, 1560-1660* (Oxford: Oxford University Press, 2009), 83.
[135] Ibid., 118.

this period of stagflation: grain agriculture, coal mining, cloth exports, wool trade, cottage industries, and the import-export balance. In the search for solutions, the Privy Council turned to the advice of merchants while an ad hoc committee on the decay of trade was initiated in the Parliamentary Commons' session of 1621. It was during this period that Thomas Mun published two works that have been interpreted by early modern economic historians as seminal in the establishment of mercantilist discourse (sometimes verging on doctrine): *A discourse of trade, from England to the East Indies* (1621) and *England's treasure by forraign trade* (written 1623; published 1664). Mun, a director in the East India Company since 1615, sat on the Privy Council's subcommittee whose stated purpose was to uncover the true causes of commercial decay and dearth of coin. Mun's answer to the committee's prime interrogative formed the basis of a balance of trade theory: "The ordinary means therefore to encrease our wealth and treasure is by *Forraign Trade*, wherein we must ever observe this rule; to sell more to strangers yearly than wee consume of theirs in value."[136] In Mun's commercial model, it was not money's retention that enriched the nation (in England that only led to stagnation given her lack of ore deposits), but rather its function as an appendage to commodity exports. If money were used to purchase foreign wares, then England could most profit from their re-exportation at the same time she increased employment (and thus the circulation of money) in areas of shipping, receiving, construction, and customs. "For although in this manner wee do yearly multiply our importations . . . our consumption is no more than it was before so that all the said encrease of commodities brought in by the one means of our ready mony sent out as is afore written, doth in the end become an exportation unto us of far greater value than our said moneys were."[137] Mun's

[136] Thomas Mun, *England's Treasure by Forraign Trade; or, The Balance of our Forraign Trade Is the Rule of Our Treasure* (London, 1664), 11.
[137] Ibid., 37-38.

model broke with the past because it made coin liquid and placed it in the service of circulating commodities; money was just one transferable commodity among others. According to Joyce Appleby, "Mun created a paradigm. He abstracted England's trade relations from their real context and built in that place an intellectual model. The shipment of goods, the exchange of bills, the trading of commodities became parts of an overall, unseen commercial flow, which moved independently of the specific, the personal, and the concrete."[138] Mun's economic paradigm shift to international circulation and endless commodity fungibility altered the terms in which political economy should and could be thought, and thus subsequent discourse on trade and state commercial initiatives progressively placed more emphasis on two things: 1. seeking policy input from joint-stock directors and granting moderate political powers, especially in zones of foreign occupation, to trade companies; 2. enlarging the mechanisms by which the state could reinforce or manipulate the flow and mutability of commercial capital.

Lines between merchant and administrative office holder became increasingly blurry as commerce and the state's revenue streams redundantly implicated one another. For a corps of economic progressives, "merchant" became a shibboleth for ethical governance and personal profit synonymous with national interest. One early modern foreign trade exponent offered the following thicket of punctilios, encomiums, and logorrheic furbelow:

> [The merchant's] *traffique* is likewise seen to bring Riches into the common purse by *customes*, *imposts*, and *duties*: and thereby may be said to perform the part of the *wealthy* and most *eminent therof*. He is seen by his wisedome, travell, and experience abroad, to be able oftentimes to sit at the *stern* of the Cities *government*, punishing the vicious, rewarding the virtuous; and herein he performes the part of a *Senator* and *Counsellor*: neither yet is he wanting in many other particulars, to perform the duety of a good *patriote* and *citizen* . . .[139]

[138] Appleby, *Economic Thought*, 41.
[139] Lewes Roberts, *The Merchants Mappe of Commerce* (London, 1638), 20.

Echoing the above sentiments, Henry Parker mapped the nation onto a polity of merchants and promoted common, entangled interests through the velleities of commercial cosmopolitanism:

> Thus is Union, or a politick Association amongst Merchants beneficiall to the places where we trade, and by resultance beneficiall to ourselves, and in the last resort beneficiall to our whole Nation: for all these interests are so interweaved, that the benefit of the Stranger is requited with the benefit of the *English* Merchant; and the benefit of the *English* merchant is to be regarded as the benefit of the *English* Nation.[140]

Nicholas Barbon, too, in a logic of quantitative utilitarianism, lauded international trade and its adherents as the post-feudal economic vanguard: "The Nation is accounted rich, when the greatest number of the Inhabitants are rich. And they are only made rich by Industry, Arts, and Traffick."[141] And Sir Dudley North imitated the clerisy of trade theorists in more succinct phrasing: "wherever traders thrive, the public, of which they are a part, thrives also."[142] None of the above should be considered just impotent, self-congratulating (or exonerating) rhetoric and raillery of early modern profit seekers, though it most certainly is that to a degree. Embedded in most of these economic tracts was a determined and often quite successful lobbying component to influence lawmakers' (including the king's) decisions. The merchant, as the common trope went, was not just a metaphorical expression of English rule abroad (ambassador, senator, or representative), his activity did not take place in a separate sphere and then offer like a nursing mother a benison to the nation; the merchant was an extension of government itself, or at least, how a government should be run with the promotion of foreign trade as its chief fiscal concern. What these tracts proposed, in short, was an alliance of merchants with the legal operations of the state, for without alliance the two would falter. "In a Trading Nation, the Bent of the Laws

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[140] Henry Parker, *Of a Free Trade* (London, 1648), 13.
[141] Nicholas Barbon, *A Discourse Concerning the New Money Lighter* (London, 1696), 48
[142] Sir Dudley North, *Discourses Upon Trade* (London, 1691), Preface, B^{v}, quoted in J.A.W. Gunn, *Politics and the Private Interest*, 246.

should tend to the Encouragement of Commerce, and all Measures should be there taken, with a due regard to its Interest and Advancement," proposed Charles Davenant,"[143] while Thomas Tryon warned, "For what thing soever is a damage to our Manufacture, or Weight upon our Foreign Trade beyond what it can bear up under, stabs it to the Heart: hereby the Subject is disabled: but when our Manufactures are incouraged, and our foreign Trade made easie, and firmly secured, our Lands then will be advanced."[144]

As trade companies grew in national importance, the knot of political and commercial interests grew thicker, more labyrinthine, and more contumacious to attempts at disentanglement. Capitally robust joint-stock companies functioned as political units and fulfilled *de facto* the state functions of government abroad: assuring compliance, maintaining courts, securing sea routes, subjugating hostiles, regulating exchequers, etc. The East India Company mogul, Josiah Child, stressed the "general opinion" that the fixed capital requirements for continuing overseas occupation, government, and commerce could only be met by the resources of a joint-stock company: "There is a necessity of a joynt-stock in all forreign Trade, where the Trade must be maintained by Force and Forts on the land, and where the King cannot conveniently maintain an Amity and Correspondence by Ambassadors, and not elsewhere." Therefore, he reasoned in a circular fashion, that "a mixt Assembly of *Noble men*, *Gentle-men* and *Merchants*, are the best Constitution for the making of *Rules, Orders,* and *By-Laws* for the laws for the carrying on any *Trade* for the publick utility of the *Kingdom*."[145] Similarly, Charles Davenant, after itemizing the enormous outlay of the East India Company to control the pepper trade, analogized the EIC to a "government [that] may be render'd immortal" by extending to it charters, rights, and exclusive

[143] Charles Davenant, *An Essay on the East-India Trade* (London, 1696), 10.
[144] Thomas Tryon, *England's Grandeur, and Way to get Wealth: Or, Promotion of Trade Made Easy, and Lands Advanced* (London, 1699), 2.
[145] Josiah Child, *A Discourse Concerning Trade, And that in Particular of The East-Indies* (London, 1689), 2, 1.

privileges in perpetuity.[146] The curvature of support and mimetic action was not simply a convex distension from central authorities in Whitehall and Westminster to colonial joint-stock holdings on the periphery. A concave reciprocity gripped the levers of state as the fiscal mechanics of government latched onto and reflected company procedures, generating personal profit for government investors and an imposingly robust portion of crown wealth from monopolies, shipping, excise, customs, and duties in addition to the diminishing staples of property and hearth taxes. Charles Wilson expresses that after the Restoration, the Privy Council entrusted a generous amount of policy formulation to committees (Trade and Foreign Plantations) "heavily weighted with merchant members," and that crown servants who sat in the Commons and on Privy Council committees could also be counted among the board of directors of the major joint-stock enterprises. [147] Vested individuals like William and Henry Coventry, Sir George Downing, Sir Joseph Williamson, Sir Leoline Jenkins, Sir William Blathwayt, and Sir Josiah Child (who perched on the Board of Trade beginning in 1695) functioned as powerful brokers between corporate, personal, and governmental interests.[148] It was never clear whether these men and others were operating in a legislative or personal capacity, since the two were so enmeshed in the fabric of economic expansion. Both Charles I and Cromwell conflated private interest with forms of legal redress, lending support to East India competitors William Courteen (financier for the colonization of Barbados) and his association of factors, with Cromwell going so far as to suspend the EIC's monopoly from 1654-57.[149] Members of the royal family and its proxies (Queen Catherine, Prince Rupert, the Duke of York, the Queen Mother Henrietta Maria, and the

[146] Charles Davenant, *Discourses on the Publick Revenues, and on the Trade of England*, 2:422. See 2:421 for details on East India Company efforts and expenses in the pepper trade.
[147] Wilson, *England's Apprenticeship*, 166.
[148] Ibid., 167.
[149] Stern, "Companies," 180.

Duke of Buckingham) owned significant shares in the Royal African Company, and Prince Rupert took the title of governor of the Hudson's Bay Company.[150] The acts of governing and profiteering, as was commonly known, were shaded throughout with long strokes of gray.

The second factor compelling more state involvement in international trade was the dexterous ferocity of Dutch competition. The English enviously and anxiously watched as the Dutch East India Company (VOC) took control of the Indonesian archipelago and Malaya using strategies of "internalized" protection that constituted an aggressive military takeover of desired outposts.[151] After three years of open hostilities between the two nations were concluded by a treaty in 1619, the VOC set up headquarters on the island of Java and strung together outposts on the Moluccas in Ternate (1607) and Ambon Island (1623). To dominate the nutmeg trade, the Dutch descended upon the Banda Islands in 1621, eviscerated the island of its indigenous inhabitants, and replaced them with an enslaved population imported from Africa. The monopsony of the spice trade in the East Indies boded ill for the future of the English East India Company's (EIC) trade in the region, but the immediate triggers of despair followed by retaliatory action were the establishment of the Dutch West India Company (WIC) in June 1621, prompting the United Provinces' further ingress into the infant English colonial territory in the Caribbean and North Atlantic, and the trial, torture, and decapitation of ten factors (agents) of the EIC at Castle Victoria in Amboina (Amboyna) in 1623 – a condign punishment, so the VOC argued, for a conspiratorial EIC breach of treaty. The English response was to flip the script and claim that the VOC trial of alleged conspirators was itself a component of a broader Dutch conspiracy to control Southeast Asian trade. With scant evidentiary support but an intoxicating mixture of fact and calumny, the EIC commissioned its official response in 1624, *A True*

[150] Wilson, *England's Apprenticeship*, 173.
[151] See Parker, *Global Interactions*, 91.

Relation of the Unjust, Cruell, and Barbarous Proceedings against the English at Amboyna In the East- Indies, by the Neatherlandish Governour and Councel there, with gratuitously violent woodcuts depicting VOC torture of English subjects. The EIC polemicist John Skinner claimed that the judicial "ground of this Barbarous and tyrannous proceeding was a true crime, and not the insatiable covetousnesse of the Hollanders by this Cruell Treachery, to gayne the sole Trade of the Moluccas, Banda, and Amboyna, which is already become the event of this bloudy Processe."[152] Alison Games details that the longevity of the pamphlet's rhetoric and the haunting afterlife of martyresque images of torture at Amboina, even the crystallization of the trial and executions as a "massacre," were "largely a by-product of the EIC's shrewd use of print culture to disseminate its interpretation in 1624."[153] Amboina became a spirited and convenient rallying cry for anti-Dutch sentiment anytime commercial disputes became heated between the two Protestant nations. The "massacre" was invoked before each of the Anglo-Dutch wars (1652-54; 1665-1667; 1672-1674) while Skinner's pamphlet was published twelve times from its 1624 introduction to 1781.[154] And, given the antipathetic and protracted resolution process, why should Amboina not have been England's jingoist mantra? The renewed Anglo-Dutch union of 1624 meant that accusations and petitions of redress had to be handled diplomatically and legally. It was not until Charles I threatened embargo against Dutch shipping in 1627 that the United Provinces convoked an investigative tribunal into the Amboina affair. And not until 1632 did the examining committee reach a decision and exonerate the indicted VOC staff, much to the resentment of the English which hobbled on in the cultural imagination for centuries beyond the

[152] John Skinner, *A True Relation of the Late Cruell and Barbarous Tortures and Execution, done upon the English at Amboyna in the East Indies, by the Hollanders there residing* (London, 1624), 70-71.
[153] Alison Games, *Inventing the English Massacre: Amboyna in History and Memory* (Oxford: Oxford University Press, 2020), 8.
[154] Ibid.

close of the first Anglo-Dutch war (1654) and an admission of Dutch culpability in the incident.[155] Unanswered questions, dour donnybrooks, indefensible justifications, addlepated diatribes, implausible prevarications, and ungrounded accusations from both nations, all against the background of conflicting imperial ambitions, slowly eroded relations and left sticky sentiments of distrust and the expectation of opportune malfeasance.

The English revolution rent the wayworn, captious tolerance that had characterized Anglo-Dutch relations in the first half of the century and catapulted England into its second, active phase of a concerted mercantilism. The 1651 Navigation Act issued by the then (more or less) English republic signaled a departure from earlier, more remote methodology of control. The state positioned itself both at the service and in a mode of cooperative management of an insufficiently autonomous economic sector. Issued under Cromwell's direction, the Navigation Act, according to Findlay and O'Rourke, formed the "basis" of the "mercantilist framework of the Old Colonial System."[156] It was reissued in more stringently enforceable terms in 1660 under Charles II and quickly followed by the Staple Act of 1663. Together, these acts constituted a circumscription of monetary leaks in the English commercial system and a consummate assault on the prolific Dutch shipping industry. The oceanic transfer of commodities was now restricted to English vessels or, for imports, vessels from their country of origin. Furthermore, English owned foreign-built ships had to be registered by 1 October 1662 or they were considered ineligible for commercial operation; the master and three-quarters of a ship's crew were to be naturalized English citizens; profit-laden goods (sugar, tobacco, cotton, wool, indigos, etc.) from

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[155] For example, John Dryden composed *Amboyna, or the Cruelties of the Dutch to the English Merchants: A Tragedy* in 1673 during the last Anglo-Dutch confrontation. For a thorough analysis of the Amboina conspiracy/massacre, the investigation, and its aftermath, see Adam Clulow, *Amboina, 1623: Fear and Conspiracy on the Edge of Empire* (New York: Columbia University Press, 2019).

[156] Ronald Findlay and Kevin H. O'Rourke, *Power and Plenty: Trade, War, and the World Economy in the Second Millennium* (Princeton: Princeton University Press, 2007), 237.

"any English plantations in America, Asia, or Africa" could only be transported to England or its dominions for re-exportation;[157] and "no alien or person not born within the allegiance of our sovereign lord the king, his heirs, and successors, or naturalized or made a free denizen [was allowed to]. . . exercise the trade or occupation of a merchant or factor."[158]

Further tightening the central government's grip on the colonial economy, the Staple Act constrained colonists to purchase all European goods from England, and those imports, unsurprisingly, were to be carried solely in English vessels.[159] The short-term tradeoff for the colonies and joint-stock merchant companies was state military and legislative support with a phenomenal boom in the overseas transportation sector. These aids were necessary against the more capacious, efficient Dutch commercial system and its colonial encroachments, until, of course, the decline of Dutch hegemony, which not only occurred in its transatlantic empire, but also more immediately, as David Ormrod argues, in the inextricably linked North Sea-Baltic trade zone and herring industry.[160] Wallerstein notes that the "percentage of world trade the English gained vis-à-vis the Dutch [is] a reflection of the successful aspects of the Navigation Acts," but it also must be noted that England's prepotency was gained at an immense cost of life and security through three distinct wars with the Netherlands from 1652 to 1674.[161] It is undeniable, however, that the English system of commerce before the revolutionary period lacked the statist élan and mercantile regulatory officiousness of what came after, and that this cross-pollination of capitalist market sectors with political power of the latter seventeenth century was overwhelmingly indebted to the premature 'Whiggish' inclinations of the socially-

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[157] Thirsk, *17th Century Economic Documents*, 523.
[158] Ibid., 521.
[159] Wilson, *England's Apprenticeship*, 164.
[160] David Ormrod, *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism* (Cambridge: Cambridge University Press, 2003), 66.
[161] Wallerstein, *Modern World-System II*, 96.

jockeyed, republican Rump Parliament of the early Interregnum, specifically at the direction of Sir Arthur Hesilrige and Thomas Scot.[162] The aberrant and temporary syzygial coordination of non-dynastic political representation with the productive commercial forces of the English economy, as exemplified in the Navigation Acts, found a welcomed retention at the Restoration. Upon the legislation's lissomeness and longevity across regimes, Charles Wilson muses, "[I]t seems that the laws worked with, rather than against, the forward march of economic forces, as a whole. They represented that growing investment of the nation's intelligence and enthusiasm in the cause of material gain."[163] The indicators of market triumph in the cinched mercantilist policies promulgated under Cromwell were inexorably intertwined with England's obstinate desire for a national advance on Dutch commercial ascendancy, and so, having proved themselves viciously effective in fending off and stunting the United Provinces, those policies endured for a century and a half, going stride for stride with the British Empire's prosperous domination of the global economy.

The scale, scope, and rate of English (later British) colonial and commercial prosperity within its unique, evolving frame of mercantilism was staggering, outstripping most, if not all, of her European imperial adversaries by 1700. Of the twenty-eight units of colonization founded in the seventeenth century, seventeen were English.[164] Between 1601 and 1700, around 177,000 British subjects immigrated to the North American continent, with a roughly equivalent number planting themselves in the West Indies and bringing a disproportionate number of African slaves with them – 12,000 and 237,000, respectively.[165] The shipping industry out of Boston, a hub for

[162] Hugh Trevor-Roper interprets Hesilrige and Scot's manipulation of policy during the Rump as a display of Whig principles in action because of their emphasis on republicanism as the necessary precursor to commercial empire. See Trevor-Roper, *Crisis of the Seventeenth Century*, 358-364.
[163] Wilson, *England's Apprenticeship*, 184.
[164] Wallerstein, *Modern World-System II*, 102.
[165] Findlay and O'Rourke, *Power and Plenty*, 231.

English imports, generated £427,000 in revenue;[166] monoculture plantation economies in places like Virginia and Maryland witnessed a rise in tobacco exports from 50,000 lbs. in 1615 to 38 million lbs. by 1700, of which about 65% was re-exported from England to the rest of Europe;[167] and the volume of rice leaving the Carolinas inflated to 90 million pounds by the 1770s.[168] West Indian imports soared from 150,000 cwt. at the time of the Restoration to 370,000 cwt. by the end of the century, with sugar and coffee dumping into the European economy from Barbados and Jamaica. British subjects consumed 24 pounds of sugar per capita in 1750, up from 4 pounds in 1699,[169] while coffee exports rose to the valuation of £873000 by 1772.[170] The EIC and Levant companies increased exports of calicoes from 240,000 pieces in 1600 to 861,000 pieces around 1700.[171] By 1772, the re-export of Indian calicoes to Europe and Africa reached the value of £701,000.[172] EIC capital rose from £400,000 in 1660 to £1.6 million in 1703,[173] and, to secure and cultivate that capital, the EIC deployed over 115,000 troops to Indian soil.[174] By the opening of the eighteenth century, the Royal African Company had exported £1.5 million worth of commodities, sailed 500 ships to Africa, and transported 100,000 slaves to plantations in the Americas.[175] Domestically, the coalmines of northeast England produced 65,000 tons per year in 1660, but by 1690 the total volume reached the heights of 1.2 million tons.[176] The resilient mainstay of rural industry, textile production, ascended, too, as cloth exports doubled.[177]

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[166] Ibid., 235.
[167] Wilson, *England's Apprentice*, 169.
[168] Findlay and O'Rourke, *Power and Plenty*, 236.
[169] Ibid., 259.
[170] Ibid., 261.
[171] Wilson, *England's Apprenticeship*, 170.
[172] Findlay and O'Rourke, *Power and Plenty*, 261.
[173] Wilson, *England's Apprenticeship*, 173-74.
[174] Findlay and O'Rourke, *Power and Plenty*, 275.
[175] Wilson, *England's Apprenticeship*, 175-76.
[176] David Loades, *England's Maritime Empire: Seapower, Commerce and Policy, 1490-1690* (Harlow, England: Longman, 2000), 219.
[177] Wallerstein, *Modern World-System II*, 91.

Merchants and investors were earning magnificent profits and often buying their way into the gentry by re-investing those profits in landed estates, hence, as J.T. Cliffe asserts, the construction boom in county estates was in large part due to the infusion of commercial wealth.[178] The reduction and subjugation of habitats abroad found its inverse equivalent in the multiplication of habitations at home. A social openness to liquid monetary ties fed into open channels for the agglomeration of capital throughout the English maritime empire, and the steady accretion of interpersonal transactions ratcheted up economies of scale that literally etched their narratives of accumulation into the face of the earth.

"Episode: Anagnorisis of Intractable Linkages"

Throughout the seventeenth century, England and its geographic network of transactions were consumed by the pervasive influence of what can be termed a liquid logic (of waste) – an endless transference of materiality into the elastic, mercurial commodity, a line of credit, quantitative improvement in productive capacities, a zone of speculative capital. This slippery mutability steadily infected coherent forms of early modern sociality, and it was not just evident in the economic to and fro of a hurried sort of urbanity. It could be identified first and foremost in the agrestic relations of the counties and consequently in the modes of cultural and aesthetic production. Everything tended toward the mobility of abstraction and reduction – the endless, global circulation of excess made austerely transferable as a foreshortened, cognizable sign, be it capital, credit, pamphlet, periodical, or printed image. The cause of England's meteoric rise to the status of commercial giant lay with its manipulative ethic of re-exportation that was, in the early phase, instigated to offset its import of naval stores from the Baltic and North America

[178] J.T. Cliffe, *The World of the Country House in Seventeenth-Century England* (New Haven: Yale University Press, 1999), 5.

trade zones and iron from Sweden.[179] English colonies were ensnared within a structure in which the center siphoned off raw materials of timber, herring, livestock, tobacco, sugar, indigo, cotton, bullion, tea, furs, rice, etc. for redistribution across Europe or back to the colonies of origin as finished products. Constant circulation of these commodities, as elucidated in Mun's prescient writings of the 1620s, was everything. In the 1660s total exports held at £4.1 million balanced against £4.4 million in imports; by 1700 exports stood at £6.4 million (of which re-exports made up more than 30%), satisfactorily overshadowing an import figure of £5.8 million.[180] London merchants prevailed over half the sea transport and owned between a third and half of all the English ships.[181] Surplus became standard fare, and England supplied a supportive framework of long-term credit and public borrowing with reduced interest rates.[182] Enticements to borrowing and reinvestment grew with the inverse decline in interest rates, with the legal maximum falling from ten percent to eight percent in 1625, to six percent in 1651, and to its ebb at five percent by the end of the century.[183] In 1672 particular revenue streams were designated to cover specified borrowings; in 1693 Parliament took over and guaranteed the national debt with the establishment of a National Bank the following year,[184] and in 1704 bills of exchange became negotiable, and therefore discountable or endorsable.[185] After 1650, provincial cities like Bristol, Newcastle, and Liverpool rose to a prominence unprecedented elsewhere in Europe, while many smaller market towns wilted in the long shadows they cast.[186] The aqueous nature of

[179] Wallerstein, *Modern World-System II*, 100-101.
[180] Wilson, *England's Apprenticeship*, 161.
[181] Ibid., 176.
[182] Wallerstein, *Modern World-Sytem II*, 117.
[183] Clay, *Economic Expansion*, 1:124.
[184] De Vries, *Economy of Europe*, 220.
[185] Ibid., 227.
[186] See Jonathan Barry, "Introduction" in The *Tudor and Stuart Town: A Reader in English Urban History, 1530-1688*, ed. Jonathan Barry (London: Longman, 1990), 6; and Peter Clark and Paul Slack, *English Towns in Transition, 1500-1700* (Oxford: Oxford University Press, 1976), 8.

commodified excess percolated the urban landscape, extending its sinuous path of exchange and leaving a residue of retail stores, coffeeshops, street lighting, and the ubiquitous presence of periodicals and daily papers replete with insistent, hyperbolic advertising.[187] Bodies lost their discreteness, holistic resonance, and immediate functionality as the most profitable and savory parts were swept away in the currents of commerce and cultural distribution. Some experienced upward mobility or enhanced socio-economic participation in the indiscriminate logic of liquidity. By 1685 a startling number of women owned approximately twenty percent of the total bonds in the East India and Royal African Companies.[188] Merchants who had made fortunes in dairy exports at the burgeoning port of nearby Ipswich purchased landed estates in Suffolk.[189] Joint stock magnates like Sir John Banks, Governor of the East India Company, and Sir William Courteen, a tenacious London merchant with active trading interests in the East and West Indies, reinvested their commercial capital in the aristocratic land market and titular rank. Banks died leaving behind £200,000 and a daughter married to the Earl of Aylesford; Courteen purchased the manor of Laxton in Nottinghamshire, substituted the customary tenures with the more lucrative leaseholds, and netted £6,500 a year from his estates alone.[190] Thomas Modyford and James Drax grew extremely rich and influential in the Barbadian plantocracy. The former, through the purchase of 500 acres at the dawn of sugar's surge in popularity, rose from the status of colonel to Governor of Barbados; the latter, after beginning with a principal investment of £300 in tobacco in 1629, prospered to become the wealthiest plantation owner on the island (and

[187] A London-based joint-stock company, Convex Lights, strove to erect a network of lamps in the streets of the city in 1684. See de Vries, *Economy of Europe*, 189.
[188] Ibid., 223.
[189] Alan Everitt, "Social Mobility in Early Modern England," *Past and Present* 33 (1966): 60.
[190] Wilson, *England's Apprenticship*, 158.

perhaps the West Indies as a whole) by 1654.[191] All of this surplus personal capital, of course, was not generated *ex nihilo*; it had its externalities and collateral sources.

The feverish pace of commoditization within the ebb and flow of the market meant that some bodies experienced a loss in social and economic status, were reduced to labor power, or, when faced with technologies of coercion and oppression, became themselves capital. The commercialization of agriculture and its arsenal of legalities (enclosure, engrossing, drainage, conversion, increased economic rents, and fines), as shown above, dispossessed the peasantry and small farmer of rights in common land and forests leading to rise of wage laboring poor and penurious migrants to urban areas. At the same time, the possibility of becoming a living-in servant faded to a memory of past socio-economic relations for many, with the percentage of those housed, boarded, and employed in households falling to a marginal ratio by 1700.[192] With the persistent influx of available laborers, real wages by the mid-sixteenth century had fallen to about half of their rates of 1500, and they hovered at that anorexic and insouciant level for the next 120 years, so that nearly the entire wage earning population of urban areas (approximately 60 to 70 percent) was consistently in need of official and charitable channels of assistance.[193] The countryside and cityscape erupted with mass numbers of destitute vagrants, vagabonds, and beggars, slowly abandoned by a decaying system of parish poor relief and facing the predations of an expanding network of extra-national capitalist accumulation. Domestic commercial agricultural formed an interlocking system with plantation economies abroad, but it was only when the state offered its coercive mechanisms at the service of economic imperatives did the indigent and criminalized feel the full weight of their compulsory abjectness. Elizabethan

[191] Hilary Beckles, "Plantation Production and White 'Proto-Slavery': White Indentured Servants and the Colonisation of the English West Indies, 1624-1645," *The Americas* 41, no. 3 (1985): 29.
[192] Beier, *Masterless Men*, 23.
[193] Clay, *Economic Expansion*, 1:219.

statutes such as the vagrancy Act of 1597, which legalized the exile of dangerous felons overseas, came to full fruition under the Stuarts and the constraints of insufficient labor supply in the colonies. Between 1619 and 1622, three hundred London youths were transported to Virginia, and in 1627 approximately 1500 children were gathered and shipped across the ocean by the Virginia Company.[194] In October 1632, the Lord Mayor and Court of Alderman bound "Fifty vagrants" as "apprentices to merchants to serve in the Islands of Barbadoes and Virginia,"[195] while similar measures were being undertaken in Kent.[196] The state-commercial partnership for the commodification of legal "outlaws" was perhaps most pronounced during the Interregnum, as attested by a 14 August 1656 order from the Council of State encouraging "the apprehending of lewd and dangerous persons, rogues, vagrants, and other idle persons, who have no way of livelihood, and refuse to work, and treating with merchants and others for transporting them to the English plantations in America."[197] This legislative framework and judicial-criminal infrastructure appended to essentially commercial operations survived the Restoration intact but with a more exacting and inclusive language of moral censure, finding revivified life in royal proclamations and proposals of May 1661 and June 1664, which urged the colonial deportation of "all vagrants, rogues, and idle persons that can give no account of themselves, felons who have the benefit of clergy, such as are convicted of petty larceny, vagabonds, gipsies, and loose persons, making resort to unlicensed brothels."[198]

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[194] Beier, *Masterless Men*, 163.
[195] "Charles I - volume 224: October 1632," in *Calendar of State Papers Domestic: Charles I, 1631-3*, ed. John Bruce (London: Her Majesty's Stationery Office, 1862), 421-434. *British History Online*, accessed July 11, 2020, http://www.british-history.ac.uk/cal-state-papers/domestic/chas1/1631-3/pp421-434.
[196] Beier, *Masterless Men*, 163.
[197] "America and West Indies: August 1656," in *Calendar of State Papers Colonial, America and West Indies: Volume 1, 1574-1660*, ed. W Noel Sainsbury (London: Her Majesty's Stationery Office, 1860), 447-448. *British History Online*, accessed July 9, 2020, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol1/pp447-448.
[198] "America and West Indies: July 1664," in *Calendar of State Papers Colonial, America and West Indies: Volume 5, 1661-1668*, ed. W Noel Sainsbury (London: Her Majesty's Stationery Office, 1880), 220-222. *British History*

Transgression of moral rectitude was just one of the markers of those reducible to capital; affiliation with a maligned ethnicity or opprobrious geographic origin was an equally common offense worthy of punitive deportation and indenture. The proto-industrialists of Northern England treated Scottish colliers as de facto serfs.[199] The plantation colony of Barbados cannibalized approximately 1,300 Africans per year and became a model for the rest of England's possessions in the Caribbean. Jamaica eventually outstripped her sister island's consumptive habits and by 1760 had crammed 173,000 captives into her belly.[200] Of the roughly 12.5 million Africans enslaved and carried as cargo via the middle passage, 3.5 million were transported by British merchants and not just sold as "laborers" to British colonies, but also, as O'Malley relates, hocked as "commodities" through backchannels of intercolonial trade with the French and Spanish in the Americas.[201] By 1690, the number of enslaved Africans in the British West Indies was 1.5 to 3 times the number of whites.[202] In the early decades of Caribbean settlement, the Irish fared little better. Hilary Beckles argues that in a plantation ethic of capital intensification, white (primarily Irish) indenture in the West Indies departed nefariously from its feudal English arrangements to become a form of "proto-slavery . . . that provided the English planters with the necessary experience for the enslavement of black labour."[203] The mass deportation and enthrallment of Irish captives reached its pinnacle with the Draconian policies of

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Online, accessed July 9, 2020, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol5/pp220-222. See also "Charles II - volume 35: May 1-17, 1661," in *Calendar of State Papers Domestic: Charles II, 1660-1*, ed. Mary Anne Everett Green (London: Her Majesty's Stationery Office, 1860), 580-590. *British History Online*, accessed July 11, 2020, http://www.british-history.ac.uk/cal-state-papers/domestic/chas2/1660-1/pp580-590.

[199] Wallerstein, *Modern World-System II*, 93

[200] Herbert S. Klein, *The Atlantic Slave Trade* (Cambridge: Cambridge University Press, 1999), 31-32.

[201] Gregory E. O'Malley, *Final Passages: The Intercolonial Slave Trade of British America, 1619-1807* (Chapel Hill, NC: University of North Carolina Press, 2014), 5-7.

[202] Hilary Beckles, "A 'riotous and unruly lot': Irish Indentured Servants and Freemen in the English West Indies, 1644-1713," *The William and Mary Quarterly* 47 no. 4 (1990): 505.

[203] Hilary Beckles, "Plantation Production," 23.

Cromwell who tenaciously heightened the magnitude and scale of transfers of prisoners and social undesirables begun under Charles I.[204] Once the Irish (many of them Catholics) had reached their destination, an ethnocentric plantocracy relegated them to the lowest "white" racial and economic status, marginally above African slaves, and condemned them to twelve hour days harvesting sugar cane in the fields. Ethno-religious ascriptions obviated legal status and made war prisoners barely distinguishable from indentures. A shared racial and ethical prejudice based on pseudo-science, naturalized cultural biases, and a threadbare moral economy layered comfortably familiar tropes over the capitalist machinery of reduction and surplus production.

The market and a potential for amplified output motivated the relegation of bodies to labor commodities; entrenched ethnic parochialism (though no doubt barbarously and sincere felt) simply made the dividing line between human and inhuman capital movable and the transition in status more justifiable. On Barbados, the plantation aspirant Thomas Verney attempted to resolve a pecuniary crisis of bad husbandry by committing himself to what would have been incomprehensible in the manorial framework of traditional English master-servant relations: he sold his indentured hands at auctions on the open market. Once he had recovered his lost capital, Thomas then wrote to his father requesting a loan that he would later use to purchase one hundred servants from Bridewell prison for his plantation. Sir Verney refused. [205] By 1652, around 12,000 servants worked in sugar production, but their value was not exclusively in their labor. According to Hilary Beckles, "servants represented in this period the most liquid form of capital on the plantation."[206] Indentured laborers were a form of alienable property and could be retailed to raise quick cash for unanticipated investments. They were capital attached to the

[204] Beckles, "Riotous and Unruly," 507.
[205] Beckles, "Plantation Production," 32.
[206] Ibid., 40.

estate, in the same category as crops, equipment, livestock, and other fixed assets, and thus their appropriated productive capacities, inextricable from their social-biological personhood, appeared in plantation accounts, wills, securities for mortgages, and deeds of sale, often with monetary value annotations.[207] The negotiability of commodified human bodies was not an aberration; it was the modus operandi colonial rationality. As Ligon remarked about his time on Barbados, "'tis an ordinary thing here, to sell their servants to one another for the time they have to serve; and in exchange receive any commodities that in the Island."[208] What was novel in this mid-seventeenth-century equation was the interdependent assistant variables united by capital, often controlled by the same groups of moneyed individuals and coteries of authority: 1. Domestic commercial agriculture – dispossession from self-sustaining standards of living, loss of rights in common land, and alienation from the products of labor in England, 2. State support – legal ascriptions of criminalization, state managed deportation, mercantilist policy incentives, and military secured transport, and 3. Overseas mercantilist imperatives – reinvestment of the dispossessed as commodified labor with foreign operations of joint-stock companies and wealthy agrarian capitalists.

The intensive form of cyclic capitalism, with transactional agents caroming off one another between core and periphery, buttressed and abetted (or retarded) the hand of the state, was a peculiarly and precociously English structure during the seventeenth century.[209] It was not

[207] See Beckles, "Plantation Production," 40-43.
[208] Ligon, *True & Exact History*, 59.
[209] Benjamin Schmidt has pushed against sliding into this interpretation too easily without first framing it within the frame of competing international forms of capitalism(s). Some would argue that the English came late to capitalist structures, although my focus is most specifically on the direct involvement of the state, which I believe came early to England with the disruption of the civil wars and Interregnum. Admittedly, when advancing this dissertation to a book, the Dutch model needs to be unpacked through a closer reading of Peter A. Coclanis, ed., *The Atlantic Economy during the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel* (Columbia, SC: University of South Carolina Press, 2005); Jan de Vries and Ad van der Woude, *The First Modern Economy: Success Failure, and Perseverance of the Dutch Economy, 1500-1815* (Cambridge: Cambridge University Press, 1997); Jan de Vries, *The Industrious Revolution: Consumer Behavior and the Household*

just the ramping up of merchant activity that instantiated capitalistic paradigms of monetary and bodily flows. Merchants had been vending and bartering wares internationally and inter-ethnically for millennia. Nor can the paradigm be marked 'capitalist' by the inclusion of state assistance. That, too, had occurred many times before and such a mercantilist ethic would continue to frame the foreign ventures of most European nations during the latter seventeenth and eighteenth centuries. According to Ellen Meiksins Wood, and I would have to agree with the addition of a few provisos, what made the English system uniquely and forwardly capitalistic in the seventeenth century was its agrarian origins, "the rupture in age-old patterns of human interaction with nature in the production of life's most basic necessities."[210] England experienced an early metamorphosis in the relations between producers and appropriators; a transformation in which the market increasingly and vexingly came to mediate those relations. In other nations, like France, a peasant estate remained in possession of the means of production, principally land, for a much longer period of history. Surplus labor was intermittently and often callously appropriated in these manorial arrangements, through 'extra-economic' means such as the use of oppressive force and coercion, but these means lacked the pristine quality of pure economic forces unsullied by the visible presence of human intentionality. In England, labor was alienated from the producer in a host of decidedly economic modes steering between the ludic and pernicious, the primary mode being the interpolation of shorter-term, fluctuating economic rents (e.g., leasholds) between landlord and tenant – "Rents not fixed by some legal or customary standard but responsive to market conditions" – with the result of a competitive market in leases

Economy, 1650 to the Present (Cambridge: Cambridge University Press, 2008); and David Ormrod, *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism* (Cambridge: Cambridge University Press, 2003); and Matthew Dimmock, *Elizabethan Globalism: England, China, and the Rainbow Portrait* (London: Paul Mellon Centre for Studies in British Art, 2019). Schmidt has suggested that a better phrase to describe the English globalism of the middle and late-seventeenth century might be "aspirational capitalism."

[210] Ellen Meiksins Wood, "The Agrarian Origins of Capitalism," *Monthly Review* 50, no. 3 (1998): 15.

driven by a logic of profit-maximizing, extra-subsistence export production.[211] Hence, the urgent actuation to enclosure, engrossment, and, the uniquely English term for the manifestation of increased agricultural output, "improvement," a word with its lexical roots in the Anglo-French 'emprower,' which meant the extraction of monetary profit from the land.[212] In the seventeenth century, productivity and profit became intimately associated through greater degrees of and measures for abstraction; that is, those measures that would increase and fine tune a burgeoning capitalist network's functionality: morbidly rotund plots devoted to the most profitable monoculture, propertyless wage laborers competing for jobs, lines of credit, speculation in joint-stocks, the opening of new, distant markets, blurry lines between the political and economic capacities of state officials and representatives, etc. By the mid-seventeenth century, England participated in an extensive network of capital and commodity transference between home-bound agriculture and the foreign entrepôts and colonies it had developed. Commercial oriented agriculture fed the machinery for colonial extraction and the revalorization of human labor, and ultimately "improved" what was interpreted as external to humans – 'nature.'

The roots of such commitments can be traced back at least as far as Sir Walter Raleigh's implication in transitions to leaseholds on his Dorset estate, which are linkable to his long-distance trade activities in textiles ("licence to export 8,000 cloths in four years" granted by Elizabeth in 1589) and his transatlantic plantation schemes and reconnoitering activities in Roanoke, Virginia and Guyana.[213] Raleigh's spokesperson for the 1580s Roanoke excursions,

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[211] Ibid., 20.
[212] Slack, *Invention of Improvement*, 5.
[213] For export licenses see "Queen Elizabeth - Volume 229: Undated 1589," in *Calendar of State Papers Domestic: Elizabeth, 1581-90*, ed. Robert Lemon (London: Her Majesty's Stationery Office, 1865), 637-641. *British History Online*, accessed July 10, 2020, http://www.british-history.ac.uk/cal-state-papers/domestic/edw-eliz/1581-90/pp637-641. In the year 1584, "Her Majesty's grant passed unto her servant, Walter Raleigh, Esq., for the discovery of all such remote heathen and barbarous countries as are not actually possessed by any Christian Princes or people." See "Queen Elizabeth - Volume 169: March 1584," in *Calendar of State Papers Domestic: Elizabeth, 1581-90*, ed.

Hakluyt, in *A Discourse Concerning Western Planting* (1584), can be read as attempting to persuade Elizabeth I for crown support while planting the seeds of a more hidebound, chained system of concatenated and exploited domestic-foreign resources. Though the tract is hundreds of pages, the talking points, blueprints, and ingredients of the mid seventeenth century economic theorists are all present in one dizzying and prolix chapter: human trafficking of the propertyless, exploitation of indentured obligations, fixed military assets (e.g. "fortes"), colonial infrastructure, fungible commodity manufacture and exchange, agricultural improvement, ecological pillage, and incursion into export markets.[214] Much to Hakluyt and Raleigh's dismay, they would not see the fructification of their ideas under Elizabeth or even James. Gloriana was much too parsimonious, retentive, and conservative to match their proposals and bend the state to their support. It would not be until those with financial stakes in commercial agriculture and large joint-stock companies (aristocrats, lesser gentry, greater yeomen) allowed market imperatives to perforate the stratigraphy of status and align capitalist financial realities with political authority during the English revolution, that state service to dictates of the economy would reach full bloom, as in the Navigation Act of 1651. This mid-century concurrence of incentivization to capital accumulation and proto-liberalist political theory found its meticulously optimistic epitome in James Harrington's works. Harrington saw limpidly the circular flows between the surplus of agrarian capitalism (including what could be absorbed and reinvested from economic tenancy) and a globalized political economy.[215] It was not accumulation of land for which Harrington argued – that came with the straitjacketing appurtenances of monarchy that

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Robert Lemon (London: Her Majesty's Stationery Office, 1865), 162-169. *British History Online*, accessed July 10, 2020, http://www.british-history.ac.uk/cal-state-papers/domestic/edw-eliz/1581-90/pp162-169.

[214] See Richard Hakluyt, *A Discourse Concerning Western Planting*, ed. Charles Deane (Cambridge: John Wilson and Son, 1877), 36-44.

[215] James Harrington, *The Oceana and Other works of James Harrington, with an Account of His Life by John Toland* (London, 1771), 165.

engrossed large holdings into the hands of the sycophantic few – but rather the accumulation of a given land's productive surplus, made more operable through the combination of population pressure and equitable property restrictions of republican agrarian laws.[216]

> The more mouths there be in a city, the more meat of necessity must be vented by the country, and so there will be more corn, more cattel, and better markets; which breeding more laborers, more husbandmen, and richer farmers bring the country so far from a commonwealth of cottagers [. . .] the overplus must seek som other way of livelihood: which is either arms, such were those of the *Goths* and *Vandals*; or merchandize and manufacture, for which ends it being necessary that they lay their head and their stock together . . . Thus *Holland* being a small territory, and suck'd dry, has upon the matter wean'd the whole people, and is thereby become as it were the one city that sucks all the world.[217]

The comparison with the United Provinces is both a model for the expansion of the English state and a reassurance of England's prophesied global dominance, for if the terminus of commercial empire begins with agrarian intensification, then England, with its more abundant terrestrial resources, is poised to surpass the land-starved Dutch. In the race for global dominance, the England of the Interregnum, so Harrington seems to intimate, can relax into her stride because the nation is already coursing through a state-regulated capitalist cycle of recursive investment from agrarian excess to commercial empire and industrial networks. The revolutionary status of England permitted Harrington to adumbrate the liquid monetary cycles between land and commercial empire, but it was the subsequent revolutionary period of the late 1680s that provoked Locke to valorize, in explicit phrasing, money's fluid, motivational, and mutational mediating capacity in this capitalist agrarian-imperial circuit:

> For I ask, What would a Man value Ten Thousand, or an Hundred Thousand Acres of excellent *Land*, ready cultivated, and well stocked with Cattle in the middle of the in-land Parts of *America*, where he had no hopes of Commerce with other Parts of the World, to draw *Money* to him the Sale of the Product?[218]

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[216] Ibid., 367.
[217] Ibid., 279.
[218] Locke, *Two Treatises*, 301.

Lucre's expanse of promissory fungibility within a teeming, broad commercial system, as per Locke, reciprocated and cosseted the unabated impulses of agricultural colonization (both internal and external forms).

The complex and vicious circle of England's global participation in early modern capitalism profoundly impacted human and animal relations during the seventeenth and eighteenth centuries. But the effects of capital networks on human-nonhuman sentient relations did not constitute a fillipic moment of rupture or a fall from Edenic grace at mid-century. On one hand, many Englishmen and women had always used animals in ways that lacked moral consideration; on the other hand, the introduction of capitalist patterns of production and consumption did not irrupt into and rent the social fabric in a trice. As I hope has been revealed, these patterns were a steady encroachment that reified quite suddenly and drastically in statist imperatives of mid-century political-economic experiments. It was around this time that the catalytic momentum of a liquid logic (of waste) infected and affected social relations in sometimes seismic but oftentimes subtle ways. Capitalistic frames imposed themselves (with state support) on social or national imaginaries and what counted as rational behavior, to the extent that many were caught in officious and insistent procedures of displacement, virtually and practically, from medieval, manorial frames of relationality and peasant production that characterized previous centuries. In a paradigm of human and animal relations that saturated this era, the post-feudal subsistence mode could be found situated at one drifting pole of a dialectic process (the antithesis) militating against another aggressively stalking pole of an inchoate capitalist liquid logic of waste (the thesis). The synthesis was the working out of this polar confrontation as relations to various species came to delineate the performance of proper authority, status, humanity, sexuality, gender, race, disciplinary and socio-economic participation

(now colored by global markets) according to the allowable parameters of specific times, places, and social ethics (usually) in-the-making. Rampant cultural displacement meant that unformed domains of social being required the laying of constitutional grounds encapsulating both identity and praxis. Nonhuman sentient life was called on and beckoned itself to perform a mediating function between the competing structure of global market and local manor, with sometimes unexpected and (im)mediate results.

"Catastrophe: Peripeteia at Halifax"

Now, let us return to the Halifax gibbet to unpack how the equine executioners in the market square fit into the era's jostled interspecies entanglements and intractably connect to the decapitations at Whitehall and the Barbados plantation. Eighteenth-century commentators opined that the abandonment of the Halifax gibbet laws and their market day spectacles was a Puritan response to an already unnaturally severe set of customary statutes. I do not intend to dispute this particular branch of causality, but instead desire to focus on the disappearance of the quadrupeds from a particular form of legal personification. As the reader may recall, the final time the gibbet law was invoked, two horses (one black, the other gray) belonging to resident Paul Johnson pulled the pin and released the blade that summarily felled the heads from the shoulders of three guilty thieves (brothers John and Abraham Wilkinson and their associate Anthony Mitchell). Since the thirteenth century, it had been customary for absconded and abused animals to participate in both the juried trials and the public executions, so Paul Johnson's two cherished colts were not unique in their appearance before the town's multitude. They were, however, unique in their disappearance and what their animal representative absence communicated about the unstable occupancy zones of interpersonal and interspecies relationality. J.G.A. Pocock states that "nearly all the threads in the inconceivably complex texture of English thought in the first

critical period [of the seventeenth century revolutions] can be attached to and often deduced from the radical need to reconstruct authority."[219] I think we can situate the disappearance of our equine public servants within one of these zones of authority's reconstruction. The horses, and the hoofed populace with which they were classified, were not just an index of changes in the social organization of authority, but as biosocial agents, were co-implicated in manufacturing those changes at multiple points along the lines of a convoluted and sprawling, transoceanic network of interactivity.

Arguably, many of the cross-species relations in Halifax were relatively static, posed and frozen in their post-feudal manorial frames of customary action. The early modern parish of Halifax, situated in the Forest of Hardwick, West Riding, Yorkshire in the Upper Calder Valley on the Pennine Plateau, had been under the administration of the Earls Warenne of Surrey at the Manor of Wakefield from the time of Henry I until the fourteenth century when the land reverted firmly to the hands of crown where it lay until 1629/30, when it was granted by Charles I to Henry Rich, Earl of Holland. The soil surrounding the township of Halifax was said to be "so barren and unfruitful as it will not yield victuals for the third part of the inhabitants,"[220] and thus the forests Hardwick and Sowerbyshire had been partially and increasingly opened to pasturage and some arable farming by the manorial lords since the high middle ages. Because of the dearth of arable land, Halifax was forced to develop a mixed economy of minimal open-field cultivation and rural textile production in the twelfth century, but it was not until the fifteenth century that the township committed itself to the cloth industry (boasting of seventeen tradesmen out of a population in the hundreds in 1467) and then, during the reign of Philip and Mary (1553-58),

[219] J.G.A. Pocock, *Virtue, Commerce, and History: Essays on Political Thought and History, Chiefly in the Eighteenth Century* (Cambridge: Cambridge University Press, 1985), 56.
[220] Quoted in Slack and Clark, *Towns in Transition*, 41.

received royal imprimatur to host a vital market trade in wool and its derivatives.[221] By the mid-sixteenth century, textile manufacture and sales formed the bulk of the Halifax economy while agriculture remained a subsistence-level supplement. One hundred years later, with 4,400 individuals residing in the town plus over 30,000 populating the parish, no doubt the conditions reported by William Camden in the 1580s, that there be "more men and women than other living creatures" in Halifax, had only been exacerbated by the growing reliance of an expanding non-agricultural population upon the clothing industry.[222] In this pastoral parish and local market environment of consistently small holdings, relations between humans and their animals remained on intimate terms, despite centuries of broader political and economic changes. This much one can glean from an examination of personal diaries, wills, and descriptive travel writing in which the private or idiosyncratic aspects of confrontation and affect imbued structurally distinct but sentimentally interconnected genres. Defoe, in his *Tour thro' the whole island of Great Britain*, remarked of Halifax that "the Land [was] divided into small Inclosures" and that each "Clothier" retained a horse and "a Cow or two for his family. By this means, the small Pieces of inclosed Land about each House [were] occupied; and, by being thus fed, [were] still farther improved from the Dung of the Cattle. As for Corn, they scarce sow[ed] enough to feed their Cocks and Hens."[223] The lack of arable land and available pasture in Halifax, combined with a congested commons, meant that a natural stint was placed on private stocks of livestock and poultry while husbanded animals lived closely with their human owners.

With income primarily derived from the woolen garment trade and not from agricultural surplus, proximal animals were housed within the tradesmen's domicile as essential labor (as in

[221] John A. Hargreaves, *Halifax* (Edinburgh: Edinburgh University Press, 1999), 17
[222] Ibid., 25.
[223] Daniel Defoe, *A tour thro' the whole island of Great Britain. Divided into circuits or journeys. Giving a particular and entertaining account of whatever is curious, and worth observation* (London, 1753), 3:136-137.

the carting capacity of the horse) or essential sustenance (dairy cows, chickens – perhaps producing a slight surplus for the local market), a household economic situation that expressed continuity with the peasant croft and toft of the late middle ages.[224] The environmental limitations also implied that parish neighbors were in a continual state of negotiation for grazing rights on the commons, and thus invariably had some greater communal consciousness because the health and economic capacity of their quadruped co-habitants depended on it. The court rolls of the Manor of Wakefield from 1651-52 speak to these cooperative concerns of multiple West Yorkshire townships with the frequent appearance of injunctions that "no maner of person [should] put any scabbed or infectious horse or meare to any the Commons belonging to the township aforesaid."[225] David Hey's extensive itemization of probate inventories in Halifax's sister clothier community, the Graveship of Holmfirth in the Manor of Wakefield, corroborates the scale and intimacy of human-livestock relations in the northern textile region. Similar environmental restrictions on arable land in Holmfirth produced an almost identical tenurial pattern of predominant small copyholds and common pastures interwoven with an arabesque of clothing industry occupations. Thus, although some probate inventories of wealthy patriarchs communicate extensive livestock holdings, specifically sheep to supply the raw materials of woolen cloth manufacture, most, like that of the clothiers John Tinker of Longley (four oxen), James Bower of Wooldale ("4 Steares 3 Cows 2 Calfes & 1 heiffer" and "2 horses), Arthur Beardsell of Holme ("1 Cow & Calfe with 1 other Cow & 2 Heifers"), and Henry Beever of Foster Place, Hepworth ("1 horse" and "3 Cows") convey modest to paltry numbers.[226] This

[224] For information on animal and human cohabitation in the medieval household, see Barbara A. Hanawalt, *The Ties That Bound: Peasant Families in Medieval England* (Oxford: Oxford University Press, 1986), 31-44.
[225] *The Court rolls of the Manor of Wakefield, from 1651 to 1652*, ed. Lilian Robinson (Leeds: Yorkshire Archaeological Society, 1990), 232, 235, 238, and 239.
[226] David Hey, "The Domestic Economy of the Seventeenth- and Eighteenth-Century Holmfirth Textile Industry," *Yorkshire Archaeological Journal* 85, no. 1 (2013): 166-167.

illustration of household husbandry contrasts with the prevalence of commercial agriculture that was either on the slight decline in Cornwall or on the rise in Kent (where textile production inversely declined) during the same period of time. And in West Riding communities like Holmirth and Halifax, unlike Kent and Cornwall, the by-products of livestock did not factor as the crucial economic variable in the production of surplus for market. Cloth manufacture was not a by-employment appended to cultivation in these regions, but the central node in household production, which resulted in a variant cooperative labor and subsistence structure between sentient humans and nonhumans.

There was a significant economic and infrastructural expansion occurring in Halifax during the seventeenth century, particularly in the latter half of the century, but since that expansion was not indebted to the regional intensification of agricultural output along commercial models, most interspecies relationships held to a constancy along class lines by betraying affinity and continuity with a post-feudal peasant estate. The image of proximal and co-productive human-livestock relations in seventeenth-century Halifax fits into the general picture of class-based interspecies involvement outlined by Erica Fudge. In most bequests of husbandmen and tradesmen, hoofed quadrupeds comprised a sizable portion of the value of possessions, despite their commercial viability, and in some instances these animals, like one heifer named Nan belonging to William Younge, a Royden weaver, were named. The message that Fudge extracts from an avalanche of data in wills, bequests, and inventories is "that these animals might have had more than a financial meaning to the testator" who interacted with them on a daily basis and in innumerable ways that were never recorded.[227] Hints at livestock's participation in non-monetary economies of sociality and affection in Halifax grow stronger

[227] Erica Fudge, *Quick Cattle and Dying Wishes* (Ithaca: Cornell University Press, 2018), 14.

when one considers that many of the trans-species relationships most frequently involved practices of dairying. Dairy production was one form of labor (along with spinning, baking, and brewing) commonly assigned to wives and female servants.[228] The guidelines for this gendered interspecies labor stayed fairly consistent from the medieval through the early modern period, and if we take the didactic written sources at face value (or even half of face value) then the time and procedures required to complete such labor were extensive. Gervase Markham in the 1656 edition of *The English Huswife* (first published in 1615) recommended that housewives and their kine engage in milking for one hour twice per day, "betwixt five and six in the morning, and six and seven a clock in the evening . . . although nice and curious House-wives will have a third houre betwixt them."[229] With two to three hours each day devoted to the intimate task of milking, a relationship of mutual recognition and dependence must have developed, at minimum, between these female members of their repsective species. Unlike counties where commercial agriculture was becoming the normative standard (much to the detriment of small copyholders), cozy arrangements of cohabitation dominated the households of textile manufacturing families in Halifax, and the expanding exportation outlets for the cloth market, which brought moderate levels of commercial prosperity to the parish, did not significantly alter the spatial and social characteristics of interaction between humans and livestock, which had remained unapologetically class-bound and relatively static in West Riding since the fifteenth century.

Where transitions in interspecies associations manifested in late seventeenth-century Halifax was not within the sphere of domestic production, but rather more peripherally at the public, legal, and constitutional boundaries of legibility, which challenged manorial and

[228] Jane Whittle, "Housewives and Servants in Rural England, 1440-1650: Evidence of Women's Work from Probate Documents," *Transactions of the Royal Society* 15 (2005): 66.
[229] Gervase Markham, *The English hous-wife containing the inward and outward vertues which ought to be in a compleat woman* (London, 1656), 143.

customary precepts. The Halifax Gibbet law had its origins in the *infangthief* jurisdiction (the prerogative to convene trial and execution of thieves) that the lords of the manor of Wakefield held over the forests of Hardwick and Sowerbyshire. By the fifteenth century it had become a customary legal process ("whereof the Memory of Man is not to the contrary") adopted by the civic authorities of Halifax,[230] but its feudal provenance was never obscured since the convocation of any legal trial and execution necessitated the express permission of the manorial lord of Wakefield. The law's invocation produced sixty-three executions between 1286 and 1650,[231] with forty-nine of them occurring after 1541.[232] One point to draw from these statistics is that the majority of cases are freighted toward the last one hundred years of the statute's viability, well after the crown had assumed control over the manor of Wakefield and a time when the textile industry and local market had gained a level of ascendancy in the northwest region. The judicial and punitive form of the law's enactment sheds some light on the uptick in its historical tempo, for those essentially communal forms following customary procedures measure a level of local/regional intransigent opposition to the centralizing tendencies of kings, parliaments, and privy councils. When William Bentley, from his hindsight-afforded earie of 1708, described the final employment of the Halifax Gibbet law in 1650 and offered justifications for its implacable severity, he introduced that moment of history by conjuring "the *common Law* of England" and "*the common Customs of the Realm*," because, to Bentley's mind, the Gibbet law against thievery was, in fact, "a Custom [that] hath obtain'd the Force of a Law" and was "ever said to be *Jus non conscriptum*; in regard that it cannot be made or created, either by Charter from the King or enacted by Authority of King and Parliament." In Bentley's

[230] T.W. Hanson, *The Story of Old Halifax* (Halifax: F. King and Sons, 1920), 120.
[231] Hargreaves, *Halifax*, 18.
[232] Thomas Allen, *A New and Complete History of the County of York* (London: L.T. Hinton, 1831), 3:241-46.

recollection, the law represented communal self-governance and local emancipation from structures of state, and was by common right recorded only in "the Usage of the People."[233] The statute, as recited by Bentley, articulates that

> if a Felon be taken within their Liberty [of Halifax], with Goods stoln out or within the Liberty or Precincts of the said Forest, either Hand-habend [goods in hand/possession], Backberand [goods carried on the back], or Confessand [by confession] Cloth, or any other Commodity of the Value of Thirteen Pence half-penny, that they shall after three Markets or meeting Days, within the Town of Hallifax, next after such his Apprehension and being condemned, he shall be taken to the Gibbet, and there have his Head cut off from his Body.[234]

There were delicately handled intricacies in a process that began with arrest and terminated in decapitation. After apprehension, the accused felon was taken to the bailiff in Halifax, who received his authority from the lord of the Manor of Wakefield, and then caged in the common jail. The bailiff next issued summonses to the constables of four precincts (Halifax, Sowerby, Warley, and Skircoat Green) calling forth four "Frith Burghers" (from each district) to serve as jurors. Once assembled for trial, the accused thief was brought before prosecutors and jury, and made to view the item stolen "if it be Beast or Horse, or any Thing of that kind," or if the commodity was moveable, it was laid before the feet all gathered in the room.[235] If the accused was pronounced guilty by the jury, the bailiff returned the offender to prison for the span of one week, and after three Market Days, on which the felon was displayed in public stocks with the stolen goods before him, he was paraded to the central gibbet and beheaded. "This," Bentley fervently avowed, "[was] that Regal Power, which by the Kings and Queens of England, hath always confirm'd to the Forest of Hardwick ever since the first Grant to the Lord of the Mannor of Wakefield."[236]

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[233] William Bentley, *Hallifax and its Gibbet-Law Placed in a True Light* (London, 1708), 19.
[234] Ibid., 25.
[235] Ibid., 29.
[236] Ibid., 31.

In addition to a general description of the Gibbet Law and a moral apologia for its condign harshness, Bentley left a detailed narrative of the final trial and execution of John Wilkinson, Anthony Mitchell, and Abraham Wilkinson in April of 1650. Complaints were lodged against the above individuals by Samuel Colbeck of Warley, John Fielden of Stansfield, and John Cusforth of Durker, respectively accusing the men of stealing sixteen yards of russet colored Kersey, one black and one grey colt belonging to Paul Johnson, and one additional "whole Kersey piece Feloniously taken from the Tenters, at Brereley-Hall."[237] Upon receipt of the accusations, the bailiff of Halifax urged constables to summon the requisite sixteen jurors (James Holland, Richard Nicolls, Isaac Hooker, and John Exley of Halifax; Francis Priestly, Henry Ryley, James Dobson, and Joseph Priestly of Sowerby; John Ryalls, Michael Wood, John Holdsworth, and Henry Mirriell of Warley; and James Witaker, James Ellison, Antho. Waterhouse, and Thomas Gill of Skircoat). While the indictments against the charged parties were read before the court, "the Felons and their Prosecutors [were] brought Face to Face," and subsequently the stolen goods were laid before the arraigned and their jurors for examination. Only Abraham Wilkinson offered a defense claiming that one John Spencer, and not himself, delivered the piece of reputedly stolen kersey cloth to Isaac Gibson's wife. The jury then adjourned until 30 April 1650 upon which day the jurors, the accused, the informants, and the stolen goods, which "were placed before them in the Room, and the rest in such convenient Places where the Jury might View them," assembled together at the Bailiff's residence to hear the verdict read aloud.[238] Apparently, while the court was adjourned, the thieves had confessed to their various iniquities and therefore the jury found the men guilty of stealing cloth worth nine shillings, one black colt valued at forty-eight shillings, and one grey colt amounting to three

[237] Ibid., 62.
[238] Ibid., 63.

pounds. The guilty parties were *ipso facto* sentenced "to suffer Death, by having their Heads severed and cut off from their Bodies, at Hallifax Gibbet."[239] On the day of execution, the prisoners perambulated the market square accompanied by the two stolen equines they had offended. Marching through a trumpeted tumult of public invectives, warnings, and shame, the felons ascended the scaffold where the fatal blade was drawn to its full height. The horses waited patiently while the guillotine's fastening pin was attached to a rope trailing from their bodies. A pause and perhaps a prayer momentarily ruptured the performance. Then a hand harshly graced the backsides of the colts, and so, reacting to the thump of flesh upon flesh, the horses "pluck'd out" the pin, releasing the blade and concluding the arraignment and capital punishment of the three clothier community predators.

What shall we make of the simultaneity of the horses as personal capital and juridical participants, monetary valuations as property and a functional presence in the judicial proceedings? The performance relates a kind of equine double consciousness, or for those feeling less gracious, an equine double valorization beyond the economic or even interspecies companion protocols that constitute "horseness." There is a third enunciation of the horse as a legal immanence or an ineluctable constituent of the proper execution of common and customary law. Their repeated presence in the trial and execution, going so far as to take the place of bailiff or his assistant in releasing the guillotine blade, articulates a communal standing within a local constitution of customary actions. Prosecutions of criminal law, like this at Halifax, at least until the eighteenth century, addressed "communal rather than personal grievances" through mechanisms of the community itself, i.e. the local jury, and only rarely through professional

[239] Ibid., 66.

lawyers.[240] In the arraignment and punishment of the three thieves at Halifax during April of 1650, the colts, one black and one grey, performed their vital communal function in league with and as supplement to the jury, both in providing proof or generating confession and carrying out the corporal punitive measures, so much as to state that without their participation any rendered verdict would be invalid. Yet the colts were not a pure legal subjectivity in the proper sense, if by proper we mean a freeholding human tenant. The horses were themselves simultaneously acknowledged property and judicial participants. One way out of this aporia is to shift the semantic dyad from human/nonhuman to a notion of bios/zoe, that is, to Agamben's distinction between politically incorporated life and a bare life that can be killed with impunity, for the horses slid between these lexical zones based on a temporally bound relation to one or a set of humans. The horses appeared as juridical presence qua Paul Johnson, though not based on the particularity of Paul Johnson, but rather on his structural and geographic embodiment within a customary legal framework that had achieved impregnable sovereignty, or to use Bentley's term, "Regal Power." Factoring in the localizing, insular tendencies of both the common law and the socio-physical geography around Halifax that was parochial in outlook, the aporetic mists surrounding the horses evaporate. It is possible to surmise that the horses existed as a legible presence in the performative iteration of customary law, which is a closed, self-referencing tautology (the law is the law), and as an item of property belonging to a specified human member of the locality, and thus were killable if the killer had proprietary rights in the horse. To state as much, however, is not to make a universal claim about livestock in this moment in history, but rather to draw attention to localized semantic and pragmatic iterations of livestock animals in and around Halifax during the seventeenth-century. I read these events as the dusk of a regionally

[240] Cynthia B. Herrup, *The Common Peace: Participation and the Criminal Law in Seventeenth-Century England* (Cambridge: Cambridge University Press, 1987), 3.

specific and manorial post-feudal totality in which owned horses could move from an idiosyncratic pre-political ontology to political presence (if, in fact, a weak presence) because in the environs of Halifax interspecies relationality was not immediately intersected with commercial agriculture. Alternative economic forms of domestic, affective intimacy held sway and preceded the performative juridical viability of livestock. The interspecies sociality of Halifax allowed conditions such that horses, cattle, sheep, and pigs, within a circumscribed orbit of communal activity, could speak in cognizable terms.

After 1650, nonhumans of Halifax were silenced from speaking in the political register of bios, and their furtive, taciturn disappearance from juridical intelligibility was enchained to the material sublations of king in the political capital of London and slave at the peripheral zone of Barbados (with which this chapter began). Bentley is not inapposite in his assertion that through the performative enunciation of the gibbet law, Halifax appropriated to itself a "regal" authority. But during the high tide of commonwealth republicanism of the 1650s, that regal authority was bartered exhaustively for a parliamentary authority, especially in the Puritan clothier community of Halifax, which fed its male denizens to the hungry ranks of Parliament's army or stood neutral during the civil war.[241] A customary law derived from aristocratic sovereignty over the forest ecosystem, originally granted and then re-granted by kings to fawning peers, was placed on the chopping block alongside Charles's head. Sinews and nerves of seigneurial/manorial law and king's neck were simultaneously severed. Even before the civil war, during the early decades of the seventeenth century, manorial jurisdiction over rights to the forest was the cause of much bloodshed among the gentry, and between commoners and aristocracy, but parliament sent an equally sanguinary yet more clearly authoritative message about where those rights should revert

[241] See J.T. Cliffe, *The Yorkshire Gentry: From the Reformation to the Civil War* (London: The Athlone Press, 1969), 262, 338-40.

when it executed the last lord of Wakefield manor, Henry Rich, Earl of Holland, on 9 March 1649 for his dismal though impassioned attempt to raise cavalry in support of the king.[242] With Charles I executed less than two months prior, the political channels for clearing away his supporters lay unobstructed. The transformative process of removing local authority from its post-feudal molecular references to the king and peerage was complete when Halifax joined the national conversation with the election of its first ever Member of Parliament (Jeremy Bentley) in July 1654. A bid for corporate status immediately followed in August, although Halifax was unsuccessful probably because of geographic size and population density, and upon the Restoration of Charles II in 1660, parliamentary privilege was rescinded.[243] The aspirational tactics of Halifax, in drawing toward the economic and political center of London, broke a linear, tiered sequence of authority and intersected the tangible, proximal, and provincially bound relations of the clothier parish with the abstractions of a global political economy emanating from the capital. It was at this time that the wealth of Halifax became more contingent on the liquid negotiations of the export trade with colonial societies, which were protected and expanded by the fiscal-military policies of the Interregnum parliaments. And it was not at all paradoxical that in joining a Parliament removed from its coordinating, interdependent position with the king, and one now based on the justificatory logic of abstractly representing 'the will of the people' through its mercantilist commercial framework and capitalistic forms of agricultural expropriation, that a form of possessive individualism would take hold in proto-industrial

[242] Malcom R. Smuts, "Rich, Henry, first earl of Holland (bap. 1590, d. 1649), courtier." *Oxford Dictionary of National Biography*, 23 Sep. 2004; Accessed 29 Jul. 2020. https://www-oxforddnb-com.offcampus.lib.washington.edu/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-23484.
[243] Hanson, *Story of Old Halifax*, 165.

Halifax and begin to reclassify the traditional socio-legal parameters of interpersonal and interspecies relations.[244]

Now, what allows me to incorporate the juridical performance of decapitation and exhibition on Walrond's Barbadian sugar plantation into the national-provincial schematic of Halifax (circa 1650) is conceiving of the local multi-species relationalities, not as beholden to a set of dichotomies (stable-unstable, local-national, feudal-capitalist) facing the reversals of historical rupture or in the thrall of a top-down systemic overhaul, but as an emergent property of density enhanced or lessened by micro-interactions of entities within macro frames of political ecology.[245] During the latter half of the seventeenth to early eighteenth century, a concentrated nucleus of associations and exchanges that established community legitimacy were becoming less dense as they were inflected and bisected by abstractive transactions and the behaviors, time scales, and epistemologies that went with them. During the middle and final thirds of seventeenth century, the woolen cloth industry centered in West Yorkshire tapped into the closed colonial markets in the Americas and meteorically increased its exportation of surplus. Although at the end of the century foreign competition and a preference for alternative commodity exports ate into Yorkshire's domination of the pie chart, woolen cloth manufacture, with its ample network of overseas distribution, was still England's principal domestic industry. West Riding sales were

[244] C.B. Macpherson locates the roots of liberal democratic theory in the rise of an operable mentality of possessive individualism that burgeoned the seventeenth century. It was in this era specifically that, according to Macpherson, the "conception of the individual as essentially the proprietor of his own person or capacities" was born. "The individual was seen neither as a moral whole, nor as part of a larger social whole, but as an owner of himself. The relation of ownership, having become for more and more men the critically important relation determining their actual freedom and actual prospect of realizing their full potentialities, was read back into the nature of the individual. The individual, it was thought, is free inasmuch as he is proprietor of his person and capacities. . . . Society consists of relations of exchange between proprietors. Political society becomes a calculated device for the protection of this property and for the maintenance of an orderly relation of exchange." C.B Macpherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Oxford University Press, 1962), 3.

[245] DeLanda uses the term density in reference to networks to denote "the degree to which the indirect links of any given member . . . know the indirect links of others." Norms have stronger binding affects and identity is less extricable from the totality of communal properties in dense assemblages of interpersonal links. Manuel DeLanda, *Assemblage Theory* (Edinburgh: University of Edinburgh Press, 2016), 10.

dispatched through savvy, imposing, and sometimes unscrupulous agents at Blackwell Hall in London who by 1672 had edged out the Merchant Adventurers as the middlemen of the cloth trade.[246] To gain a firm footing in the Caribbean, Halifax and her sister parishes diversified their woolens with the introduction of lighter worsted fabrics that were consumed ravenously as polished outer garments by the sugar magnates of island slavocracies in Jamaica, Antigua, St. Kitts, Nevis, and, especially, Barbados. (A continual flow of rough kerseys generally landed on the backs and legs of servants and the laboring poor.) As incongruent as it sounds, Richard Ligon, in first-hand observations and itemizations, conveyed the importance of wool clothing to Barbadian society and its forced labor economy, despite the sweltering heat and humidity. Consumption of finished woolen clothing was predictably greater in the more suitable climate of mainland North America, but Ligon still recommended that "One hundred pounds" minimum be set aside by every Barbadian planter for the purchase of "woolen cloath, both fine and course,"[247] plus an additional £170 spent on clothing for servants.[248] Because of the immense profits to be gained in the sugar trade, many parvenu planters were catapulted into aristocratic lifestyles, and therefore they invested heavily in fashion imitative of London as the outward show of class viability, sometimes spending up to £1,000 on personal wardrobes with supplementary outlays for elaborate servant liveries.[249] Possession of fine woolen jackets was socially mandatory for acceptance into this coterie of landed elite, as attested by Captain George Green's clothing inventory littered with dimity, flannel, and worsted jackets as well as other woolen garments.[250] The staggering increase in the Halifax export market opened up the insular, parish-bound

[246] See Nick Bateman, "From Rags to Riches: Blackwell Hall and the Wool Cloth Trade, c. 1450-1790," *Post-Medieval Archaeology* 38, no. 1 (2004): 8, 11-12.
[247] Ligon, *True & Exact History*, 109.
[248] Dunn, *Sugar and Slavery*, 284.
[249] Ibid., 282.
[250] Ibid., 285.

cognitive dynamics of custom to the outward, anticipatory schematics of global commerce and what best confirmed the proto-industrial city's continual participation in that commerce. This adjustment to a more outward-looking political economy diluted the nucleic mass and density of post-medieval economic contingency in Halifax (and other communities) and the social relations bound to that contingency.

Interspecies relations were integral in establishing personal and collective legitimacy within the semantic shifts, abstractions, micro and macro-contracts of England's advance into early modernity. Colonization of both the recalcitrant Americas and nationally interior vestiges of commons and customary provinciality was accomplished through oppressive forms of biopolitical power and the linguistic colonization of what could be conceptualized as legitimate transspecies relationality. The loss of the herd animal's legal standing in Halifax was a performative instantiation of that larger process, and was embedded in an unwieldly network of accruing constitutional and epistemic operations that continuously classified some bodies as fully human and others as subaltern or exterior to that humanity. As Colleen Glenney Boggs argues in *Animalia Americana*, "the way we read subjectivity depends on the way we represent the relations between human beings and animals."[251] Historicizing Boggs's structural statement to the middle of the seventeenth century reveals the temporally contingent, interlocked particulars of animal, racial, and social grammars. The early seventeenth-century concurrence of England's imperial impetus and the lexical transition of the term domestic was not happenstance. Prior to the third decade of the seventeenth century, the term 'domestic,' from the Latin *domesticus*, was used almost exclusively to refer to human "inmate[s] of a house" or *domus*, such as servants or others belonging to the household. But around 1620 domestic was being applied to animals in

[251] Colleen Glenney Boggs, *Animalia Americana: Animal Representations and Biopolitical Subjectivity* (New York: Columbia University Press, 2012), 4.

two newly related senses: “living under the care of man, in or near his habitations” and “tame, not wild.” The former related animals to the semi-private domain of human existence by merging animals attached to property with servants and charges under paternal care (i.e., the household). The latter denoted the product of a process – domestication – clarified by what that product negated, which was wildness or living outside of man’s supervisory control. A mere decade later human and nonhuman sentient life were merged once again with the term’s application to men “having settled abodes; not nomad or wild.”[252] Taken altogether, the term domestic, within the span of a twelve years, produced an available (and subsequently widely incorporated) cognitive schematic that consolidated process and product, human and animal, across categories of binaristic difference. Retaining domesticated animals connoted both humanness and a process of territorialization in areas where humanness was not fully perceived and validated.

When combined with the moral and fiscal arsenal of England’s improvement ethos, domestication became a potent lexical weapon in the colonization of the Americas and the expansion of England’s commercial empire.[253] The concept and praxis of domesticating the Americas apodictically preceded the term’s coinage. David A. Nibert has traced an unbroken line of domestication’s affiliated animal and human oppression, a process he dubs ‘domesecration,’ as a transnational strategy of geographic and cerebral colonization extending from Spain’s fifteenth-century arrival in the West Indies to the spread of industrial agriculture in late capitalism.[254] In his endorsement for the colonization of Virginia in 1587, Hakluyt had spoken of

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[252] "domestic, adj. and n.". *OED Online*. June 2020. Oxford University Press. https://www-oed-com.offcampus.lib.washington.edu/view/Entry/56663?redirectedFrom=domestic (accessed July 31, 2020).
[253] In 1607 the term improvement, in addition to generative profit from land through cultivation, began encompassing a process of increasing or enlarging something, especially territory. "improvement, n.". *OED Online*. June 2020. Oxford University Press. https://www-oed-com.offcampus.lib.washington.edu/view/Entry/92858?redirectedFrom=improvement (accessed July 31, 2020).
[254] See David A. Nibert, *Animal Oppression and Human Violence: Domesecration, Capitalism, and Global Conflict* (New York: Columbia University Press, 2013).

using the Spanish model in Hispaniola, where "Spaniards at their first entrance found neither sugar-canes or ginger growing there, nor any kind of cattel," and thus to subdue the land "they sent kine & buls and sundry sorts of other profitable beasts thither." The "large and ample regions" of Virginia could be expropriated in such a way through a similar "breeding of divers sorts of beasts"[255] The praxis of domestication, as Alison Games points out, was neither an ideological extension nor the initial modus operandi of the Virginia Company in 1607.[256] In 1610 the governing council of Virginia published abroad that the purpose of their presence in North America among the aboriginals was proselytization through commerce, for "by way of marchandizing and trade, [we] doe buy of them the pearles of earth, and sell to them the pearles of heauen." However, the tract also justified the need to "possesse part of their land, and dwell with them, and defend our selues from them. Partlie because there is no other, moderate, and mixt course, to bring them to conuersion, but by dailie conuersation."[257] In the decade after 1612, according to Gary Nash, the "Virginia Company of London gave up its plans for reaping vast profits through Indian trade or the discovery of minerals and instead instituted a liberal land policy designed to . . . make it an agricultural province of such productivity that land sales would enrich its investors."[258] Robert Gray had promoted Virginia plantation schemes in 1609, arguing that " the greater part of [the earth is] possessed & wrongfully vsurped by wild beasts, and vnreasonable creatures, or by brutish sauages, which by reason of their godles ignorance, &

[255] Richard Hakluyt, "Hakluyt's Dedication to Ralegh, 1587," in *The Firsts Colonists: Documents on the Planting of the Fist English Settlements in North America*, eds. David B. Quinn and Alison M. Quinn (Raleigh, NC: North Carolina Department of Cultural Resources, 1982), 89.
[256] Games, *Web of Empire*, 128.
[257] Counseil for Virginia (England and Wales), *A true declaration of the estate of the colonie in Virginia vvith a confutation of such scandalous reports as haue tended to the disgrace of so worthy an enterprise* (London, 1610), 9, 10.
[258] Gary B. Nash, "The Image of the Indian in the Southern Colonial Mind," *The Wild Man Within: An Image in Western Thought from the Renaissance to Romanticism* (London: University of Pittsburgh Press, 1972), 69.

blasphemous Idolatrie, are worse then those beasts which are of most wilde & sauage nature."[259] Gray's rhetoric collapsing indigenous humans with wild animals had become commonplace by the early 1620s as the Virginia Company moved to establishing "a colony based on export agriculture" and abandoned "trying to perch gently like traders."[260]

Domestication and the claims of property over domesticated animals, as opposed to *ferae naturae* (wild nature), became marks of full enfranchisement in humanity and, by logical extension, ownership over territory. In this paradigm, domesticated animals ranked higher (socially and legally though not ontologically) than wild humans and, under common law, made invalid indigenous arguments of habitation while simultaneously consuming ecological space (and attendant indigenous subsistence patters) through the conversion of forest to pasture.[261] By the time of war between Powhatan's Algonquin alliance and the English colonists (1622-32), the Governor of the Virginia Colony, Francis Wyatt, saw domestication both as a goal and a chief strategy for subjugating the native tribes: "Our first worke is the expulsion of the Salvages to gaine the free range of the country for encrease of Cattle, swine, &c . . . for it is infinitely better to have no heathen among us who at best were but as thornes in our sides, then to be at peace and league with them."[262] A later governor, Sir John Harvey, felt that the Virginia colony was sufficiently ready for the next phase of combative engagement when he wrote to Secretary Dorchester in May of 1630 and stated, "It has been agreed to plant Chesapeak, situate upon Pamonkey, next spring, whereby they will face their greatest enemy Appochankeno and disable the savages. The colony has above 1,200 neat cattle, besides swine and goats, which he will by

[259] Robert Gray, *A good speed to Virginia* (London, 1609), 2.
[260] Games, *Web of Empire*, 142.
[261] See Virginia DeJohn Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford: Oxford University Press, 2004), 68-71.
[262] Francis Wyatt, "Letter of Sir Francis Wyatt, Governor of Virginia, 1621-1626," *The William and Mary Quarterly* 6.2 (1926), 118.

all means seek to preserve from the Indians."[263] About the same time the Duke of York, in a published history on the War of the Roses, was said to have "domesticated a savage" people in Ireland (1641),[264] Charles I (in 1640) made the use of domesticated animals to squeeze out aboriginals and reduce the American wilderness to plantations a core tenet of official state colonial policy:

> Every person which shall have any part of the said Lands so to be divided and allotted as aforesaid shall and may export out of this Kingdome or Dominion of Wales any Horses Mares Cattell Sheep or other goods for the planting improving and stocking of the said Lands or any part thereof at any time during the space of two yeares . . . without paying any Custome Subsidy or Impost.[265]

Repeated practices of "domestication" in North America had sufficiently motivated the term's instantiation by the 1620s and the neologism consequently provided the English with a stronger purchase on embedded and uneven socio-political transactions.

The conflation of "wild" humans and animals was also registered in cartographic discourse of early maps of the Americas.[266] The transformation of Virginia from an indigenous political space suitable for trade negotiations to a depopulated wilderness fit for agrarian expropriation can be read when juxtaposing John Smith's 1612 map of Virginia with John Farrer's 1651 map of the same site. Smith's map is colonized by Chief Powhatan's symbols of dominion over Sasquesahanough, both his anthropogenic likeness appearing in the upper left corner, and his

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[263] "America and West Indies: May 1630," in *Calendar of State Papers Colonial, America and West Indies: Volume 1, 1574-1660*, ed. W Noel Sainsbury (London: Her Majesty's Stationery Office, 1860), 114-117. *British History Online*, accessed July 16, 2020, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol1/pp114-117.

[264] Giovanni Francesco Biondi, *An history of the civill warres of England, betweene the two houses of Lancaster and Yorke*, 2 vols, trans. 2nd Earl of Monmouth (London, 1641–1646), 1.5.145.

[265] Charles I, "1640: An Act for the speedy and effectuall reducing of the Rebells in his Majesties Kingdome of Ireland to theire due obedience to his Majesty & the Crowne of England," in *Statutes of the Realm: Volume 5, 1628-80*, ed. John Raithby (s.l: Great Britain Record Commission, 1819), 168-172. *British History Online*, accessed July 9, 2020, http://www.british-history.ac.uk/statutes-realm/vol5/pp168-172.

[266] Similar ethnographic exhibitions can be found in Michael van Meer's *Album Amicorum* in which a Virginian native is displayed among nonhuman animal exotica in the St. James's Park menagerie. See Arthur Macgregor, "The Household Out of Doors: The Stuart Court and the Animal Kingdom" in *The Stuart Courts*, ed. Eveline Cruickshanks (Thrupp, Stroud, Gloucestershire: Sutton, 2000), 106.

name impressively scrawled across the landscape over tributary tribes and those political units beyond Powhatan's empire, such as the Monacans and Mannahoac confederacy. A legend in the upper right corner communicates hierarchical social organization by distinguishing "Kings howses" from "Ordinary howses" while monikers along the river system trace Powhatan's infrastructure for maintaining rule. All said, the document is a statement of indigenous political import as an affluent nation for potential trade.[267] In contrast, Farrer's 1651 "mapp of Virginia" is rife with what J.B. Harley calls "toponymic silence" by which "whole strata of ethnic identity are swept from the map" through the erasure of place names and effacement of native settlement symbology.[268] Farrer displaces native markers of habitation (houses, hierarchies, trading networks, and Powhatan's image) with a profile of Sir Francis Drake and a teeming iconography of "wild" animals outlining the boundaries of English plantations like Lord Baltimore's. Deer, elk, wolves, bears, porcupines, mongooses, and wild fowl trammel on and occlude the presence of indigenous culture while conveying an English imaginary topography of one more waste to be

[267] As the dissertation moves to a book, Benjamin Schmidt advises exploring a "Helgersonian" reading of the Virginia maps and incorporating a wider and more nuanced view of early modern cartographic and chorographic ideology that sought to discover or create sameness where there was ostensible difference. Helgerson's influential essay "The Land Speaks: Cartography, Chorography, and Subversion in Renaissance England" argues much in line with this chapter's arc of political history that cartographic representation in England, over the course of the late sixteenth and seventeenth centuries, "strengthened the sense of both local and national identity at the expense of an identity based on dynastic loyalty." International maps should thus be read with that thesis in mind. Richard Helgerson, "The Land Speaks: Cartography, Chorography, and Subversion in Renaissance England," in *Representing the English Renaissance*, ed. Stephen Greenblatt (Berkeley: University of California Press, 1988), 332. See also Richard Helgerson, *Forms of Nationhood: The Elizabethan Writing of England* (Chicago: The University of Chicago Press, 1992); Richard Helgerson, "The Folly of Maps and Modernity," in *Literature, Mapping and the Politics of Space in Early Modern Britain*, eds. Andrew Gordon and Bernhard Klein (Cambridge: Cambridge University Press, 2001), 241-262. John Gillies, *Shakespeare and The Geography of Difference* (Cambridge: Cambridge University Press, 1994); Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2001); Denis Cosgrove, ed., *Mappings* (London: Reaktion Books, 1999); Frank Lestringant, *Mapping the Renaissance World: The Geographical Imagination in the Age of Discovery* (Berkeley: University of California Press, 1994); and Benjamin Schmidt, *Inventing Exoticism: Geography, Globalism, and Europe's Early Modern World* (Philadelphia: University of Pennsylvania Press, 2015); and Goran V. Stanivukovic, ed., *Remapping the Mediterranean World in Early Modern English Writings* (New York: Palgrave Macmillan, 2007).

[268] J.B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, ed. Paul Laxton (Baltimore: Johns Hopkins University Press, 2001), 99.

made productive. Much of the south mainland would indeed be overrun by England's domesticated species and devoted to forms of animal husbandry supplying the expanding monoculture colonies in the West Indies.[269] And in places like Barbados, too, the same cartographic neutralization and segregation was at work. Richard Ligon's 1650 topographic representation dissects the "Yland" into named English plantations sustained by the presence of domesticated cattle, camels, donkeys, sheep and shrinking spaces of outlying wilderness where wild boars and maroons were tracked with "liam" or bloodhounds and could be killed with impunity by ranchers and plantation managers on horseback.[270] In distinction with Smith's politically balanced map of 1612, Farrer's and Ligon's maps from the 1650s use marks of domestication as a biopolitical regulatory apparatus that conjointly condenses untamed human and nonhuman animals, and defines the status and value of life as it enhances or detracts from the monetary endgame of joint-stock investment companies.

Figure 1. Smith's Map of Virginia (1612)[271]

[269] See Nibert, *Animal Oppression*, 76-82.
[270] Ligon refers to the efficient use of Liam hounds to track runaway slaves in the many caves of Barbados. See Ligon, *True & Exact History*, 98.
[271] John Smith and William Hole. *Virginia*. (London, 1624) Map. Library of Congress, Geography and Map Division. https://www.loc.gov/item/99446115/.

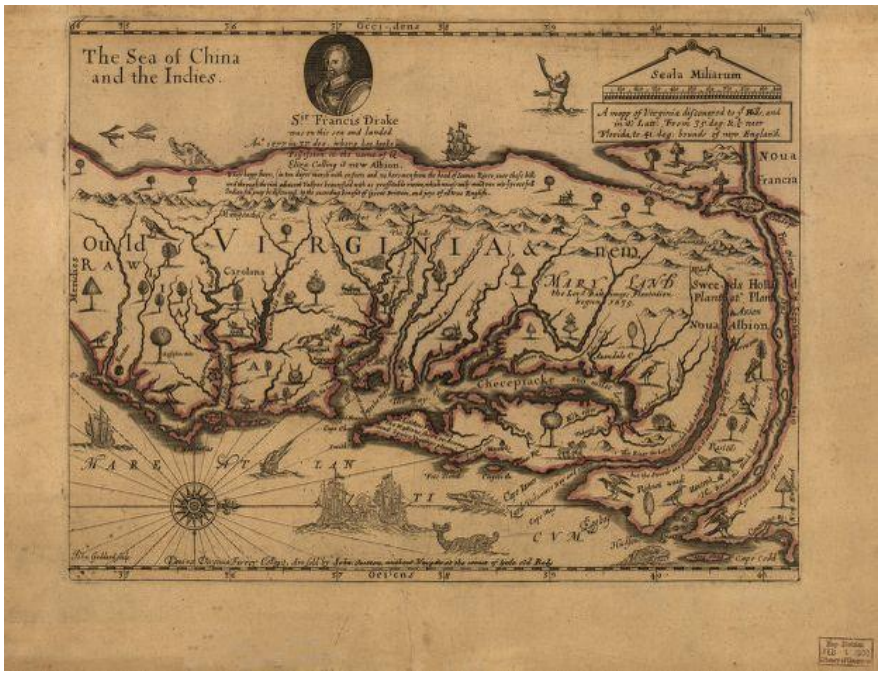

Figure 2. Farrer's Map of Virginia (1651)[272]

Figure 3. Ligon's Map of Barbados (1657)[273]

[272] John Farrer, 1590?-1657, Virginia Farrer, John Goddard, and John Overton, *A mapp of Virginia discovered to ye hills, and in it's latt. from 35 deg. & 1/2 neer Florida to 41 deg. bounds of New England*. (London: John Overton, 1667) Map. Library of Congress, Geography and Map Division. https://www.loc.gov/item/2002623130/.
[273] Richard Ligon, *A topographicall Description and Admeasuesurement of the YLAND of BARBADOS in the West INDYAES* (1657), in Richard Ligon, *A True & Exact History of the Island of Barbadoes* (London, 1673),

This inflating legitimacy of capital-intensive domestication to reclassify modal discrepancies between human and nonhuman also underwrote the failure of the crown to maintain legally enforceable distinctions of wildness as they directly pertained to the *meum* and *tuum* of royal prerogative. Nowhere was this better evinced than in the dynamic tension between afforestation (with its legal apparatus), common pastures, and the rising agrarian capitalism of the middle decades of the seventeenth century. John Manwood's *A Treatise of the Lawes of the Forest*, published in 1615 under James I, thoroughly unpacks the origins, causality, and benefits of the king's forests, arguing that forests and common law were not in direct opposition as long as forest boundaries remained stable. A forest was no wilderness. It was distinguished from wastes, woodlands, and chases by its political structure of keepers, foresters, regarders, agisters, woodwards, verderers, Court of Attachments, Swanimote (court), and justice seat. A forest was, according to Manwood, "a certain Territorie of woody grounds and fruitfull pastures, priviledged for wild beasts and foules of Forest, Chase and Warren, to rest and abide in, in the safe protection of the king, for his princely delight and pleasure."[274] A forest was reserved strictly for the recreation of the king, and no man of any station could make a forest, use the timber, or hunt the venery except by grant, deed, or charter. A forest was a symbol of privilege and power, the excess of a medieval political ecology that emanated from the king's soma and appetites, and it ran counter to every aspect of English theories on improvement (especially Locke's labor theory of value):

> The king of this Realme, above all other men, within his kingdome, that hee onely shall have these things, which by the Law of nature ought to bee the finders . . . therefore the king by his prerogative shall have them. He also by the common law shall have in his owne possession, all such things, which by the Law of nature ought to bee common, as wild beastes and foules, that are not tame, which by the

Reproduction provided by The British Library, Shelfmark: K.Top.123, http://www.bl.uk/onlinegallery/onlineex/carviewsvirtex/afrtrade/ylandbarb/largeimage70912.html.

[274] John Manwood, *A Treatise of the Lawes of the Forest* (London, 1615), 18-19.

> law of nature ought to bee common, and are made proper by the possession and taking of them, as by fouling, hunting and such like. And although men may kill such wild beasts in their wildenesse, when they are found wandering, being out of any Forest, Parke, Chase, or Waren: Yet no man hath any property in them, until they have killed them, for, during the time of their wildnesse, they are *Nullius in rebus*, and then they must needs be said to be *In manu domini regis*, in the kings possession: And then a king may priviledge them in any place where hee wil appoint, & so prohibite any man to kil or destroy them.[275]

Manwood goes to great lengths to harmonize kingly prerogative with natural and common law through a spectral regal authority that clings to wild animals even when they are beyond the boundaries of the regal demesne. Two discordant justifications for this resurface in Manwood's text. The first is that a monarch's rights to the coverts, verts, and venerie of the forest and chase succors and protects beasts by reserving them for the sovereign's selective and unnecessary ritualized slaughter. The second is that afforestation, by charter, must preserve common pastures within the bounds of the forests if such ground for commonable animals (excluding geese, goats, sheep, and swine) "hath bin used before the memory of man."[276] Thus, prerogative attached to the pleasure of the king's person created states of exemption by preserving both common rights from the (increasingly liquid) logic of improvement and "wild" beasts otherwise deemed killable by natural law.[277]

In the 1630s and 40s these justifications collapsed as the novel lexical discretions of domestication and a flood of nonhuman casualties settled in their place. Around the time Vermuyden was contracted to drain the Hatfield Chase and Francis, Earl of Bedford (along with his fellow projectors) began levelling sprawling territories of the eastern fens, Charles I

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[275] Ibid., 26-27.
[276] Ibid., 98.
[277] Sir William Blackstone in his Commentaries on the Laws of England stated that both Forest Laws and Game Laws were "founded upon the same unreasonable notion of permanent property in wild creatures; and both productive of the same tyranny to the Commons: but with this difference; that the forest law established only one mighty hunter throughout the land." William Blackstone, *Commentaries on the Laws of England, in four books* (Oxford: Clarendon Press, 1765-69), 4:408-9.

expanded his father's assertion of royal prerogative over the forests by reviving laws and a system of courts in the Forest of Essex that had been discontinued since 1622. Offenders numbering approximately 396 were tried for punishment by the swanimote court of 1630, but it was the 1634 forest eyre's reassertion of broader boundaries for the forest, abandoned and annulled in the thirteenth century, that produced the shrillest outrage.[278] Hundreds of prosecutions subsequently passed through the courts and, according Daniel Beaver's investigations, many of the reputed offences were committed years or decades previously. The chief justice presiding over the proceedings was none other than Henry Rich, Earl of Holland and Lord of the Manor of Wakefield, yet it was not a single judge but rather a tangled thicket of court appointees ruling in multiple swanimote courts and serving as forest officials who gave teeth to the revivified laws and bounds. In April 1635, all legal appeals were effectively silenced when Sir John Finch, Chief Justice of Common Pleas commanded all judges to enforce the newly resurrected forest borders. An eye-witness account later recorded by John Rushworth captured the sentiments of dissent that ran through those assembled, but Rushworth plangently and pointedly noted that some of those dissenting voices were not human:

> It so happened, that when the Court was to declare their final Decree and Sentence against the People inhabiting in the *Forests* in *Essex* . . . that there came a drove of Calves passing through the Town towards *London*; and when they were at the open place in that Town over against the *Justice-Seat*, they sullenly made a stand and a great bleating, with such an united and unmeasurable noise . . . as if the dumb Creatures did understand that Sentence was to be pronounced against the Inhabitants in the *Forest* in whose Grounds they fed.[279]

[278] Daniel C. Beaver, *Hunting and the Politics of Violence before the English Civil War* (Cambridge: Cambridge University Press, 2008), 82.
[279] John Rushworth. "Historical Collections: 1639-40, January-March (2 of 2)," in *Historical Collections of Private Passages of State: Volume 3, 1639-40*, (London: D Browne, 1721), 1018-1060. *British History Online*, accessed August 5, 2020, http://www.british-history.ac.uk/rushworth-papers/vol3/pp1018-1060.

This was not the last time that animals were anthropomorphized as extensions of common political will. By 1642, a decade of court verdicts permitting a sweeping drainage of the fens and the revocation of rights to both commonable and freehold pasture in the forest (along with revived penalties ignoring statutes of limitations) had sufficiently spat in the face of the common law and provoked a multispecies, paramilitarized rebuttal that legally valorized rights afforded to animals of the *domus* (domestics) over the wild animals in which the king held property. John Browne, one of the courts' many victims, and eighteen accomplices used an assortment of weapons and a mastiff dog to kill and consume a diverse array of the king's deer over the course of a three-week rampage in April. Beaver argues that "[i]mplicit in the claims of Browne and his friends was the conviction that the customary hierarchy of the forest had dissolved in corruption and the coveted trophies of the hunt had been released to the neighborhood."[280] Added to this were claims on the legitimacy of authority as it related to the classification of nonhuman animals and transspecies association. The relentless, prolonged war waged on the king's deer nullified the validity of his paternal power over and rights in venison animals, specifically by evacuating the credibility of the crown's justificatory ethics of care. To many residing in and around Waltham Forest, the king's absent stewardship of wild animals through his proxy courts was as flimsy as indigenous proprietary rights in the wilderness of America, especially when contrasted with the utilitarian benefits derived from domesticated cattle, which is why the mutual bleating of bovine subjects and their proximal owners for rights to grazing lands became a main argumentative tenet against afforestation and the expropriation of the commons. This drama that bound notions of pastoral power to territorial rights was performed throughout the middle

[280] Beaver, *Hunting*, 58.

decades of the seventeenth century as livestock, against court orders and official decrees, were herded into forest clearings and the enclosed (but once common) fenland of projectors.[281]

Browne and his company of merry men assaulted sovereign authority in additional ways by mimetically repeating structures of the king's hunt with critical and parodic surrogations of status and breed. The quadratic sanguinary relation between sovereign, his dog, his nobles, and his quarry was a ceremonious appraisal of honor and the king's favor flowing from his power to capriciously abstain from an ethics of care. In 1618, an Italian visitor to England, Horatio Busino, chaplain to the Venetian Ambassador, recorded the ritualistic pageantry of the royal hunt conducted by James I, a king notorious for his admiration of sport and his assertion of rights over those nonhuman sentient creatures dwelling in the forests:

> The king accompanied by a number of cavaliers riding the quickest horses, follows the game [stag or deer] over the country and often for the space of eight whole days, until it is quite exhausted and dead . . . On his Majesty coming up with the dead game, he dismounts, cuts its throat and opens it, sating the dogs with its blood, as the reward for their exertions. With his own imbrued hands, moreover, he is wont to regale some of his nobility by touching their faces. This blood it is unlawful to remove or wash off, until it fall of its own accord, and the favoured individual thus bedaubed is considered to be dubbed a keen sportsman and chief of the hunt and to have a certificate of his sovereign's cordial good-will.[282]

For James, the transmission of blood from venison to greyhounds and human nobility was the sacrificial transference of care and exemption from the law. The short-haired coats and skin (of his multispecies subjects) stained in blood bore the marks of mercurial sovereign will that set them beyond the reach of forest law and put them, like the dying deer at his feet, under his indeterminate and fickle protection. Greyhounds and courtiers were "bedaubed" as equally noble

[281] See Lindley, *Fenland Riots*, 174.
[282] "Venice: July 1618, 1-15," in *Calendar of State Papers Relating To English Affairs in the Archives of Venice, Volume 15, 1617-1619*, ed. Allen B Hinds (London: His Majesty's Stationery Office, 1909), 251-266. *British History Online*, accessed August 6, 2020, http://www.british-history.ac.uk/cal-state-papers/venice/vol15/pp251-266.

participants in the hunt, but the order of blood recipients from king, to hounds, to hunters, signified a descending order of intimacy with sovereign authority. It was not simply that James viewed greyhounds as noble species, but that he legislated them into a narrow regal and aristocratic companionship by maiming competitor breeds and outlawing their ownership. Manwood notes that forest law disallowed the retention of greyhounds and spaniels, but did permit the ownership of small dogs and mastiffs as long as they were lawed and "expeditated," meaning that the "three clawes of the forefoot shall be cut off by the skin" which was usually accomplished by swiftly bringing a mallet down on "a chissell of two inches broad [set] upon the three clawes."[283] If mastiffs discovered in the king's forests "were strays, or belonged to artificers," the keeper hanged them upon a tree "without any formal judicial process."[284] If greyhounds were owned but their owners did not meet property qualifications, the court issued fines. Similarly, if a mastiff, during the triennial investigations, was found to be unexpeditated, fines were levied on the dog's possessor. John Browne was one such swanimote court defendant who retained and paid dearly for ignoring the order to mutilate his mongrel. In his 1642 attacks on King Charles and his beasts of Waltham forest, Browne mobilized the companionable hunting dog as a politicized site through which layers of sovereign ascendancy were exfoliated and appropriated.

Disclosed by Browne's forest raids was a reassertion of absolute and qualified categories of common law over and against the *ratione privilegy* implicit in sovereign forest law and its system of courts. Michael Dalton in *The Countrey Justice* states that it was a "felonie to steale" animals in which a right of property is held absolutely, those classified as *domitae naturae*,

[283] Manwood, *Treatise*, 115.
[284] Roger B. Manning, *Hunters and Poachers*: *A Social and Cultural History of Unlawful Hunting in England, 1485-1640* (Oxford: Clarendon Press, 1993), 72.

"Horses, Mares, Colts, Oxen, Kine, Sheepe, Lambes, Swine, Pigges, Hens, or Geese, Duckes, Turkies and other domesticall beasts or birds, of tame nature," as opposed to savage or wilde beasts, fowles, or fish, animals classified as *ferae naturae*, "for no person can claime propertie in them."[285] It is only through two methods that a "qualified propertie" could be attested in *ferae naturae*. The first was through the process of domestication or "tam[ing]," but only so long as animals remained tame, for once "they attained their natural libertie . . . then the propertie of them [was] lost."[286] The second, *ratione privilegy*, implied that "by reason of a Parke or Warren" the landowner had no absolute property in the animals, but only a privilege in their use "so long as they remain[ed] in the place privileged . . . for that without them the Parke . . . [was] not complete."[287] This form of territorial "possessorie" was much less legally durable and generally required the reinforcement of statute law.[288] Browne and his party's forays into Waltham Forest tacitly validated only a qualified property attained through processes of domestication while rejecting royal privileges to an enclosed possessory of wild nature. But more to the point, Browne's bloody, boisterous hunts with his mastiff dog also indexed the type of domestic interspecies relationship that constituted authority in defiance of both the king's absentee landlordism secured by mutilative edicts and aspects of common law arrayed against mongrel dogs, "Bloodhound[s] and Mastiffe[s] . . . of so base a nature, no felony can be committed by taking them."[289] In the performative ritual acts of the hunt, Browne and his canine companion repositioned themselves from a state of mutual abjection within the law to one of extra-legal, pragmatic sovereignty over undomesticated nature, thus valorizing (above royal prerogative)

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[285] Michael Dalton, *The Countrey Justice, Conteyning the Practise of the Justices of the Peace out of Their Sessions* (London, 1618), 233-34.
[286] Ibid., 234.
[287] Ibid., 235.
[288] Ibid., 234.
[289] Ibid., 235.

rights inherent in a type of proximal interspecies domestic relationship based on mutual assistance, maintaining bodily integrity, and affective bonds, or what Dalton insufficiently and ambiguously referred to as relationship aimed at producing "pleasure."[290]

"Exodos"

The propertied retention of domestic animals for a type of pleasure, especially in defiance of royal statute, was a promulgation of sovereign power in transformed nomenclature and it exempted chosen domestics from their opposite but always potential fate of economic and expopriative intensification in early modern liquid logic. By the 1650s, that binaristic determinism expanded into and consumed the third space of juridical enunciation for nonhuman animals, or what Bentley expressed as "regal power," which lay rotting with corpse of Charles I and his forest laws; that third space of ambiguous socio-political status of communal and legal participation at the Halifax gibbet. As Halifax embraced parliamentary power, the residual authority of regality and its associated practices drawn from monarchical forest laws disappeared along with the animal from any provincially idiosyncratic juridical register. The public and legal spatio-discursive zones for sentient nonhumans withered into states of abjection for those excluded from the law but subject to its envious reprisals: *videlicet*, the king and the slave. Charles I and the Barbadian slave were unintentionally yoked together as exclusions from juridical subjectivity and both were beheaded in the same machinery of England's socio-economic expansion at mid-century. Any "regal" relation to animals that aspired to a mutual political legibility with humans became suspect and abject within the law. The ridiculousness of James with his avaricious "protection" of wild species and ceremonies of blood that placed greyhound above courtier became just as politically inadmissible in a liquid logic of waste and

[290] Ibid., 235.

appropriation as the West African captives of Ligon's narrative, "commanded" by Colonel Drax "to swim" in chase after "*Muscovia* Ducks" for sport.[291] Ligon reports the impetuous amusement at witnessing the public exhibition of animalistic resemblance between duck and slave: "The duck would make them good sport for they are stronger Ducks, and better Divers by far than ours: and in this chase, there was much of pleasure, to see the various swimmings of the *Negroes*; some the ordinary wayes, upon their bellies, some on their backs, some by striking out their right leg and left arm, and then turning on the other side."[292] Transspecies mimicry and joint pursuits were not proper to a publicness that had replaced the authority of sovereign immunities and exceptions on animal life with a model of capitalist agrarian intensification and the infinite fungibility of commoditized animal life. Regal power to declare nonhuman life exempt from human predation and reductive transactional economics was deposited within institutions and loci that could absorb and refashion sovereign authority within the liberties or epistemological free zones of parliamentary commercial expansion – zones such as self-valorizing Protectorate opera, science-in-the-making, and the *domus* of companionate gentility. It was within these aporias embedded in the enveloping liquid logic of waste that interspecies entanglements with nonhuman sentient life sometimes countermanded transoceanic biopolitics and militated against the epoch's transactional surplus. The epistemological legitimacy (and even institutional opacity) afforded those who took up residence in these aporias earned them political authority, and thus pronouncements from individuals like John Ray, Fellow of the Royal Society, who argued, against Descartes, that animals were not mere machines but rather "endued with a lower Degree of Reason" and "Argumentation," carried the weight of quasi-sovereign statute and intimated

[291] Ligon, *True & Exact History*, 52.
[292] Ibid., 53.

that third exemptive "regal" space of interspecies constitutionality.[293] This is the subject of the chapters that follow.

[293] John Ray, *The Wisdom of God Manifested in the Works of the Creation* (London, 1691), 38.

Chapter Two

"(Gestural Ontologies): Providential Politics and Simian Sociality in the Production of Early Modern Universals"

Ontological possibilities arise from illness. Those who have read Mel Chen's *Animacies* or Elisabeth Tova Bailey's *The Sound of a Wild Snail Eating* (or perhaps through personal experience) are familiar with the potentiality of disease to set one's phenomenology askew – to challenge the conceptual stratosphere of the bounded self and bring other entities and sensations within the orbit of embodied consciousness; to force a subject to be cognizant of its de facto multiplicity as a semi-stable, contingent assemblage.[1] When Koko, a female western lowland gorilla, contracted shigella (a bacterial infection that leads to dysentery) in her infancy, a path toward shared being-in-a-world was illuminated for Koko and Francine Patterson. Koko, the San Francisco Zoo reasoned, could not be returned to her gorilla community for fear she would be ostracized after her long hiatus, and thus the zoo happily loaned Koko to Patterson in order that the Stanford graduate student could conduct her language acquisition study.[2] After 45 years of interspecies intimacy and the mastery of 1,000 words of a unique sign language accompanied by

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[1] Mel Chen opens *Animacies* with the following statement: "Recently, after reaching a threshold of 'recovery' from a chronic illness . . . I found myself thinking about the marriage of bodies and chemicals – I found myself deeply suspicious of my own reassuring statements to my anxious friends that I was feeling more alive again." What follows is a synthetic analysis of how conceptualizations of insensate, deathly, or inert matter animate cultural lives across categories of sexuality, race, and affect, and how animacy operates in the frangible boundaries between the living and the dead, the human and animal. See Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), 1. At age thirty-four Elisabeth Tova Bailey was stricken with an indicepherable viral or bacterial pathogen while on an excursion to Europe. During her arduous recovery of several years, Bailey experienced neurological symptoms, cellular degradation, muscle weakness, and pain mandating total confinement to her bed for days on end. Bailey pondered her spiral into listlessness and detachment: "Given the ease with which health infuses life with meaning and purpose, it is shocking how swiftly illness steals away those certainties." While she remained stowed away in a small studio apartment, Bailey began observing a snail residing in a pot of field violets beside her bed. Casual observations turned into an engrossing commitment to understand the biological, sexual, and phenomenological life of her cohabitant, which in turn opened up the shrinking world of illness onto a vista of differential being. See Elisabeth Tova Bailey, *The Sound of Wild Snail Eating* (Chapel Hill, NC: Algonguin Books, 2010), 5-6.

[2] See James L. Newman, *Encountering Gorillas: A Chronicle of Discovery, Exploitation, Understanding, and Survival* (Lanham, MD: Rowman & Littlefield, 2013), 129-134; and Francine Patterson and Eugene Linden, *The Education of Koko* (New York: Holt, Rinehart and Winston, 1981).

spoken English, Koko and Francine had co-created an exclusive gestural economy and affective kinship that altered consciousness and radically shifted the horizon of their sociality. Over time, gesture articulated an ontology not bound to species uniqueness, but reciprocally contingent upon human-gorilla interaction. Vinciane Despret describes this world formation as a process of "attunement," which occurs in the name of "a 'we' constituted by the assemblage of [animal] and human beings equipped with an apparatus" aimed at enabling communication and meaning production.[3] So when Koko expressed an intense desire to mother a child and picked out a potential mate, Ndume, from video footage of the Cincinnati Zoo, the social and procreative outgrowth from their initial physical contacts remained stunted. Koko was no longer just a desiring gorilla mind-body conjunction, but a subjective surplus of symbolic gestures, abstractions, and altered time-space awareness. The gestural sign changed the reproductive capacity of the gorilla's social body because it set new boundaries for the subject's signification of the social. Koko's body might have looked like that of most female gorillas, but her embodiment was a hybridized construction. Meaning and its production traveled on new relational vectors that lent a necessary coherency to Koko's and Francine's overlapping worlds.

Illness, signs, and ontology: the chief actors in this mini-narrative spill over onto my primary object of inquiry, William Davenant's 1658 operatic production *The Cruelty of the Spaniards in Peru,* and I ask what interspecies, ontological possibilities were birthed in a stew of bodily corruption, gesture, and desire for foundational universals in Cromwell's Protectorate. The question may seem amiss for a masque that has been well explicated in terms of its political service to both the Commonwealth and its author's career; its denunciation of the Spaniards for their colonial exploitation of the Americas at odds with England's own designs; its presentation

[3] Vinciane Despret, "The Becomings of Subjectivity in Animal Worlds," *Subjectivity* 23 (2008): 127-28.

of Peru as a generic tabula rasa on which to inscribe nascent mercantile desires; and its legitimized public format during a time when theatres were officially closed. What has been largely disregarded is the question of the animal; the integration of the play's bestial agents with the political and social landscape that defines the imaginary colonial topography; and its reliance upon transspecies accords to claim English victory.

The Cruelty of the Spaniards in Peru recounts the tale of the anachronistic arrival of the English in Peru at the time of Spain's first conquest. In six entries the Incan Priest of the Sun narrates the history of the Inca Empire from (1) idyllic pre-history to (2) its decadent imperial formation plagued by internecine strife between two royal princes to (3) the Empire's destruction and enslavement under Spanish tyranny. The masque is rescued from an ostensibly inevitable tragic ending by the prophesied entrance of benevolent English colonials, who, in league with the Peruvians, dance in mock military formation for control of the Andean territory. But the final victory is claimed by two nondescript "apes" descending from their arboreal abodes to join a neighboring baboon in a furious dance that drives away an avaricious Spaniard laden with silver and gold. With his retreat, the halcyon quietism of isolated pre-civilization is restored through fraternal internationalism in the form of a great dance of English, "Indians," and a supplicating Spanish soldier representing the demise of his nation's irreconcilable ambitions. Is the *coup de grace* delivered by a contingent of simians merely jocund antics to break up the serious business of war and colonization, or are their gestures themselves serious formal elements in a masque that, according to Susan Wiseman, "registers contemporary concerns in its construction of Englishness,"[4] and according to Dale Randall, demonstrates "the glories of being English"?[5] It is

[4] Susan Wiseman, *Drama and Politics in the English Civil War* (Cambridge: Cambridge University Press, 1998), 145.
[5] Dale B.J. Randall, *Winter Fruit: English Drama, 1642-1660* (Lexington: University Press of Kentucky, 1995), 175.

my assertion that during the chaotic and sickly period of the Interregnum (a time when radical groups like the Ranters, Adamites, Diggers, and Levellers were challenging Cromwell's authority through public enactments of revelation and transspecies cosmopolities) Davenant's entertainment, whether consciously or not, was responding to contentious debates on territorial sovereignty, religious authority, animality, and conflicting visions of political ecology with its own formal "naturalization" of the political. Through aestheticized negotiations of monkeys and hominids, Davenant was searching for a non-theological, extra-legal basis for English statecraft and hegemony that could seal up the deep fissures of the Commonwealth and vindicate its westward expansion.

"Settlement: A Providential Phenomenology"

As most scholars acknowledge, Davenant's masque is inexplicable without relating it to the fitful motion of Cromwell's intervention in the Spanish colonial agenda in the West Indies. Janet Clare relates, ". . . [Davenant's] representation of *The Cruelty of the Spaniards in Peru* as propaganda in support of Cromwell's expansionist policy and of the war with Spain . . . appears as the most accessible meaning and indeed was one which Davenant had helped to promote in his purpose as declared to the Council of State."[6] The Western Design, as the policy has become commonly known, was the brainchild of Thomas Gage and the Lord Protector to launch an assault upon Spain's Caribbean possessions, particularly the islands of Hispaniola and St. John's Island (Puerto Rico). According to Kristen Block, the campaign was grounded in "Cromwell's millennial belief in the righteousness of an all-out religious crusade 'beyond the line'" verified by the fact that "America's 'Indians' would 'freely and willingly invite the English to their

[6] Janet Clare, "The Production and Reception of Davenant's 'Cruelty of the Spaniards in Peru,'" *The Modern Language Review*, 89, no. 4 (1994): 833.

protection,'" as Gage boasted.[7] The aim of the venture was to make England "master of the Spanyards Treasure which comes from Peru," but the design's grandeur collapsed during its flawed execution. Launched in early 1655, 38 ships and 9,000 men under the command of Admiral William Penn and General George Venables failed to take Santa Domingo losing over 1,000 men in the process, many from disease. In May the Design's leadership settled for the undefended and, at the time, undesirable outpost of Jamaica won in a relatively bloodless transfer. By early 1656, most of the 5,000 Englishmen left on Jamaica were dead. Only a handful of the original 9,000 remained to manage the infant colony.[8]

The disastrous course of the expedition was mirrored by the production process of Davenant's new masque. Having most likely written the play in 1655 as events in the West Indies unfolded, Davenant was capitalizing on the religiously infused expansionist fervor to promote his own representation of the subject. In a 1656 letter to John Thurloe, Cromwell's Secretary of State, Davenant writes, "If morall representations may be allow'd . . . the first arguments may consist of the Spaniards' barbarous conquests in the West Indies and of their severall cruelties there exercis'd upon the subjects of this nation: of which some use may be made."[9] As Elizabeth Maddock Dillon and others have shown, Davenant's petition was intentionally timed to coincide with the January 1656 publication of John Phillips's translation of Bartolome de las Casas's account of Spain's destructive conquest of the Indies freshly titled *The Tears of the Indians: Being an Historical Account of the Cruel Massacres and Slaughters of*

[7] Kristen Block, *Ordinary Lives in the Early Caribbean: Religion, Competition, and the Politics of Profit* (Athens, GA: University of Georgia Press, 2012), 110.
[8] J.R. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* (Cambridge: Cambridge University Press, 2010), 101.
[9] William Davenant, "Some observations concerning the people of this nation" in C.H. Firth, "Sir William Davenant and the Revival of the Drama during the Protectorate," *The English Historical Review* 18, no. 70 (1903): 321.

above Twenty Millions of Innocent People.[10] Yet the immense embarrassment of the Design's pitiful returns and massive casualties most likely stalled the production of *Cruelty* until 1658, when it came on the heels of Robert Blake's victory over the Spanish fleet at Santa Cruz and the successful combined English and French assault at the Battle of the Dunes.[11]

Davenant's shrewd political timing with the publicity of his art and career do not need be dissected here (others have done that extensively), but attention should be paid to the masque's deviation from the official rhetoric of millenarian injunction against Spain.[12] The choice is not just a matter of stylistic departures or unbridgeable interstices between generic forms. It concerns the placement of origins and preference for particular gendered models of authority. The renunciation of consanguinity between God and Empire textually incarnates asymmetrical yet co-implicated bodies of state and public as a turn away from political theology. Davenant's detour needs explication. If one were speaking to and about the reach of Protectorate power (as Davenant certainly was), the language of divine sanction was the received common tongue. Pangs felt during the military-enforced dissolution of the Rump were mollified by the opaque workings of God in Cromwell and Council's 22 April 1653 "Declaration":

> But we shall conclude with this, that as we have been led by necessity and providence, to act as we have done, even beyond and above our own thoughts and desires, so we shall do . . . put ourselves wholly upon the Lord for a blessing . . . and therefore do solemnly desire and expect that all men, as they would not provoke the Lord to their own destruction, should wait for such issue as he shall bring forth, and to follow their business with peaceable spirits; wherein we promise them protection by his assistance.[13]

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[10] Elizabeth Maddock Dillon, *New World Drama, Performative Commons in the Atlantic World, 1649-1849* (Durham, NC: Duke University Press, 2014), 71.
[11] Randall, *Winter Fruit*, 174-175.
[12] See Clare, "Production and Reception."
[13] Oliver Cromwell, "The Declaration of the Lord General and his Council of Officers, April 22, 1653," in *The Writings and Speeches of Oliver Cromwell*, ed. Wilbur Cortez Abbott (Cambridge, MA: Harvard University Press, 1945), 3:7.

Providence, to operate both beyond the Council's will and as assistant to it, generates a wide field of elastic justificatory and punitive action through dispersed agency. Cromwell was claiming that the coming Protectorate would not be born of human desire, but rather that through current measures eventually instantiating the Protectorate, desires of the godly were reconciling with God's will in quest of a peaceable nation. Again on 16 December 1653, in the aftermath of Barebones Parliament's evaporation, Cromwell saw "it was the will of God, and the pleasure of the Council, that he should be invested with so great an honour, as to be Lord Protector . . . so the Gospel might flourish in its full splendor and purity; and the people enjoy their just Rights and Propriety."[14] The God of the Protectorate oscillated smoothly between the fecundity of pure religion and otherwise predominantly secular rights to property and protection under the law. Economy, legality, and religious orthodoxy met at the nexus of Protector and Council who gave providence a proprietary geography.

Barry Coward has highlighted Cromwell's deployment of the word "settlement" as emollient for "the social and political wounds" of the civil wars, and more expansively as the heuristic for the reformation of social justice.[15] Settlement aptly captures the imperial-spatial-legal semantics and practices undergirding providential rhetoric and millenarianism. According to Coward, Cromwell's reconciliation of "'settlement' and 'reformation'" entailed balancing bondage to Charles I and Archibishop Laud with Israel's spiritual and physical slavery under the Egyptian pharaohs, which could only be rectified through settlement outside of Egypt, "metaphorically . . . allegorically" and geographically.[16] One of Cromwell's frequent tropes was

[14] Oliver Cromwell, *A Declaration concerning the Government of the three Nations . . . By his Highness the Lord Protector Cromwell* (R. Wood, 1653), 5, in *The Writings and Speeches of Oliver Cromwell*, ed. Wilbur Cortez Abbott (Cambridge, MA: Harvard University Press, 1945), 3:138.
[15] Barry Coward, *The Cromwellian Protectorate* (Manchester: Manchester University Press, 2002), 16.
[16] Barry Coward, *The Stuart Age: England 1603-1714*, 3rd ed. (London: Longman, 2003), 258.

God the Father of the Old Testament "bringing [Israel] out of Egypt through a wilderness" to the conquest and settlement of Canaan as "parallel" to the settling of interests in the three kingdoms.[17] In an officially sponsored publication of Cromwell's speech reinforcing his faith in the Instrument of Government,[18] international treaties with Portugal, Denmark, the Dutch, and potentially France, had opened up colonial trade zones and brought the English fleet to "the edge of Canaan . . . That is the blessing of God go along with them in the management of their Affaires"[19] Henry Stubbe reiterated the comparison in 1659 when he stated, "through resemblance of events" with the Old Testament, "the same providence operateth now in us . . . and we expect the same issue."[20] Mending divisions and healing wounds required arrogating and defining claims to territory: a New Jerusalem, a phrase that captures the retrogressive expectancy of the Protectorate; its combination of Judaic law's spatial appropriation with the millennialist pause at "the door to usher in the things that God has promised."[21] These *threshold politics*, or what Block has termed "the spiritual rhetoric of economic rights," required the frequent settlement of space as proof of divine favor.[22]

It was probably Thomas Gage who in 1648 drew up the first thorough blueprint for the expropriation of Spanish possessions in the Americas as a natural extension of religious and

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[17] Oliver Cromwell, "His Highnesse the Lord Protector's speech to the Parliament in the Painted Chamber, on Monday, the 4th of September, 1654," in *The Writings and Speeches of Oliver Cromwell*, ed. Wilbur Cortez Abbott (Cambridge, MA: Harvard University Press, 1945), 3:434.
[18] The Instrument of Government was Cromwell's constitutional bequest that superseded articles of the first Protectorate Pariament and initiated a period of Rule by the Major Generals. It called for all executive power to be invested in the Lord Protector, legislative authority to be attached to triennial parliaments, and for an English Council of State to advise and approve actions taken by the Lord Protector.
[19] *The Last Speech of His Highness the Lord Protector to the Parliament; And the Instrument of Government Presented unto Them on Tuesday Morning Last, in the Painted Chamber, for Each Member to Subscribe and Sign, &c.*, (London, 1654), 7.
[20] Henry Stubbe, *Malice Rebuked* (London, 1659). See Blair Worden, "Providence and Politics in Cromwellian England," *Past & Present* 109 (1985): 89.
[21] Quoted in Coward, *Cromwellian Protectorate*, 10.
[22] Block, *Ordinary Lives*, 113.

property settlement in England, Scotland, and Ireland.[23] His book *The English-American his Travail by Sea and Land, Or A New Survey of the West India's* is dedicated to Thomas Lord Fairfax, Captain-General of the Parliament's army and it begins by fashioning Fairfax as God's instrument led "towards the settlement of the peace of this Kingdom, and reduction of Ireland . . . to employ the Souldiery of this Kingdom upon such just and honourable designes in those parts of America as their want of action at home may neither be a burden to themselves or the Kingdome."[24] Gage's extension of a godly military conquest paradigm from Ireland to the West Indies seemed a natural one that found company in a host of existing imperial literature on Irish subjugation and management. John Dillingham opined in the *Moderate Intelligencer* "that where people do not acknowledge an eternall being nor live according to the laws of nature and reason, but that others may goe and possess those Countries . . . if the Irish be more brutish then Indians, why may it not be reasonable to tame such wilde beasts . . . ."[25] Likewise, to stifle radical republican opposition to the Commonwealth's planned invasion of Ireland, in May 1649 Thomas Waring was ordered by the Council of State to republish bloody tales of the Irish rebellion of 1641 and cast the event as the Catholic persecution and massacre of Protestants sponsored by "incarnate Divels."[26] In just a few months Cromwell would boast of putting to the sword "near

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[23] Gage had expansionist paradigms on which to draw, but his overtures condoning conquest in the Spanish Indies were exquisitely detailed and personalized with the imprint of autobiographical knowledge. In 1640 John Pym delivered an opening speech to the Short Parliament urging war and territorial expropriation of Spanish possessions in America. "It is not unknown how weake, how distracted, how discontented the Spanish Colonies are in the West Indies. There are now in those parts in New England, Virginia and the Caribe Islands, and the Barmudos, at least Sixty thousand able persons of this Nation, many of them well armed, and their bodies seasoned to that Climate, which with a very small charge might be set downe, in some advantagious parts of these pleasant, rich and fruitfull Countreys, and easily make his Majesty Master of all that treasure, which not onely foments the Warre, but is the great support of Popery in all parts of Christendome." John Pym, *A Speech Delivered in Parliament, by a Worthy Member Thereof a Most Faithful Well-Wisher to the Church and Common-weale, Concerning the Grievances of the Kingdome* (London, 1641), 38.

[24] Thomas Gage, *The English-American his Travail by Sea and Land, Or A New Survey of the West India's* (London: R. Cotes, 1648), Epistle Dedicatory A4.

[25] John Dillingham, *Moderate Intelligencer*, no. 215 (2 May 1649).

[26] See Norah Carlin, "The Cromwellian Reconquest of Ireland, 1649-1651," in *Representing Ireland: Literature and the Origins of Conflict, 1534-1660* (London: Cambridge University Press, 1993), 213.

one thousand" Drogheda Catholics outside the same Church of St. Peter's in which they dared to hold public mass.[27] According to Sarah Barber, the siege of Drogheda was upheld by Cromwell as "the verdict of God on the anti-Christian practices of the catholic [sic] Irish."[28] Additionally, an Act for the Settlement of Ireland (12 Aug 1652) provided for the expropriation of two-thirds of Irish occupied land, and for the transplantation of the bulk of the endemic population to Connaught (though this Act was never officially enforced).[29] Supplementing the prevalence of vengeful hysteria over Irish Catholics was Gage's own intimate knowledge of the Dominican order and his compulsive desire for vindication. Having spent over ten years in service to the Catholic faith in New Spain prior to his Protestant conversion, Gage felt authorized to "offer a New-World, to be the subject of your future pains, valour, and piety . . ."[30] His argument rests upon observations of illegal means of seizure that, aside from the Pope's donation, leave Spain with "no title . . . but force, which by the same title, and by greater force may be repelled." Might alone does not stabilize legal claim. It falls through the cracks of the secure vessel of law into the endless, churning maelstrom of stronger force toppling weaker force. By natural reason and English custom, only settlement and its signification legitimize human action on an environment. "No question but the just right or title to those Countries appertains to the Natives themselves; who if they shall willingly and freely invite the English to their protection, what title soever they have in them, no doubt but they may legally transferr it or communicate it to others."[31]

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[27] Oliver Cromwell, *The Writings and Speeches of Oliver Cromwell*, ed. Wilbur Cortez Abbott (Cambridge, MA: Harvard University Press, 1945), 2:127, 128.
[28] Sarah Barber, "Scotland and Ireland under the Commonwealth: a question of loyalty," in *Conquest and Union: Fashioning a British State, 1485-1725* (London: Longman, 1995), 212.
[29] See Christopher Hill, *The Century of Revolution, 1603-1714* (New York: Norton, 1961), 114-15.
[30] Gage, *English-American*, Epistle Dedicatory A4.
[31] Ibid., A5.

Gage seems to ensconce aboriginal inhabitants of the Americas within English common law. For both geographic localities, primacy, precedence, and labor internationally validate proprietary rights and their ability to be accounted as transitive through felicitous signification. But in the following lines of Gage's tract it is apparent that ethos proves human kinship; that humanity is granted by God in equal parts ontological and social, but that humanity must also willingly and correctly be *performed* by His creation. "And to say, That the inhumane butchery which the Indians did formerly commit in sacrificing of so many reasonable Creatures to their wicked idols, was sufficient warrant for the Spaniards to divest them of their Country; The same argument may by much better reason be inforced against the Spaniards themselves, who have sacrificed so many millions of Indians to the Idol of their barbarous cruelty."[32] Misdirected religious devotion toward idols results in a fall away from humanity, but such a fall is a temporal category ("did formerly commit") that borders redemptive moments of irruption by God's agents. The Spanish, in mimicking the indigenous penchant for irreligious sacrifice to fetish objects, have extricated the human from its natural place – the land – and left "large Territories upon the main Continent . . . uninhabited." Depopulation persists in two senses: one, the genocidal sweep of Spanish plague and sword, and two, the failed performance of humanity in both the natives left to isolation and, exponentially worse, in their malicious Old World, Catholic models. Gage's tract bears a Baconian imprint on its interrogation of idols, for it is not just the idols themselves that lead one astray, but the host of demonstrations and performative utterances circulating with the idols, the one tribe becoming a paradigm for the other, that gives them a theatrical, rhetorical force that makes "thought the bond-slave of words" and actions.[33] The

[32] Ibid.
[33] Francis Bacon, *The New Organon; Or, True Directions Concerning the Interpretation of Nature* in *The Works of Francis Bacon*, eds. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath, (London: Longman and Co., 1858) 4:54.

human naturally linked to rights of inhabitance and space is unintelligible without the marks of culture, but humanity is only revealed in the outward signification of inward reason. For Gage, "God hath given the earth to the sons of Men to inhabite" and it is clear that once granted, habitation is not retained through categorical belonging, but through the performance of recognizable (that is, by Protestant Englishmen) signs of humanness.[34]

The official tract of the Protectorate penned by John Milton, *A Manifesto of the Lord Protector to the Commonwealth of England, Scotland, Ireland, &c. published by consent and advice of his Council. Wherein is shewn the reasonableness of the cause of this republic against the depredations of the Spaniards*, borrows Gage's language to validate his designs on Spanish territory. The manifesto threads property claims through a tapestry depicting the mutual suffering of English and Indigenous populations. Vengeance lays at the right hand of the English because "The Spaniards themselves are the occasion of this war . . . they are continually murdering, and sometimes even in cold blood butchering any of our countrymen in America they think fit."[35] The blood of "the poor Indians, which in those places has been so unjustly, so cruelly, and so often shed by the hands of the Spaniards" is equal cause for reacting with violence.[36]

> God has made of one blood all nations of men for to dwell on all the face of the earth, having determined the times before appointed, and the bounds of their habitation. And surely God will one time or other take vengeance on the Spaniards, who have shed so much innocent blood, who have made such terrible havoc among the poor Indians, slain so many thousands of them with the utmost barbarity, done them so many injuries, and harassed and persecuted them in such a miserable manner, whatever time that may happen, and by whose hand soever it may be executed.[37]

[34] Ibid., A6.
[35] Abbot, *Writings and Speeches*, 3:878.
[36] Ibid., 3:879-80.
[37] Ibid., 3:880.

The Lord Protector promulgates a messianic timeline with the implication that the Spanish and, though not explicitly named, English are caught in a Manichean struggle between fallen despoilers and redeemed avengers. A biological substrate, blood, unites the two, along with indigenous populations, as one creation with multiple outward faces and organizing principles bound to "nation." Nations are appointed habitations within this temporal frame and while geographic zones may not be constant, place is legitimized by a visible praxis that harmonizes with a single law of human creation encoded in blood. Rejection of blood ties abrogates a people's status in the brotherhood of creation and thus the right to settlements. Yet, demotion is not the consequence of exercising radical free will. The mechanisms of choice are rather blurry in Cromwell's scheme. Since everything takes place within the bounds of Providence, the Spaniard is, in the mind of a God adumbrated by Calvinist doctrines, always already at enmity with the godly English. The visible signs of Spain's inhumanity are merely the incarnation of theistic communication with His chosen nation.

In Cromwell's speech at the opening of Parliament on 17 September 1656, this rhetorical construction reaches a vertiginous apex. The Spaniard "is a natural enemy . . . throughout all your enemies, through that enmity that is in him against all that is of God that is in you . . . This State is your enemy . . . by that antipathy that is in him providentially."[38] The Lord Protector's diatribe echoes Thomas Gage's set forth to Cromwell at the end of 1654 in which Spain has banished itself from the association of human polities: there are "no people more sinfull then the Spaniards in America, greate and small . . . [they] sinne publikely, sinne like beasts uncrontrowledly: therefore thier sinnes will betray them and fight against them, if every any

[38] Abbot, *Writings and Speeches*, 4:261.

nation shall oppose them."[39] The battle between Spain and the rest of humankind is sketched in cosmic and global scales, pre-ordained and transnationally, even universally recognizable, but the evidence cited for this sinful enmity is at times surprisingly worldly and banal. In Cromwell's estimation Spain occupies this position of exclusion not because the country is Catholic (France is excused from censure by the Council as "not soe bitter against the Protestants"), but because Spain places service to the Pope above performance as an international-economic unit; that is, because commercial interests, alliances, and trade remain secondary interests to the will of an extra-national demagogue.[40] France does "not think themselves under such a tie to the Pope, but think themselves at liberty to perform honesties with nations with whom they are agreed." No state but Spain "is under the lash of the Pope" and will "break or keep" agreements based upon that thralldom.[41] Misplaced authority thwarts the impetus toward globalization, and an anti-commercial state is an "anti-Christian" state. The refusal to support trade displaces Spain from the physical geography of early modern Europe onto an admonitory and eschatological Biblical mytheme, "that State that is so described in Scripture . . . expressed throughout the Revelations."[42] As the strait gate to ruination, Spain's imperial objectives are nothing less than the rape and ravishment of "the whole Christian world, if not more."[43] Cromwell blames the Spanish not only for the destruction of the Americas, but the murder of 20,000 Protestants in Ireland, the religious restraint and corruption of the English in the West Indies, and the initiation

[39] Thomas Gage, "Some briefe and true observations concerning the West–Indies, humbly presented to his highnesse, Oliver, lord protector of the commonwealth of England, Scotland, and Ireland," in *A Collection of the State Papers of John Thurloe, Volume 3, December 1654 - August 1655*, ed. Thomas Birch (London: Fletcher Gyles, 1742), 46-63. *British History Online*, accessed May 18, 2017, http://www.british-history.ac.uk/thurloe-papers/vol3/pp46-63.Calendar of State Papers.
[40] See C.H. Firth, ed., "Appendix B: Edward Montagu's Notes on the Debates in the Protector's Council Concerning the Last Indian Expedition," *The Clarke Papers* (London: Longmans, Green, and Co., 1899), 3:203-208.
[41] Abbot, *Writings and Speeches*, 4:263.
[42] Ibid., 4:264.
[43] Ibid., 4.262.

of the Apocalypse.[44] Spain is the semiotic *point de capiton* for all of Cromwell's commercial, social, and mythological bugbears.[45]

Cromwell's rejoinder to the spread of papal malevolence across the Atlantic was an antithetical colonizing army of the godly. As an outgrowth of his "reformation of manners," those who would wrest possessions from Spain in the West Indies must bear the marks of sainthood.[46] The "liberty and prosperity" of the nation depended upon the slow asphyxiation of sin and profaneness, and only those who had been tested and proved themselves zealous reformers of self and community in the religious crucible of England (and its Puritan colonies) were, at least in official proclamations, sufficient to the task. "Indifferenc[e] and lukewarmness" in the promotion of God's interests were the first signs of national infidelity and had to be avoided whenever possible.[47] The timeless cosmic war between good and evil, light and

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[44] Ibid.

[45] Lacan uses the term *point de capiton* to designate points at which the signified and signifier are bound together – points at which slippage between the two can only occur with a resultant psychosis or tear in the psychical fabric.

[46] Beginning in the 1570s, the reformation of manners was a campaign undertaken by the godly to eliminate sin from the daily activities of English Protestants. The Blasphemy Act of 1650 covers much, but not all, of that which the elect sought to rid from habitual practices. Murder, adultery, fornication, drunkenness, filthy speech and riotous behavior make the act's broad litany of transgressions. A cornerstone of the movement was the strict observance of the Sabbath, thus Puritans in the early seventeenth century began actively interdicting or frustrating Sunday sports, pastimes, and alehouses. Barry Coward asserts that what gave the reformation its passionate force was a "deeply-held conviction among the godly that without such a reformation they and the nation would lose God's support and that God would (as they graphically put it) 'spit in their face.'" The Old Testament triumph of the Israelites was proof that God would bless the English only after they made observable and regular signs of expiating their sins. Barry Coward, *The Stuart Age: England 1603-1714*, 3rd ed. (London: Longman, 2003), 86.

[47] Cromwell's 17 September 1656" Speech to Parliament" offers a pointed diagnosis of the problem and gestures toward solutions. "I did hint to you my thoughts about the reformation of manners; and those abuses that are in this nation through disorder, is a thing that should be much in your hearts. It is that, that I am confident is a description and character of that interest you have been engaged against [and pressing to, as any other,] the badge and character of countenancing profanes, disorder and wickedness in all places [In my conscience it was a shame to be a Christian within these fifteen, sixteen, or seventeen years in this nation, either in Caesar's house or elsewhere; it was a sham, it was a reproach to a man, and the badge of Puritan was put upon it,] and whatever is next of kin to that reproach, and most agrees with that which is Popery, and the profane nobility and gentry of this nation. We would keep up the nobility and gentry; and the way to keep them up is, not to suffer them to be patronizers nor countenancers of debauchery or disorders; and you will hereby be as labourers in the work. And a man may tell as plainly as can be, what becomes of us by our indifferency or lukewarmness, under I know not what weak pretensions, if it lives in us. Therefore I say, if it be in the general, it is a thing I am confident, that the liberty and prosperity of this nation depends upon reformation, to make it a shame to see men to be bold in sin and profaneness, and God will bless you." Abbott, *Writings and Speeches*, 4:273-74.

darkness, righteousness and the temptations of sin necessitated that "such as goe thither must bee well principled in points of honesty; otherwise they may soone bee ensnared, and fall from God, and loosing him loose againe, what by his blessing, helpe, and favour, may bee easily gotten."[48] The leaders of the Western Design, Admiral William Penn and General Robert Venables, "seem to have met [Cromwell's] standards for men who would prize the religious mission over the lucrative possibilities of personal gain."[49] Penn, who owned an estate in Ireland preserved at the behest of Cromwell in 1654, is described by his great grandson and biographer to have been "simple, sincere, and strong" in "his sense of religion."[50] He had a history of viewing war and religiosity as agreeable companions. While commander of the *Fellowship*, the *Assurance*, and the *Lion* deployed against the King's forces and Irish rebels from 1644-1650, Penn wrote to his father that he could not abandon "so pious a quarrel" for mercantile assurances, despite its many hazards to life and limb: "Nor do I serve the state in hope of gain: gold to me, in this, is dirt; 'tis the goodness of the cause that hath only put me on."[51] Penn interpreted his commission against "the cruelties and inhuman practices of the King of Spain exercised in America" ten years later as a continuation of that divine mission.[52] His admiralty in the West Indies evenly combined the role of military strategist with that of pastoral governor. Divinations were proffered on the earthbound imprints of God's guidance. In a letter to Cromwell scribed on 17 March 1655, while the ships were docked in Barbados, Penn took the general health of the crew and land as indications of God's "presence, and of His favour to this Design" and thus the navy was "very much encouraged to wait on Him for the accomplishment of His good pleasure concerning the

[48] Gage, *Briefe and true observations*, V. xxiv.p. 11.
[49] Block, *Ordinary Lives*, 117.
[50] Granville Penn, *Memorials of the Professional Life and Times of Sir William Penn, Knt., Admiral and General of the Fleet during the Interregnum; Admiral, and Commissioner of the Admiralty and Navy, after the Restoration: from 1644 to 1670* (London: James Duncan, 1833), 94.
[51] Quoted in Penn, *Memorials*, 1:93.
[52] Quoted in Penn, *Memorials*, 2:21.

same."[53] Abstractions from environmental conditions repeatedly revealed the Design and God entwined in an emblazoned symbology, like the medical signification of snake and Staff of Asclepius – one unintelligible without the other.

Only a righteous probity could maintain such favor, no matter the severity of climate or puissance of the enemy, and Penn was invested with plenipotentiary powers to ensure that probity's maintenance. In one sense, it could be argued that he mitigated martial austerity by ministering to his crew's spiritual needs. Chaplains were closely vetted so that only those "well principled in religion, and whose practice in life and conversation [was] agreeable to the rules of the Gospel" were allowed to perform official functions for payment.[54] On the Sabbath men were kept at liberty from naval obligations, except those of "necessary public business," and sailors, if their ships had no chaplain, were permitted "to go on board some other ships of the fleet, where the word of God [was] preached." The positive freedoms in these decrees are self-evident. Institutional restrictions are minimized to allow and potentially actuate the individual expression of piety. But in another sense, the full list of Penn's proclamations portrays piety as very much an institutional mandate and integral weapon in the military's arsenal. Punitive force commingles with a modicum of fitful circumstantial freedom. Servicemen were forced into vessels for fear of going ashore only to commit to "idling and mispending their time." Micro-level behaviors were policed: "Every person that shall blaspheme the name of God, or swear, or be drunk on board any ship of the fleet (whether the said person belong to the shore, or to any merchant ship or vessel), shall be punished after this manner, (viz.) he shall pay five shillings, or twenty pounds of sugar, for every such offence." Failure to remit payment in a timely manner resulted in "twenty

[53] Penn, *Memorials*, 2:73.
[54] Penn, *Memorials*, 2:66.

stripes on the bare back."[55] In a just war God demanded the blood of the unjust; nationality alone dictated the amount and methods of its extraction. To prevail against the Spanish, the English must visibly prostrate themselves before God.

A reformational consanguinity imbued the five-commissioner leadership of the Design. Penn's counterpart on land, General Robert Venables, brandished an equally fervent strand of Puritanism in his tactical configurations. In his personal defense composed during a period of examination by Council and imprisonment in the Tower of London (which ultimately led to his dismissal from service), Venables sought "to vindicate [his] reputation . . . as a general" in part by humbling himself before the sanctity he identified in the Design itself.[56] During the English Civil Wars he had "promoted to his utmost Ability" the Parliamentarians "against all discouragements" and at great personal cost, selling a "Tenement of about Forty pounds a year [to] maintain a company of Foot in that service."[57] The acts of continual sacrifice to God and Parliament's cause was, in essence, a procreative series that allowed the Protectorate and Council to come into existence only to condemn him, if in an attenuated manner, for the West Indies debacle. The cost of the Design had been great, but yet again he was willing to pay "to let the World know it was the Promotion of the Gospel and the Service of our country we did chiefly propound ourselves."[58] Rife with the Lord and thoroughly feeling his election, Venables could see that it was "God so ordering it by his Providence to bring [them] to Jamaica," and that "it pleas'd God thro' his Providence to retard" supplies so that their faith may be tested.[59]

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[55] Penn, *Memorials*, 2:64.
[56] C.H. Firth, ed., *The narrative of General Venables, with an appendix of papers relating to the expedition to the West Indies and the conquest of Jamaica, 1654-1655* (London: Longmans, Green, and Co., 1900), vi.
[57] Venables, *Narrative*, 2.
[58] Ibid., 5.
[59] Ibid., 45, 63.

This very act of recognition, of sensing God in the major outlines and minutiae of experience, exonerated the perspicacious cadre of commanders. They radiated from the warmth of God's finger nudging them along from Westminster to the West Indies.[60] Before his grievous death from malarial fever, Edward Winslow, former governor of the Plymouth Colony then chosen to assume the governorship in Hispaniola, wrote to John Thurloe of the saintliness of England's incursion into the Caribbean:

> Sir, we are so weary of wayting, and the season so neer spent, as we are resolved to cast ourselves into the arms of Almighty God, whose providence we trust will be ever for good, and will owne us as instruments in his right hand, to execute his determined vengeance upon that tyrannous, idolatrous, and bloudy nation, that hath inflicted so many cruelties upon the nations of the earth, in their distressed members, and not the least upon ours.[61]

Winslow espouses a Heidegerrian *ready-at-hand* passivity of the saintly English subject. He is of God's Phenomenology, the instrument through which the Creator extends Himself and takes up prosthetic residence, orienting the Englishman toward those regions where there is active resistance to His/his habitation.

Divine instrumentality allows a body to inhabit that which is otherwise prohibited (domain or title). Cromwell relied upon its cognitive purchase to explain the army's advance to Naseby and Long-Sutton during the civil wars, it "pleas[ing] God to use His servants" against errant Royalists;[62] to vindicate the killing and capture of "about 5,000, very many officers," the

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[60] Venables reported to Cromwell that "The good of God [went] along with us at Sea preserving us from Tempests and diseases (not twenty that I can hear of dying in all the Fleet)." The health of the crew during its crossing contrasts starkly with the unremitting rate of casualties that followed after leaving Barbados, implying that the hand of God, for whatever reason, had stayed their progress. See Venables, *Narrative*, 7.

[61] Edward Winslow, "Mr. Edward Winslow to secretary Thurloe, Barbados, March 30, 1655," "State Papers, 1655: March (8 of 8)," in *A Collection of the State Papers of John Thurloe, Volume 3, December 1654 - August 1655*, ed. Thomas Birch (London: Fletcher Gyles, 1742), 311-332. *British History Online*, accessed May 23, 2017, http://www.british-history.ac.uk/thurloe-papers/vol3/pp311-332. See also Carla Gardina Pestana, *The English Conquest of Jamaica: Oliver Cromwell's Bid for Empire* (Cambridge, MA: Belknap Press, 2017), 100.

[62] Abbott, *Writings and Speeches*, 1:365.

efficient cause of which was none other than "the hand of God";[63] and to countervail the black mark of "traytor" when exhorting the House of Commons to move capitally against the King, "since providence and necessity had cast them upon it."[64] Within the flow of providence one could occupy the place of the criminal, the traitorous, and the barbarous because occupation purified signifiers of their banal intelligibility and ejected actions into divine consciousness outside of time. The performative force of these providential actions, their Austinian ability to manufacture and not just describe reality, was inextricable from the convincing performance of piety and continual acts of submission elicited by their earthly agents (hence Admiral Penn's enforced behavioral protocols). The New Model Army was acclaimed a godly congregation of soldiers, and thus its victories during the civil wars thickened this relational logic. According to Cromwell's Chaplain John Owen, it was "God [who] marched before them and traced their way from Kent to Essex, from Wales to the North . . . Their work was done in heaven before they began it." And God "was pleased to employ such worthy instruments" aware of their own "nothingness in his all-sufficiency" and attuned "to find the footsteps of the mighty God going before [them]."[65] Understandably then, a question that continually beleaguered Venables and Penn was how could the Design, as worthy of God's providential blessing as it was, succeed when its regiments were adulterated by cashiering "old Blades," "diverse Papists," "sixteen Irish", and "a Priest" – the western venture serving as a dumping ground for the military's undesirables.[66] How could the English beset and purify Spanish defilement if its own invading force was contaminated and rotting from the inside out?

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[63] Abbott, *Writings and Speeches*, 1:360.
[64] Abbott, *Writings and Speeches*, 1:719.
[65] John Owen, *The Works of John Owen, D.D.*, ed. William H. Goold (Edinburgh: Johnstone and Hunter, 1851), 8:97-98.
[66] Venables, *Narrative*, 6.

The response was a triptych of Spartan measures: identify and purge the opprobrious, recruit the Protestant contrite, and mandate godliness through legalistic and physical intimidations. Venables complained of being provided with "the most abject of [the officers'] Companies" and having numerous "Prophane Persons" heaped upon him.[67] John Berkenhead's letter to Secretary Thurloe composed in Barbados on 17 February 1655 conveys the extent of antireligious infestation and the proposed methods for recalibrating the parameters of doctrine and exclamations of faith:

> Nor is there any faction at all amongst us, every one hitherto shewing himselfe a faithful souldier and a true Englishman; but we have lately found the devill's endeavours to have his chapel amongst us, which we shall teare up by the roots; for I have made a discovery of certain papists in our armie, to the number of one hundred and fifty, which came out of England, and most of the regiments which came out of the Tower, which were raised in hast, and put into colonell Butler's. Besides there are certain Irish papists, which were listed in this island since our coming, which we are now purging ourselves of. We have likewise in our fleet many (as I am credibly informed) anabaptists that doe in their speeches justi[f]ie admiral Lawson's late actings, that he was questioned for, and especially one captain Newbury of the Portland frigat, who denyes the Trinity, and are so violent in prosecuting their way of worship and their owne opinions, that they come on shore, and make proselites, and get soe many of theire owne sort into the army, as they can; as particularly one captain Martiall, whos company is most of the late proselites raised in this island, and himself likewise.[68]

Berkenhead's letter fails to convince its writer of the success of a depurative mission and degenerates into a querulous, searching grammatical run-on. A strong avowal of "[no] factions at all amongst us" conjoins despairingly with its disavowal at the multiplication of sectarian discord: English Catholics, Irish papists, and Anabaptists outstrip their search and seizure, carrying the bulk of the passage's verbiage against the two congratulatory clauses at its

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[67] Ibid., 5,6.

[68] John Berkenhead, "Mr. J. Berkenhead to secretary Thurloe" in "State Papers, 1655: February (2 of 3)," in *A Collection of the State Papers of John Thurloe, Volume 3, December 1654 - August 1655*, ed. Thomas Birch (London: Fletcher Gyles, 1742), 150-165. *British History Online*, accessed June 8, 2017, http://www.british-history.ac.uk/thurloe-papers/vol3/pp150-165.

inception. The language of high politics is vainly connoted – "tearing up by the roots . . . the deavill's endeavours" in reference to Root and Branch Petition (1640) urging the Commons to eradicate episcopacy from England's government and "purging" papists a la Thomas Pride's purge of the grandees' opposition from Parliament in 1648 – in the hopes of making particular liberties of religious conscience actionable forms of sedition and mutiny, thus remaining within the military's judicial and punitive structure. But the inscription of personal faith onto the juridical is foiled by the apostasy of its very enforcers, those such as Captain Newbury, "violent[ly] prosecuting their way of worship and their owne opinions." Military conformity and order cannot keep pace with the proliferation of doctrinal opinion. If it were merely a case of the binary schematic of Protestantism and popery that Peter Lake examines – "popery as an anti-religion, a perfectly symmetrical negative image of true Christianity" asserting itself as structure "dividing up the world between positive and negative characteristics" – then the morphology between religious and legal codes could be maintained less contumaciously as similar (and with greater freedom granted to disparate Protestant opinions).[69] In the case that Berkenhead presents, the metamorphosis and slipperiness of post-Regicide Christian identities in foreign lands erases that stark line between orthodoxy and heresy, requiring the continual vetting of positionality and the display of proper reverence through strategic conduct.

The Protectorate's purgative methodologies had to balance extensive measures to recruit the godly with the Instrument of Government's declaration to field "10,000 horse and dragoons, and 20,000 foot, in England, Scotland and Ireland."[70] While the top tiers of the Western Design hierarchy could be staffed along the lines of the New Model Army, including such men as the

[69] Peter Lake, "Anti-Popery: The Structure of a Prejudice," in *Conflict in Early Stuart England*: *Studies in Religion and Politics, 1603-1642*, eds. Richard Cust and Ann Hughes (London: Longman, 1989), 73,74.
[70] "Article XXVII" in "Modern History Sourcebook: Commonwealth Instrument of Government, 1653," ed. Paul Halsall, accessed November 11, 2020, https://sourcebooks.fordham.edu/mod/1653intrumentgovt.asp.

pious separatist William Goodsonn (vice admiral) and the Independent George Dakins (rear admiral) serving under Penn, and the tried and true Parliamentarians Edward Doyley (lieutenant colonel) and James Heane under Venables, the rank-and-file were drawn from superfluous numbers in other regiments or raised specifically for the unpalatable venture to islands teeming with foreign diseases. Approximately 3,000 soldiers had to be sourced from the small planters and dispossessed of Barbados, whom one expedition commander denigrated as "the very scum of scums, and mere dregs of corruption."[71] Failure to secure Hispaniola from the Spanish was, for many, evidence of God's disapproval of the English military's debauched constituents. Boston minister John Cotton counselled Cromwell: "As for the aspersion of factious men, I hear, by Mr. Desboroughs letter last night, that you have well vindicated yourselfe therefrom by cashiering sundry corrupt spirits out of the army. And truly, Sir, better a few and faithfull, than many and unsound. The army on Christs side (which he maketh victorious) are called chosen and faithfull, Rev. 17. 14. a verse worthy your Lordships frequent and deepe meditation."[72] The author of *A Brief and Perfect Journal of the Late Proceedings and Successe of the English Army in the West Indies* listed "Hectors, and Knights of the blade, with common Cheats, Theeves, Cutpurses and such like leud persons" as the "polluted" and "unfit instruments" of the Design responsible for providential failures of an "Army so numerous, strong and well provided"[73] The responsive purges and reprimands oftentimes were executed in vain. Venables dismissed the "Drunkard and Whoremaster" Adjutant General Jackson from his post, performed a massive sweep to punish as whores and excise women cross-dressed as soldiers, and whipped and burned through the tongue

[71] I.S., *A Brief and Perfect Journal of the Late Proceedings and Successe of the English Army in the West Indies* (London, 1655), 11, quoted in Pestana, *English Conquest,* 55.
[72] "John Cotton to Oliver Cromwell, 28 July 1651," in *The Correspondence of John Cotton*, ed. Sargent Bush Jr. (Chapel Hill, NC: University of North Carolina Press, 2001), 461.
[73] I.S., *Brief and Perfect Journal*, 8, 7.

several notorious swearers.[74] Defeat still plagued the English forces at Hispaniola because God the Father would not countenance the banner of victory to be held aloft by hands steeped in sin. Therefore, the 7th of May 1655 was ordered as a day of fasting and humiliation within the sightlines and earshot of God. As David Armitage relates, "The council of state signaled the godliness of the Design with cruel impracticality to an army lacking tent, water-bottles and sufficient food, when on 9 June 1655 it ordered two thousand Bibles to be sent to the soldiers in the West Indies."[75] Reverberating Major Sedgwicke's report to Cromwell in November, many members of parliament and council were quite ready to scapegoat the soldiers as the root cause of God's "wrath and heavy displeasure" and condemn them as a prime factor in the Design's calamitous breakdown. [76]

Once a few drops of God's grace finally fell upon the English during the relatively uneventful capture of the consolation prize Jamaica, attempts were made to reinforce or replace the remaining morally questionable troops with a settling army of the elect. Cromwell sent Daniel Gookin to gather Puritan settlers in New England with a broadside expressing the Protector's fevered desire to have Jamaica "inhabited by a stock of such as know the LORD, and walk in his fear," but few left their respective communities.[77] Cromwell's scheme was not a novel one. His enjoinder to Gookin and Massachusetts Bay, as Karen Ordahl Kupperman has revealed, was a precedent established in the late 1620s by puritan lords and gentlemen who saw millennialism aptly expressed through colonization of the West Indies. "Only ventures there, they believed, could truly serve England by helping to solve the country's crippling economic

[74] Pestana, *English Conquest*, 105-106.
[75] David Armitage, "The Cromwellian Protectorate and the Languages of Empire," *The Historical Journal* 35, no. 3 (1992): 540.
[76] Sedgwicke to Cromwell, Nov. 5, 1655, in Birch, ed., *Thurloe State Papers*, 4:154.
[77] "Instructions given unto Mr. Daniell Gookin," 26 September 1655, SP25/304-5, quoted in Pestana, *English Conquest*, 218. See also Kupperman, "Errand," 96.

problems and, more important, by stemming the flow of gold to Spanish coffers that fueled the great war machine harrying European Protestants back into Roman Catholicism."[78] This desire manifested most clearly in the mission of the Providence Island Company, a non-governmental corporate body comprised of landed puritan gentlemen and aristocrats who sought to establish an island colony of the coast of Nicaragua as a replicable and sustainable solution to Arminian episcopal threats to reformed religion.[79] But practicing reformation abroad proved much more difficult than theoretical manifestoes anticipated. Sustaining the colony's godliness actuated a revolving door of ejections from the very bottom to the very top of the colonial hierarchy. Henry Halhead, former mayor of Puritan-controlled Banbury, arrived in 1632 with a bevy of godly replacements for those of "evill disposition" whom he ordered off the island. Despite the community's early successes at putting up defensive resistance, the colony was eventually taken by the Spanish in 1641.[80] In Kupperman's estimation, "as Cromwell moved into leadership, the goals of the Providence Island Company investors finally became the goals of the national government."[81] What Cromwell unfortunately discovered regarding Jamaica was that efforts to entice younger colonists from Nevis and Bermuda were much more successful than motivating the godly to settle further south. Among the insalubrious conditions of Jamaica, many colonists, regardless of origin, did not survive the seasoning period and, despite efforts to create an island of a godly gentry families, by 1670 Jamaica was controlled by an elite plantocracy with "forty-seven people [holding] over 1,000 acres apiece."[82]

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[78] Karen Ordahl Kupperman, "Errand to the Indies: Puritan Colonization from Providence Island through the Western Design," *The William and Mary Quarterly*, 45, no. 1 (1988): 72.
[79] Ibid., 75.
[80] See "Instructions to the Governor and Council of the Isle of Providence from the Governor and Company of Adventurers of the City of Westminster . . . to be put in operation for the benefit of that Plantation and Advancement of the Affairs of that Colony," May 11, 1632, quoted in Kupperman, "Errand to the Indies," 76.
[81] Kupperman, "Errand to the Indies," 88.
[82] Pestana, *English Conquest*, 223.

State rhetoric repeatedly justified international hostilities on religious grounds and maintained that Jamaica was a providential bequest engendered by the purity of the Design and its progenitors set against the boundless iniquity of Spain. A spate of supporting literature followed that line of argumentation timidly and unquestioningly. The council's *A Declaration of His Highness, by the Advice of His council; Setting forth, on the behalf of this Commonwealth, the Justice of their Cause against Spain* (1655) reads as an itemized list of quantified corporal and commercial losses that amble along ploddingly until their sudden escalation to crescendo in divine national sanction. Elizabeth Maddock Dillon claims that in the *Declaration* Cromwell provides "a new account of territorial sovereignty – one that is no longer authorized by God (from above), but one that is legitimated on the basis of territorial occupation and popular consent (from below)," yet to claim such is to overstate the case in neat, symmetrical terms and miss the messy, ongoing dialectic between territorial sovereignty and divine Providence.[83] Although the document is a parceling of infractions against discrete instantiations of nation (sailors, ships, corporations, goods, etc.), Cromwell's non-dynastic foreign policy does not emerge *ex-nihilo* or as absolute repudiation of the past, but from entrenched personal and public modes of enacting reformation (e.g. appeals to Protestant temporality). As the *Declaration* plainly and plangently states, to disengage from armed encounters with Spain would "worst of all, sell away the precious opportunities which God hath put into their [English] hands for his Glory and the advancement of Christ, which we do not doubt will in the end (all Mists being dispelled and cleered) appear to have been the principall end of the late expedition and undertaking against the Spaniards in the West Indies."[84] In essence, territorial acquisition is one

[83] Dillon, *New World Drama*, 72.
[84] Oliver Cromwell, *A Declaration of His Highness, by the Advice of His council; Setting forth, on the behalf of this Commonwealth, the Justice of their Cause against Spain* (London: Henry Hills and John Field, 1655), 142.

among many evidentiary filaments of providential labor; consent is another. But these are lubricious signs in play on a top-down, fideist field of temporal deferral. The council placates reluctant readers through a strategy of continual forestalling, identifying providence through English expansion but placing confirmation (and thus arcane knowledge) of its fruits beyond the "misty" horizon of contiguous *nows*. The truly godly will patiently await history's judgment.

Faced with raids from Spanish maroon communities continuing through the 1680s and beyond, Edward Doyley's *A narrative of the great success God hath been pleased to give His Highness forces in Jamaica, against the King of Spains forces* (1658) mobilizes a similar strategy. Doyley's tract ends on a zealous note musing that Jamaica was obtained by "the goodness of God, who hath given yet by his glimmering, some hopes, that he altogether hath not forgotten us, but doth, and will at length continue to own his Servants."[85] In Doyley's terse narrative, English "Servants" of the true Protestant God are contrasted with the Spanish colonists' subversions of hierarchy and repeated adulterations of servitude as a neatly and divinely prescribed condition. The English don the vestiges of magnanimity when Spanish officers cravenly abandon 120 of their dead and wounded servicemen to their foreign aggressors who in return, "(though [having] received barbarous usage from them), could not kill them in cold blood."[86] Worse horrors are revealed among the abandoned infantries at the camps where "Negroes, formerly their Slaves, were using them [Spanish infantrymen] roughly and denying them Provisions."[87] In a letter from Deputy Governor Don Francis de Liva to one of his former slaves (now vested with authority), Doyley is appalled to see the ex-slave addressed with the

[85] Edward Doyley, *A narrative of the great success God hath been pleased to give His Highness forces in Jamaica, against the King of Spains forces* (London, 1658), 6.
[86] Ibid., 4.
[87] Ibid.

"Title of Worship at every word."[88] The reader is led to believe that the reduction of Spain's colonial outpost to forms of social inversion are superficial but no less terrifying indicators of a greater, cosmic inversion of anti-Christian popery. The transitivity of racial identity and power negates any proof of settlement, since the familiar conjunction of labor and phenotype are clearly unsettled, just as the subjugation of national identity to Rome shatters the functional synergism of state-driven political economy abroad.

Andrew Marvell, who, like William Davenant, never earnestly abandoned royalism, offered up arguably the most blatant panegyric of the twinned program of providence and imperialism in *The First Anniversary of the Government under His Highness The Lord Protector* (1655). In Marvell's overwrought lines of verse, international quietude, economic fortitude, and ascendancy of the Protestant cause are hailed as the output/gift of Cromwell's divinely chosen yet irremediably idiosyncratic charisma. Blair Worden's reading of the poem unveils Cromwell as a demiurge figure, "creating order out of the impending Anarchy of 1653" and the year's succession of dilatory and feckless parliaments.[89] To accomplish this, Marvell stretches the Cromwellian legend to its limit across three distinct worlds. In the first, the Lord Protector convenes with Seraphim and Cherubim: "indefatigable Cromwell hyes, / And cuts his way still nearer to the Skyes, / Learning a Musique in the Region clear, / To tune this lower to that higher Sphere."[90] Then "Angelique Cromwell who outwings the wind" weaponizes the *musique* of the spheres and "Pursues the Monster [Catholicism] thorough every Throne: / Which shrinking to her *Roman* Den impure, / Gnashes her Goary teeth; nor there secure"[91] In the second world, he is

[88] Ibid.
[89] Blair Worden, *Literature and Politics in Cromwellian England* (Oxford: Oxford University Press, 2009), 147.
[90] Andrew Marvell, *The First Anniversary of the Government under His Highness The Lord Protector* in *Andrew Marvell: The Complete Poems*, ed. Elizabeth Story Donno (London: Penguin, 1996), 127.45-48.
[91] Ibid., 129.125, 128-130.

the nexus of Empedoclean elementals in communion and commiseration with the "stupid Tree" or "Rock so savage"; in sum, "Natures self" identifies with the even the least of Cromwell's aches and whims.[92] Yet it is in the third world of domestic and foreign policy where the Lord Protector, as the instrument of "a higher force," is destined to fully realize his sainted stature.[93] Referring to the Protectorate's precipitously drafted constitution, the *Instrument of Government*, Marvell imbues it with a harmonious serenity that belies its repudiations by the Commons and its fraught replacement with the Humble Advice and Petition a few years later: "Such was that wondrous Order and Consent, / When *Cromwell* tun'd the ruling Instrument; / While tedious Statesmen many years did hack, / Framing a Liberty that still went back."[94] For Marvell, Cromwell's supernatural stature as Protector does more beneficent work and in less time than a Parliamentary government ever did. The notes of Cromwell's "musique" resound as if they were copied from the pages of Stuart hymns on the divine right of kings. But just as Marvell's circumlocutions through classicism and Biblical mythography scale to supernatural heights, the poet settles his lines in the domain of *real politik*, in the very blood and soil of an expanding nation with Cromwell as merited but humble captain:

> Yet rig a Navy while we dress us late;
> And ere we Dine, rase and rebuild our State.
> What Oaken Forrests, and what golden Mines!
> What Mints of Men, what Union of Designes!
> [. . .]
> Theirs are not Ships, but rather Arks of War,
> And beaked Promontories sail'd from farr;
> Of floting Islands a new Hatched Nest;
> A Fleet of Worlds, of other Worlds in quest;
> An hideous shole of wood-Leviathans,
> Arm'd with three Tire of brazen Hurricans.[95]

[92] Ibid., 131.201-204.
[93] Ibid., 132.239.
[94] Ibid., 128.67-70.
[95] Ibid., 135.351-54; 135-136.357-362.

Nation is secured by the transformation of providentialism and nature into instrumental materiality, "a Navy," that secures the mercantile and colonial currents of manifold "Designes." The poem, revised in late December just as the fleet was sailing for the West Indies, certainly alludes to the Western Design among the numerous naval endeavors necessary for state building, or, more than the bounded state, "world" building. David Loades calculates that from 1649 to 1660 an average of roughly £684,000 per year was spent on augmenting and utilizing the English navy, a figure toppling the £100,000 per year expended during the height of Charles I's exaction of ship money.[96] By 1652 the English could claim the largest fleet numerically and at the close of 1654 that fleet had waged two successful wars against Portugal and the United Provinces.[97] Marvell is near the mark when he boasts that each ship carries with it the economic, affective, and imaginary surplus of an entire world, "A Fleet of Worlds," whose reassuringly rigid, wooden tangibility fills in the fuzzy edges of divine vindications of empire. During the Protectorate, the government's Council of Trade effectively mobilized the massive allotment of standardized warships filled with a standing navy of 20,000 men (which obviated the need for converted merchantmen) as the offensive arm of a closed, mercantile economic policy secured by the Navigation Acts of 1650-1651.[98] According to Loades, the primary motivation was "to abolish monopolistic companies, and replace them with a unified system of state control, which would have regularised the position of erstwhile interlopers," and thus make the navy the "prime instrument of this new state mercantilism."[99] No doubt attempting to convert this cumbersome and ravenous military-economic policy into the stuff of billowy lyrics, Marvell poeticized a

[96] David Loades, *England's Maritime Empire: Seapower, Commerce and Policy, 1490-1690* (Harlow, England: Longman, 2000), 167.
[97] Ibid., 170.
[98] Ibid.
[99] Ibid., 176.

beatific voluptuousness into the fleet's "hideous," Leviathan-like voracity for foreign lands. In the final analysis, the armaments of war and trade issued from the Commonwealth's gaping fissure aptly termed the Cromwellian prerogative provided the best evidence of divine sanction and English spiritual election.

"*Cruelty* among the Laws of Nations and Nature"

When political and literary discourse tackled Protectorate statecraft, theology seemed more than comfortable sleeping next to imperialism. Considering the model texts left by the Council, Gage, Doyley, and Marvell, the union of providence and politics appeared mandatory, particularly when English foreign policy clashed with the objectives of Catholic Spain and France. William Davenant in his opera *Cruelty of the Spaniards in Peru* does not fail to cast moral aspersions on Spanish callousness and barbarity in both the drama and his promotion of it, but he avoids getting caught up in Cromwell's own providential justification for English hostility, as presented in Cromwell's address to Parliament on 17 September 1656, which treated the Spaniard as "a natural enemy. He is naturally so; He is naturally so throughout,—by reason of that enmity that is in him against whatsoever is against God"[100] Davenant adheres to a style of restrained classicism with all prophetic musings on an English victory coming from the Incan Priest of the Sun or a national vision of colonial paternalism ethically at odds with Spanish avarice. The drama, like Cromwell's Design, is a valorization of the English nation, but unlike the Design, it eschews theological arguments, which throws into relief alternative questions about the investiture of authority for national or corporate claims on property and the proper foundations of colonial empire. Many scholars see Davenant grounding that authority in a retrogressive prolepsis: reading the Elizabethan age of conservative exploration into a

[100] Oliver Cromwell, "Speech V" in *Oliver Cromwell's Letters and Speeches, with Elucidations*., ed. Thomas Carlyle (New York: Scribner, 1897), 270-71.

Cromwellian and/or post-Protectorate futurity. Susan Wiseman claims that "the annexation of the euphoric values of Elizabethan Protestant conquest to an imagined future permit displacement of the present."[101] Adjusting Wiseman a bit, Rachel Willie identifies Davenant's Protectorate entertainments critically displacing events earlier in the historical timeline: "In establishing a link between Elizabethan heroes and the protectorate, these masques endeavour to erase not so much the memory of monarchy but the idea of Stuart monarchy."[102] While in contradistinction, Janet Clare avers that the work is "indeed responsive to contemporary politics and exigencies" through, for example, frequent allusions to the era of Stuart rule "as the modus vivendi of a pre-Civil War people [the Incas]" and "images of a time given over to sports and revelry" redolent of royalist protections on traditional popular culture.[103] Finally, with expansively conscious acumen Elizabeth Maddock Dillon has isolated Davenant's elaboration on the *Declaration*'s Cromwellian triadic of "cruel Spaniard, mute and mutilated Indian, and justly sovereign Englishmen" as "rewriting the past to authorize a new future" of empirical claims to territory.[104] Not to gainsay the validity or maturity of any of these scholarly contributions, I am much less interested in engaging the open-ended texture of *Cruelty*'s temporality and imbrication of pointed political critiques than, along the lines of Dillon, anatomizing the masque's staging of non-theological first principles of governance and sovereignty. *The Cruelty of the Spaniards in Peru* registers a sea change in attitudes toward imperialist apologia and political theory, yet it is a change that moves both *pro* and *contra* the quasi-republican dictates of Protectorate nationalism – *pro* national imaginary as dispersed, public entity (even if an emanation of false consciousness)

[101] Wiseman, *Drama and Politics,* 146.
[102] Rachel Willie, "Reinventing the masque: Shirley's and Davenant's protectorate entertainments" in *Staging the Revolution*, ed. Rachel Willie (Manchester: Manchester University Press, 2015), 107.
[103] Clare, "Production and Reception," 836, 841.
[104] Dillon, *New World Drama,* 77, 82.

and *contra* Cromwellian penchants for a theo-political substratum. My intention is not to argue (as Dillon does citing too much republicanism in Protectorate statecraft) that *Cruelty*'s tortured Indian subject is the "condensed sign of political modernity," but rather that Davenant's masque constructs Englishness and territorial sovereignty as non-dynastic political economy founded on post-Platonic grounds of naturalized knowledge; thus, I intend to bear witness to how the temporal, spatial, and numerical flights of theatrical fancy meet at the nexus of species and subject to activate synoptic origins of the cosmo-political.

The high stakes of *Cruelty*'s thematics were co-implicated in commensurately high anxiety over the interaction of formal elements with the entertainment's status as drama.[105] Presented in 1658 at the Cockpit Theatre in Drury Lane under conditions of Protectorate scrutiny, the presence of a paying audience connected *Cruelty* with pre-1642 public theatre and belied Davenant's sedulous efforts to draw implicitly upon the Stuart court masque in explicitly fashioning the piece as opera. Music, dance, song, emblematic proscenium arches, and narrative breaks marked as entries instead of acts were taken from the masque form, but the number of entries was augmented from three to six and the masque-antimasque structure enacted by members of the court was excluded.[106] Moreover, the prologue to Davenant's *The First Days Entertainment* (produced May 1656) curated its own dramatic oratorical experience as mere "passage, and the narrow way / To our Elisian Field, the Opera."[107] And even though Davenant's *Siege of Rhodes* (first produced at his abode of Rutland House in 1656) was entered into the Stationer's Register as a masque, it was deemed an opera by its creator in his correspondence

[105] Wiseman, *Drama and Politics*, 146.
[106] See Wiseman, *Drama and Politics*, 141; Willie "Reinventing the masque," 90; and Martin Butler, "The Masque of Blackness and Stuart Court Culture," in *Early Modern English Drama: A Critical Companion*, edited by Garrett A. Sullivan, Jr., Patrick Cheney, and Andrew Hadfield (Oxford: Oxford University Press, 2006), 157.
[107] William Davenant, *The first days entertainment at Rutland-House, by declamations and musick* (London, 1656), A4.

with Bulstrode Whitelocke.[108] According to Stephen Orgel, the primary force of masque, and what I should add distinguishes it from Davenant's Protectorate entertainments, was its function as an "extension of the royal mind" providing "the monarchy chiefly with an impenetrable insulation against the attitudes of the governed."[109] Masques were occasions of state, orchestrated by sovereigns, councilors, courtiers, and their commissioners, to bespeak centralized power and dialogue with its principal representatives. The prodigality of the masque encapsulated Bataille's notion of sovereignty: a lavishly visual contempt for riches or a radical indifference toward expenditure that challenges conceptions of exchange and utility. The "sovereign self-consciousness" exhibited itself through a form of interminable financial exhaustion ending not in ruin but in solipsistic apotheosis of continual reflexivity.[110] Yet, as much as the formal qualities of the masque might attempt to constrict the circle of representation, the masque was never a unidirectional affair replicating rarefied princely ideals of order. The masque was a zone of mediation for sometimes subtly antagonistic court relations and political frictions before, what Martin Butler calls, "audiences that combined a cross-section of England's social elites – the aristocrats and gentlemen who constituted the 'political nation'" – with their invited foreign dignitaries.[111] According to Butler, these events ultimately "affirmed [one's] place in the great social pyramid over which the king presided and which the hierarchical arrangement of the masquing space presented in miniature."[112]

There are obvious formal extractions from the masque that Davenant incorporates into his public theatrical of *The Cruelty of the Spaniards in Peru* – episodic structure, thin narrative,

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[108] See Clare, "Production and Reception," 832; and Willie, "Reinventing the masque," 93.
[109] Stephen Orgel, *The Illusion of Power: Political Theater in the English Renaissance* (Berkeley: University of California Press, 1975), 43, 89.
[110] See Georges Bataille, "To Whom," in *The Bataille Reader*, eds. Fred Botting and Scott Wilson (Oxford: Blackwell, 1997), 277-78.
[111] Martin Butler, "Masque of Blackness,"153; See also Wiseman, *Drama and Politics*, 140.
[112] Butler, "Masque of Blackness," 154.

choral odes, tableaux, mimed actions, pageant entries, and dance – but I would say the attempt to control the metaphoric and allegorical content of his opera, to use micro-level manipulations in presenting a microcosmic summation of political ideology, is his most robust and tenacious retention. Counter to previous practices that printed textual and descriptive matter of masques *ex post facto*, Davenant distributed a selective libretto before spectators assembled together in order to provide, as Wiseman asserts, "a 'definitive' interpretation of events on stage[,] . . . a hermeneutic code, which links the visual and aural codes into a narrative and suggests an interpretation to the audience."[113] The mediation of print concretized interpersonal and hierarchical courtly dynamics of superintendence, for Davenant's objective was no different than that of Orgel's characterization of court masques whose "allegories gave a higher meaning to the realities of politics and power, [while] their fictions created heroic roles for the leaders of society."[114] Print reinforced the rather slippery iconography of *Cruelty*'s nascent imperialist imaginary. Thus, the fusion of distributed libretti, discontinuous recitative, and loosely disjunctive stage imagery approximated sovereign regulatory mechanisms for Davenant's poetic referendum on political universals.

The Cruelty of the Spaniards in Peru labors to naturalize limitations placed on ethno-linguistic formations of collective sovereignty. Through the opera's structural mechanics of dead-locked dichotomies, both the Incan and Spanish imperial units reveal inherent flaws in their premature construction, flaws only rectified when the dyad expands to a triptych encompassing the English model of conscientious state expansion. A dramaturgy of what I am articulating as *political chrono-spatiality* forms the opera's architectonics. The term, for lack of a better label at present, denotes a shift from territorial rights within a framework of political theology toward a

[113] Wiseman, *Drama and Politics*, 146.
[114] Orgel, *Illusion of Power*, 38.

rationalist geographic sovereignty that congeals at points along an anthropocentric developmental teleology. In such a dramaturgy, Aristotelian and scholastic iterations of natural law are taken up by Hobbesian (or at least, post-Grotius) geometric universals of the juridical to valorize or discount disparate stages of political ontogeny. As many scholars have pointed out, a capricious "time" operates discursively in Davenant's music-drama, adjusting the parameters of possibility for theorizing the polis by gerrymandering received facts in the historical record. This very prejudicial time-function assists in coordinating uneven levels of autonomy with respective positions of the three nations (Incan, Spanish, and English) on a grid registering the coherence of *jus gentium* and *jus naturae* (law of nations and natural law). It should come as no surprise that the English fare much better in Davenant's aesthetic analysis, but what might evade the historically inclined reader's expectations is *Cruelty*'s delineation of the English nation as aggregate with no charismatic center (i.e. no monarch or lord protector) and the deployment of simian sociality as the universal political substratum.

The Cruelty of the Spaniards in Peru plots a quasi-linear temporal logic along the familiar lines of *felix culpa* (fortunate fall), but its features are primarily concerned with the lived experience of social bonds and governance while matters of religious doxa remain tertiary. In the first entry, an Edenic pre-civilization of Peru appears through a proscenium arch symmetrically emblematizing the future opposition of Habsburg and Inca empires. Music "sutable to the Region" reinforces an exotic topography of "parcht and bare Top[ped] distant Hills, [and] Sands shining on the shores of Rivers" populated by "Natives, in feather'd Habits and Bonnets, carrying, in Indian Baskets, Ingots of Gold and Wedges of Silver."[115] Many of the countryside's

[115] William D'Avenant, *The cruelty of the Spaniards in Peru. Exprest by instrumentall and vocall musick, and by art of perspective in scenes, &c. Represented daily at the Cockpit in Drury-Lane, at three after noone punctually* (London, 1658), 1.

inhabitants, in total neglect of the metallic wealth provided by the land, are occupied with "their natural sports of Hunting and Fishing" amid a tropical wilderness overflowing with "coco-Trees, Pines and Palmitos . . . Munkies, Apes and Parrots."[116] What Stephen Mullaney says of the Tupinamba Indian village performed for Henri II's royal entrance into Rouen in 1550 applies here: the exhibition is a "polymorphous" reconstitution of clichéd exotica, the *conspicuous expenditure* of "an alien culture itself."[117] The opening entry slowly unfolds an idyllic tableau of simple contentment and ecological immediacy. Gold and silver serve no financial purpose and the untended, queerly placed distant "Vallies of *Sugar-Canes*" lack the orgasmic fungibility of English commercial speculation. This is a small, loosely-bound community ignorant of its potential value in a global system of exchange, and a community that, as the Incan spokesperson the Priest of the Sun would have us believe, was a prelapsarian economy of affective autopoiesis.

> Thus fresh did Nature in our world appear,
> [. . .]
> When various sports did Man's loved freedom show,
> And still the free were willing to obey
> Youth did to Age, and Sons to Parents bow.
> Parents and Age first taught the Lawes of sway
> [. . .]
> When none for being strong did seek reward
> Nor any for the space of Empire strove:
> When Valour courted Peace and never car'd
> For any recompence, but publique love.[118]

The Incan Priest falls prey to a romanticized neo-Stoic (i.e. Rousseauian) construct of sociability in the (ancient) New World. A shared sentience between environment and inhabitant circumscribes a natural order maximizing both individual liberty and paternal hegemony. Verification of living in accordance with *jus naturae* is located in the tangibility of placid

[116] Ibid., 2.
[117] Stephen Mullaney, "Strange Things, Gross Terms, Curious Customs: The Rehearsal of Cultures in the Late Renaissance," *Representations* 3 (1983): 46,48.
[118] D'Avenant, *Cruelty of the Spaniards*, 3.

"publique" affections. Davenant proffers a web of relations that is non-speculative and non-abstract. The visible public functions not in any governmental capacity or as nomenclature to justify the exercise of authority, but as the interpersonal repository for the surplus of social production; in this case, the production of charity.

The "First Song" following the opening entry already presents these halcyon images as nostalgia-laden manifestations of Incan memory in order to prepare the spectator for the imminent breakdown of social reciprocity. The lambent cries of a unified chorus of "begger'd slaves" narrate the loss of a spontaneous egalitarianism which had banished poverty, knew no definition of nudity, held no need for cities, and neatly melded frivolity and necessity so that labor and trade remained foreign practices.[119] A salubriousness and agility of indigenous corporality is abandoned with the arrival of cities and fortifications as conveyed in the refrain: "We dance'd and we sung, / And lookt ever young, / And from restraints were free, /As waves and winds and Sea."[120] The repetition of these four lines rehearses phantasmatic tropes of the porous native body, undemarcated from its natural enclave and metaphorically flowing from ecstatic bodily plenitude into the uncontainable sublimity of nature. In these lines Davenant stands in the tradition of Montaigne's "On the/Of Cannibals," but he also preempts a late Enlightenment aversion to civic consolidation and cultural decadence, for it is only after the excesses of empire that the native body as such is afforded epistemic space.[121] Irreparable loss translates into ponderous cognizance.

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[119] Ibid., 4-6.
[120] Ibid.
[121] In "Of Cannibals," Montaigne voices the literary tradition of the pure originary nature of 'untainted' savage cultures: "These nations, then, seem to me barbarous in this sense, that they have been fashioned very little by the human mind, and are still very close to their original naturalness. The laws of nature still rule them, very little corrupted by ours; and they are in such a state of purity that I am sometimes vexed that they were unknown earlier, in the days when there were men able to judge them better than we." Michel de Montaigne, *The Complete Essays of Montaigne*, trans. Donald M. Frame (Stanford: Stanford University Press, 1976), 153.

The problem of sovereignty and political self-definition becomes first and foremost an epistemological one. The second and third series of entries, speeches, and songs work in tandem to dissolve the Incan Empire through the plagues of prophecy and civil strife. Although the Spanish appear in the historical timeline after the twelfth Incan Emperor divides his property among his sons and thus prompts a war for dominion, they precede that divisive moment in the form of insidious omen. Disturbing the insouciance of their "peacefull Palaces," The Priest of the Sun foretells the coming of "cruell men, Idolaters of gold," intent on corrupting and enslaving Incan society.[122] All of Peru falls into a general state of depressive anxiety, prematurely bemoaning the nation's collapse:

> Make haste! Make haste!
> You delights that are past!
> And do not to our thoughts appear:
> Lest vainly we boast
> Of joys we have lost,
> And grieve to reckon what we were.
> The Incas glory now is gone![123]

Indigenous religiosity allows the oracular idol of Spain to transform time into an oppressive weight. Rather than the immediacy of environmentally captivated pre-civic existence, the Incas are future-oriented and subdued by their own morose speculation. Once affirmed through affective "publique" networks, ideal native comportment is now judged on the intensity of its identifiable despair completely out of joint with current prevailing conditions. The power of prophecy has bifurcated a consciousness of felicitous presentism into the schizophrenic displacement of glorified past and abject future. The scenic progression (Entries1-3) from cultural innocence to disquietude about lethargy and loss is overtly humanist in tone and could

[122] Ibid., 8.
[123] Ibid., 9.

be taken straight from Ovid or Hesiod's stages of man, but I would wager that Davenant has a political agenda beyond the Renaissance conceit of intertextual *imitatio*.

What the Council marginalized in its *Declaration* against Spain, Davenant makes the cornerstone of his operatic argument for just intervention in the Western Hemisphere. Lifted directly from Gage and Milton, the council put forth the idea that "Since God hath made of one blood, all Nations of men, for to dwell on all the face of the Earth, and hath determined the times before appointed, and the bounds of their habitation," then English aggression against Spanish usurpation was providentially justified. The Council, however, immediately nudged that argument aside in favor of a rationale grounded in a narrower sense of nationalism and the infringement of European accords, "But we shall have no need to have recourse unto the common Brotherhood between all Mankinde . . . the blood and spoils of our own Countreymen being sufficient to warrant the late Expedition."[124] Not satisfied with the universal application of the council's provincial reasoning, Davenant incubates the concept of "common Brotherhood" in an alchemical mixture of classical humanist history and international parallelism.

Andrew Fitzmaurice observes how the abundant comparisons of ancient Britons with Amerindians in the first half of the seventeenth century gave voice to latent anxieties about colonizing projects.[125] John White's watercolors of Picts and North American natives catalogued (as de Bry's engravings) in Harriot's *A Briefe and True Report of the New Found Land of Virginia* was but one ethnographic emanation of New World encounters filtered through ancient Roman historians "to showe how that the Inhabitants of great Bretannie have bin in times past as

[124] Oliver Cromwell, *A Declaration of His Highness,* 118.
[125] See Andrew Fitzmaurice, *Humanism and America: An Intellectual History of English Colonisation, 1500-1625* (Cambridge: Cambridge University Press, 2003), 163.

Savage as those of Virginia."[126] Tacitus's frequently sourced *The Life of Gnaeus Julius Agricola* invokes a compelling, nostalgic vision of virtuous first-century Britons consistent with early modern writings on the innate nobility of various Amerindian tribes. Prevenient to Agricola's conquest of the isle, the Britons "exhibit more spirit, as being a people who a long peace has not yet enervated."[127] In the mouth of Galgacus, "one superior to the rest in valour and in birth,"[128] Tacitus places a moving condemnation of Roman oppression:

> To all of us slavery is unknown . . . this remote sanctuary of Britain's glory has up to this time been a defence. Now however, the furthest limits of Britain are thrown open . . . terrible Romans, from whose oppression escape is vainly sought by obedience and submission. . . . Nature has ruled that every man's children and kindred should be his dearest objects. Yet these are torn from us to be slaves elsewhere.[129]

For Celtic people of the Isle, a once isolated and proud people, the options are limited to death, slavery, or the snare of Roman decadence: "Step by step they were led to things which dispose to vice, the lounge, the bath, the elegant banquet. All this in their ignorance they called civilization, when it was but a part of their servitude."[130] A similar servitude overtakes *Cruelty*'s Incas. "All Creatures when they breed / May then with safety feed. / All shall have times for liberty but we. / We, who their masters were, / Must now such masters fear, / As will no season give us to be free."[131] By replicating nostalgic Tacitean structure, Davenant has ingrained an ambivalence into his opera. On one hand, there is empathic cultural mirroring taking place. The Peruvians and Britons share a similar cultural origin and the narratively foreshadowed but historically

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[126] Thomas Harriot, *A Briefe and True Report of the New Found Land of Virginia*, quoted in Fitzmaurice, *Humanism and America*, 158. See also Kim Sloan, *A New World: England's First View of America* (Chapel Hill, NC: University of North Carolina Press, 2007).
[127] Publius Cornelius Tacitus, *The Life of Gnaeus Julius Agricola*, trans. Alfred John Church and William Jackson Brodribb, in *The Complete Works of Tacitus*, ed. Moses Hadas (New York: Random House, 1942), 11.683-84.
[128] Ibid., 29.694.
[129] Ibid., 30.694-95.
[130] Ibid., 21.690.
[131] D'Avenant, *Cruelty of the Spaniards*, 10.

completed conquests solicit a mutual sympathy and respect. Additionally, Fitzmaurice relates that the congruity between "Ancient Britons and modern Americans . . . reveal[s] an incipient progressive theory of history,"[132] and allows for the same cultural teleology to hold across the Atlantic. On the other hand, acculturation, if allowed to proceed from criminal vectors (in this case, Spanish), condemns social structures to alien and corrupt formalizations, which necessarily exposes the colonizer-colonized dyad to third party emendations or else the social crumbles under the burden of its own depravity.

In the opera's isomorphic logic, the fissuring of Davenant's idealized native phenomenology (through an exposure to Spanish influence) floods logically onto a scene of internecine carnage. The third movement opens with opposing Peruvian armies feeding on the acrimony of "two Royall brethren" and engaging in a mutually destructive war.[133] Repudiation of customary precedence has caused the firestorm. The third narration tells us that "contrary to the customs of all his Royall Ancestors, who always marry'd their own Sisters," the twelfth and final Incan Emperor "had chosen to his second Wife the beautifull daughter of an inferiour Prince" and furthermore, favored his younger son by her and "assigned a considerable part of his Dominion" to him, "his Ancestors never having during eleven Generations, divided their Empire."[134] The Priest's lamentation expounds upon the ramifications of the emperor's ruinous choice:

> How fatall did our Inca's passion prove
> Whilst long made subject to a forraign love?
> Poor Lovers, who from Empire's arts are free,
> By nature may entirely guided be,
> They may retire to shady Cottages
> And study there onely themselves to please
> For few consider what they mean or do

[132] Fitzmaurice, *Humanism and America*, 158.
[133] D'Avenant, *Cruelty of the Spaniards*, 11.
[134] Ibid., 11-12.

> But Nations are concern'd when Monarchs woe [woo].
> And though our Inca by no Law was ty'd
> To love but one, yer [sic] could he not divide
> His publick Empire as his private Bed.
> In Thrones each is to whole Dominion bred.
> He blindly priz'd his younger son's desert,
> Dividing Empire as he did his heart.[135]

Janet Clare decodes this "encroachment of private familial interests on public action" as an implicit critique of "Charles I's reputed subordination to his Queen, Henrietta Maria, a view of the marriage which had become common currency since the publication of the King's private correspondence in 1645."[136] Clare's reading is astute, particularly when she brings in evidence from the third movement's choral summation that "Kings who move / Within a lowly sphear of private love / Are too domestick for a Throne,"[137] but I am more interested in the bald assertions the passage makes. Private and public interests cross-pollinate in a way that engenders a monstrous hybrid but does not negate the fact that, in Davenant's illustration, the original structures of private and public spheres are deficient *ab ovo*. The contrast here is between laws of "nature" and "Nations," and the fact that while natural law exercised in a state of political innocence requires only human reason and tacit "publique" obligations, national law demands legal codification. Customary assumptions at the scale of empires are insufficient covenants between sovereign and governed. Since no "Law" binds the emperor to an incestuous contract solely for the security of state property, and no "Law" constrains the emperor to primogeniture, public and private actions supported by sovereign whimsy can in no way maintain the two spheres as distinct and separate. The fault, Davenant is saying, lies both in an unnatural private obligation (to marry one's sister) and the faulty imperial framework (lacking juridical purchase)

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[135] Ibid., 12.
[136] Clare, "Production and Reception," 838.
[137] D'Avenant, *Cruelty of the Spaniards*, 14.

that obligation is intended support. Perverted will has generated a false consciousness, for it is really a sentient denial of circumstantial political alterations that has produced the internal fallout:

> We liv'd so happy and so free,
> As if we were not kept in awe
> By any Law,
> Which martiall Kings aloud proclaim.
> Soft conscience, Nature's whispering Oratour
> Did teach us what to love or to abhor
> And all our punishment was shame.[138]

What might have been the case in a Rousseauian state of nature, with its gentle susurrations of "soft conscience" as instructor, here lacks transitivity across scales of governmentality. The "as if" retains the phenomenological displacement into a comforting but misleading imaginary of "natural" reciprocity across vast differentials of dynastic power. "We liv'd . . . as if" there were no need of laws to capture fleeting proclamations believed to be universally uttered. In Davenant's estimation, Incan imperial ambitions produced a failed political experiment.

There are strong currents of Las Casas's *Apologética historia summaria de las gentes destas Indias* and Jose de Acosta's *Historia natural y moral de las Indias,* both sympathetic but nonetheless Eurocentric ethnologies, running through Davenant's opera. In Anthony Pagden's erudite treatment, *The Fall of Natural Man,* these Spanish anthropologic ventures are cited as innovative for their conscious pruning of *observed* cultural particulars down to an essential teleology of cultural history. Each work is Aristotelian in nature, molding the Platonic Form (*universalia ante rem*) into the telos of discrete entities (*universalia in re*), or put another way, interpreting essence as the consanguinity of efficient and final causes exhibited in the

[138] Ibid., 13.

actualization of being (in this case, the telos/being of political association or civilization).[139] Each takes from Aquinas his stress on environment and customs as active factors in the temporal progression or regression of culture in an eschatological timeline.[140] Where the texts differ are in the areas of psychology and the precise historical forms taken by the interaction of religion and government. Las Casas's study appeared first and laid the groundwork for a graduated trek of people from pre-historical nomadism to fully-realized and civically stationary power over nature in the fold of the Church. To refute Juan Gines de Sepulveda's accommodation of Indian psychology to Aristotle's condition of natural servitude, Las Casas parsed barbarism into a four-fold taxonomy. In the first category can be found individuals from any polity who acted "cruel, inhuman, wild and merciless . . . against human reason."[141] The second contains secure social and religious structures but, nevertheless, its members lack a literary language and are thus incapable of achieving *sapientia* (true knowledge). The third category is comprised of the barbarian *simpliciter*, "those men who, through impious or perverse understanding, or on account of the miserable regions they inhabit, are savage, ferocious, slow-witted and alien to all reason." These men are closest to the natural slaves defined by Aristotle in Book One of his *Politics*.[142] In the fourth and final category are all non-Christians, since outside the *communitas fidelium* no true civilization worthy of the lexical definition can exist.[143] According to Las Casas, the Mexica and Inca were discovered in the second and loftiest category of barbarism, and their temporizing or deviation from European standards was merely culturally relative (related to environmental influences) rather than a matter of innate psychological or moral deficiencies.

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[139] See Heinrich A. Romnen, *The Natural Law: A Study in Legal and Social History and Philsophy*, trans. Thomas R. Hanley (Indianapolis: Liberty Fund, 1998), 15.
[140] See Anthony Pagden, *The Fall of Natural Man: The American Indian and the Origins of Comparative Ethnology* (Cambridge: Cambridge University Press, 1982), 137.
[141] Ibid., 126.
[142] Ibid., 132.
[143] Ibid., 134.

Jose de Acosta's *Historia* democratizes human reason and scaffolds a super-structural inverse relationship between religion and government on Las Casas's classificatory base. One result of these shifts is that environmental conditions and language play a greater constraining role in issues of self-determination. Employing Las Casas's first three categories, de Acosta affirms that even the most barbarous of nomadic, antisocial cannibals still retain the capacity for Reason. The largest impediments to the performance of the savage's full humanity (and therefore salvation) are the adoption of perverse customs and the lack of a formal written language. Thus, while the Mexica and Inca achieved the pinnacle of semi-literate barbarian society, without a true writing system (hieroglyphs and quipu being incomplete), the ability to form universal abstractions (true *sapientia*) necessary for discovering religious truths lay fallow, allowing religious heterodoxy and imperfect civic association to flourish. Specious customs were allowed to sediment and ultimately adulterate these civilizations' anthropogenic *potentia*. According to Anthony Pagden's reading of the *Historia*, it is Acosta's assertion that "such deviations from natural behavior . . . had brought about the downfall of the Peruvian 'empire.'"[144] Davenant gives aesthetic form to de Acosta's belief when the lack of Incan legal codification enables moral lassitude (the repudiation of "soft conscience") and incestuous practices to thrive in *Cruelty*'s third episode. Division of the Inca empire occurs at the moment reason's autonomy is exhausted, when the emperor's "reason did on love rely," and a tyrannical form of government is exposed with no written constitutional frame to absorb the shock of despotic detachment from rational governance. It is not a consummate lack of native reason but the darkening of ratiocination that leads to civil war and the collapse of empire to Spanish steel. Similar conditions prevail in another of Davenant's Protectorate entertainments, *The History of Sr Francis Drake* (1659),

[144] Ibid., 177.

when a band of Cimarrons (African-Indian Maroons) recently allied to the English seek vengeance upon their former masters by disrupting a Spanish wedding ceremony and taking the bride hostage. Drake is compelled to correct their impious deficiencies in understanding with threats of violence:

> Arm! Arm! the honour of my Nation turns
> To shame, when an afflicted Beauty mourns.
> Though here these cruel Symerons exceed
> Our number, yet they are too few to bleed
> When Honour must revengeful be
> For this affront to Love and me.[145]

Pedro, the Cimarron leader, responds beseechingly that it is not wickedness but "mistaken diligence" in carrying out Drake's commands to eliminate the Spanish foes that has caused their transgression. The fault lies in their single-minded inability to view engagement as modal and contingent – to mistake Spanish colonial citizens for the Spanish state and military apparatus. Las Casas and de Acosta would argue that the only way indigenous reason could advance toward the apprehension of proper civil being in this moment, which perverted customs have undermined, would be through Europe's catechism into Christian orthodoxy. Astonishingly, Davenant eludes invoking that staple millenarian homily.

In *Cruelty*'s narrative, as the Spanish arrive and exploit the chaos caused by the civil war, supporting the younger brother against the elder in order to gain total control of the capital, the moment is ripe for the heavy hand of corrective ecclesiology to chart the ineluctable course from Incan to Spanish-Catholic patterns of idolatry and then adjust the offending semiotics of indigenous ignorance through elucidations of Protestant doctrine. Davenant, however, does not concede to that line of argumentation. In the fourth movement, bands of awe-struck Incans

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[145] William D'Avenant, *The history of Sr Francis Drake. Exprest by instrumentall and vocall musick, and by art of perspective in scenes, &c. The first part. Represented daily at the Cockpit in Drury-Lane, at three afternoon punctually* (London, 1659), 28.

quickly succumb to technologically advanced Spanish prowess, and while initially the conquered subjects analogize the "bearded Race" from some "dark and distant Region" to the august antithesis of the Sun deity, calling them "more than mortall," the native inhabitants quickly reduce the adverbial "more than" to a negation of the natural.[146] Native deductive inquiries move circuitously from axioms to particulars and then back to axiomatic formulations of *unnaturalness*. The question of "How they [the Spanish] reasons Lawes in life fulfill / We know not"[147] finds some solace in the trenchant observation "that all they do / In life's whole scene is bad, / Since they with Arms are clad Defensive and Offensive too."[148] Incan interrogations no longer fixate on Spanish transcendence, but on the nation's all too sullied immanence evidenced by a constant retention of "Defensive and Offensive" weapons. "In life's whole scene" they are marked as ostensibly separate but in no way secure from the nature that envelopes them. Furthermore, the final syllogism of the "Fourth Speech" points to a psychical corruption as the ultimate source of constant external antagonisms: "In Nature it is fear that makes us arme; / And fear by guilt is bred; / the guiltless nothing dread, / Defence not seeking, nor designing harm."[149] The guilt the Incas describe is not cosmically induced, nor does it signal a greater eschatological sensitivity on the part of the author. Spain's guilt arrives at the point when natural Reason fails. For the Spanish, that failure is the hubristic denial of immanence and a vitiation of natural contract that shared immanence necessitates.

The Fourth Song pauses to cogitate on what has been Spain's dual mis-emplotment along the vertical axis of cultural evolution. Lachrymose Incas bemoan the ruptures in their

[146] D'Avenant, *Cruelty of the Spaniards*, 16.
[147] Ibid.
[148] Ibid., 17.
[149] Ibid.

ratiocination when they misrecognized the Spanish as deific agents and they begin to disassemble their fallacious reasoning:

> Those forraigne shapes so strange appear,
> That wonderfull they seem;
> And strangenesse breeds esteem;
> And wonder doth engender fear:
> And from our fear does adoration rise:
> Else why do we encline
> To think them Pow'rs divine
> And that we are ordain'd their sacrifice.[150]

Self-reflexivity has been heightened by the fulminous irruption of Spanish into indigenous consciousness and the subsequent psycho-physical declivity toward slavery. Peruvians surmise that divinity was wrongly bestowed, and the evidence lies not just in the empirical proof of Spanish abuses but also in errors of judgment discovered through the purely rational, meta-cognitive project of logical deconstruction. A series of maxims proceeding from the nature of humanity, in which the Incas painfully bear witness to their participation, exposes their momentary misappraisals of sensory data. Without calculating these cognitive missteps of deification there can be no explanation for their willingness to be sacrificed to Spanish rapacity or their denial of basic physics: "Not trusting to our Arrowes, but our feet / . . . We thought them more then human kind, / . . . That we by leaps as soon / May reach th'ascended Moon / As guesse through what vast dangers they have steer'd."[151] Native inquiries toil in fellowship with Bacon's rudimentary cultural anthropology: "Let a man only consider what a difference there is between the life of men in the most civilised province of Europe, and in the wildest most barbarous districts of New India; he will feel it great enough to justify the saying that 'man is a

[150] Ibid., 17-18.
[151] Ibid., 18.

god to man.'"[152] But the precipitous Spanish descent into barbarism controverts any impression of divine incarnation and even confutes notions of Iberian participation in human nature.

The Fifth Entry puts forth a grisly scene of sanguinary torture. "A dark Prison" is set in the distance among "Racks, and other Engines of torment, with which the Spaniards are tormenting the Natives and English Marriners." Two Spaniards in cloaks and ruffs divide the labor of "turning a Spit" and "basting an Indian Prince, which is rosted at an artificiall fire."[153] After the Priest of the Sun graphically details the Spanish devices of torture, he interrogates the Spaniards own illogic in a speech itemizing Spanish actions as contrapuntal to the Cartesian mode of Incan introspection:

> What Race is this, who for our punishment
> Pretend that they in haste from Heav'n were sent,
> As just destroyers of Idolatry?
> Yet will they not permit
> We should our Idolls quit
> Because the Christian Lawe makes Converts free.
> [. . .]
> And other Christian strangers landing here,
> Strait, to their jealous sight, as spies appear
> And those, they so much worse then Heathens deem
> That they must tortur'd die,
> The world still waste must lye
> Or else a prison be to all but them.[154]

The Priest of the Incas calls into question the entire Roman legal basis for Spain's operations in the New World and appends what he cites as critical disjunctions to a canopy inquiry into racial (i.e., species) origins.

Beginning with Ferdinand's comprehensive Leyes de Burgos (Laws of Burgos) promulgated in 1512 from Castile, the treatment of indigenous populations as free subjects was

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[152] Francis Bacon, "Aphorism 129" in *Novum Organum* in *The Works of Francis Bacon*, vol. 4, ed. James Spedding, Robert Leslie Ellis and Douglas Denon Heath (London: Longman, 1858), 114.
[153] D'Avenant, *Cruelty of the Spaniards*, 19.
[154] Ibid., 20-21.

legally inscribed into Spain's overarching mission of Christian proselytization. Indians were allowed to hold property and though they could be conscripted as labor in the encomienda system (grants of 'free vassalage' labor from the crown), they had to be remunerated for their services.[155] The code went through several revisions including the *Leyes Nuevas* (New Laws) of 1542 (which aimed at reinforcing the original restrictions on dominion and punishment to eliminate the *just war* pretext for slave raids) to eventuate in the *Leyes de Indias* (Laws of the Indies) issued on 13 July 1573. These ordinances set about to repair the holes through which slavery was squeezed by the encomienda and repartimiento networks (the temporary allocation of compulsory labor to non-encomenderos).[156] A degree of benevolence can be read into *Laws of the Indies*' constructions of paternal authoritarianism, as in Statute 148 which states, "The Spaniards, to whom Indians are entrusted [*encomendados*], should seek with great care that these Indians be settled into towns, and that within these, churches be built so that the Indians can be instructed into the Christian doctrine and live in good order."[157] In practice, however, "entrustment" more often took a form similar to that carved out in Peru in 1569 by Viceroy Don Francisco de Toledo, who amalgamated Spanish prescriptions for forced labor with the Incan public works model of the *mita*. Toledo provided "a continuous labor supply" for the mines of Potosi working under a rota system in which one-seventh of adult males from the Andean highlands were levied for a year's worth of disabling, sometimes fatal labor.[158] Davenant acknowledges these Spanish legal aporias as *de facto* Christian pretexts for building an early and extreme form of proto-capitalist wage slavery. The Sun Priest is fully cognizant of the fact that

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[155] See J.H. Elliott, *Empires of the Atlantic World: Britain and Spain in America, 1492-1830* (New Haven: Yale University Press, 2006), 68.
[156] Ibid., 98.
[157] Quoted in Axel I. Mundigo and Dora P. Crouch, *Spanish City Planning in North America* (Cambridge, MA: MIT Press, 1982) 258-59.
[158] Elliott, *Empires*, 99.

encomenderos subvert "Christian Lawe" because an inordinate amount of assimilated converts would eviscerate the mines of their indentured labor force. Moreover, his perspicacity extends beyond local equivocation to identify tokenism as the geopolitical currency traded between center and periphery: "to please the Priests, some Chief permits / A few of us to be their Proselytes / Yet all our freedom then is but deceit."[159] Even for those few exemplary converts there is no security. The Christian English suffer the pangs of punishment "so much worse then Heathens" because it is assumed they are involved in financial espionage ("as spies appear"), and those guilty of such trespass "must tortur'd die." Attendant images of the abject boundaries of human subjectivity – torture, dispossession, cannibalism, perpetual darkness – affectively reify the irreconcilable antagonisms between Spain's political economy and its pro forma evangelical commitments. The combination of gruesome verbal and visual iconography is a scathing indictment of Spanish hypocrisy as bemoaned from the ultimate empirical perspective, namely, the indigenous ministerial subject, but more than merely indicting Spanish duplicity, its numeric and graphic excess leaks onto questions of Spain's ontological (human) status.

By immersing Spain in the corporal abyss of sadism, Davenant fabricates the diametric optics for recognizing the subject of modernity. The scene of aimless torture carries on the Petrarchan conceit of identifying the regressive time of human lack, the middle age of barbarism, that chasm between the classical era and its humanist recrudescence. But Davenant's scene is transhistorical – a violent *pastness* visiting the present.[160] The lexical and practical indifference of Spaniards to the Law dissolves into an other-than-humanness of carnal abjection. Davenant

[159] D'Avenant, *Cruelty*, 20.
[160] In 1640 Charles I issued the last recorded warrant of examination under torture in England. John Archer was ordered to be tortured to extract the names of accomplices involved in an assault on Archbishop Laud's palace. The Privy Council had already ceased issuing warrants of torture in 1626. See John H. Langbein, *Torture and the Law of Proof: Europe and England in the Ancien Régime* (Chicago: University of Chicago Press, 1976), 134-39.

has foreclosed possibilities of Spanish humanity by placing them in a space of absolute alterity to that of modern jurisprudence.[161] The dichotomy gets its potency from what Robert Mills in his book *Suspended Animation: Pain, Pleasure, and Punishment in Medieval Culture* calls the "Exclusionary matrix, a dangerous, abject region that circumscribes the identities of ideas, institutions and selves;" a region in which "capital punishment functions as a metonym for the brutality of the past, establishing an uninhabitable space fantasized by the speaker as threatening to his or her integrity and consequently disavowed."[162] Torture and consumption of the indigenous body is not laden with the equanimity of sovereign power; it asserts itself as erratic and gluttonous, the nasty underside of a high gothic imaginary. Abjection and juridical modernity are mutually constitutive forces allowing the opera to capitalize on an implicit religiosity while simultaneously ushering in its rational antithesis for argumentative purchase. Amerindians and English are of "one blood" in their Christological suffering, recalling late medieval scenes of Calvary like Lucas Cranach the Elder's crucifixion woodcuts that elicit pathos for the "unnamed criminals in whose company, according to all four Gospels, Christ suffered bitterly and died."[163] Above the commiserative fray, however, is the Priest of the Sun, the rational narrator who deconstructs the scene by employing English jurisprudence.

The Incan figure of religion par excellence has metamorphosed into early modernity's *ratiocinative subject*. Ventriloquizing an epistemic Englishness, he is the prismatic colonial

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[161] Lisa Silverman argues that in France between 1600 and 1788 the symbolic functionality and legal purpose of torture transitioned from a meaningful cultural practice to a culturally indefensible one. This process occurred because the epistemological foundations of torture eroded alongside a consensus on the nature of pain, the body, and their connections to truth. Sacramental interpretations of pain's efficacy were forcefully challenged by Enlightenment philosophes who held no common conception on the metaphysics of suffering. See Lisa Silverman, *Tortured Subjects: Pain, Truth, and The Body in Early Modern France* (Chicago: The University of Chicago Press, 2001).

[162] Robert Mills, *Suspended Animation: Pain, Pleasure & Punishment in Medieval Culture* (London: Reaktion Books, 2005), 7.

[163] Mitchell B. Merbeck, *The Thief, the Cross and the Wheel: Pain and the Spectacle of Punishment in Medieval and Renaissance Europe* (Chicago: University of Chicago Press, 1998), 12.

figure in which myriad refracted textual and contextual codes coalesce. Of course, Davenant sees himself involved in reportage at some level by making conscious use of John Phillips's 1656 translation of Las Casas, *The Tears of the Indians,* and perhaps unconscious use of William Lithgow's personal account of torture and imprisonment in the hands of the Spanish inquisition;[164] but Phillips is siphoning denunciative energy from the literal artillery of an earlier colonial enterprise, James Cranford's *The Teares of Ireland wherein is lively presented as in a map a list of the unheard off cruelties and perfidious treacheries of blood-thirsty Jesuits and the popish faction: as a warning piece to her sister nations to prevent the like miseries, as are now acted on the stage of this fresh bleeding nation* (1642). *The Teares of Ireland* more than transcribes the events and mass casualties of the 1641 Ulster Rebellion against English Protestants. In lurid detail it magnifies the atrocities in the form of phantasmagoric racial degeneration. The text is filled with woodcuts and narratives depicting "the most barbarously exquisite" torments of "poore Protestants": "Cutting off their privy members, eares, fingers, & hands, plucking out their eyes, boyling the heads of little Children before their Mothers faces, and then ripping up their Mothers Bowels, stripping women naked, and standing by them being naked, whilst they are in Travell, killing the children as soon as they are born, and ripping up their mothers bellies."[165] Recounting unrestrained acts of "sacrific[ing]" children in the fire and flaying "skin from bones like Butchers" strips the Irish of human intentionality and depoliticizes the conflict "as if their Habitation were in Hell" and not in a nation under foreign occupation.[166] Spanish cruelty, as Phillips and Davenant depict it, is cognizable through the paradigm of

[164] See William Lithgow, *The Totall Discourse of the Rare Adventures* (London, 1632).
[165] James Cranford, *The Teares of Ireland wherein is lively presented as in a map a list of the unheard off cruelties and perfidious treacheries of blood-thirsty Jesuits and the popish faction: as a warning piece to her sister nations to prevent the like miseries, as are now acted on the stage of this fresh bleeding nation* (London, 1642), 9.
[166] Ibid, 22.

Catholic Irish atrocities and rebellion, which surreptitiously conflates the Spanish with the insatiably wild, "inhuman" Irish and beckons the imposition of English disciplinary colonial structures *as if* the Spanish were already expropriating legitimized English settlements. The presence of the ratiocinative subject of indigeneity (a very English form of indigeneity), the Priest of the Sun, exercises both condemnation of Spanish rapacity and an invitation to English colonial ventures and forms of governance, the two actions being semiotically and performatively insufficient when exercised separately.

The Priest is also a deceptive figure who conceals a tactical disavowal nestled in his Anglicized heart – that is, the denial of English colonial exploitation enacted under the penumbra of secular "rational taxa" and racialized categories. A second-order mimeticism permeates the Priest's speech giving voice to a preemptive colonialism under the English. He is an odd, incomplete exemplum of Homi K. Bhabha's indeterminate colonized: at once a failed copy of the original English subject of law and an anchor point for angst-ridden resilience to oppression.[167] As an insufficient mimic, our Priest, without historical precedent or enfranchisement, indicts Spain in the decidedly English legal nomenclature of *res nullius,* the neglect of land utility communicated in the words "The world still waste must lye," and he bewails the disruption of global commerce in Spain's inquisitional-carcereal form of international politics ("Or else a prison be to all but them").[168] As embodied *ressentiment,* his selfhood is measured against and elevated over Spanish transgressions, which he itemizes and

[167] For an analysis of the three levels of mimeticism in postcolonial critiques see Rey Chow, *The Protestant Ethnic and the Spirit of Capitalism* (New York: Columbia University Press, 2002), 103-115.
[168] This language is borrowed directly from Cromwell and Council's 1655 *Declaration . . . against Spain*: "The best Title, that any can have to what they possess in those parts of America, is Plantation and Possession, where there were no Inhabitants, or where there were any, by their consent, or at least such waste and desolate parts of their countries, as they are not able in any measure to plant, and possesse; (God having made the world for the use of men, and ordained them to replenish the same.)" Oliver Cromwell, *A Declaration of His Highness, by the Advice of His council; Setting forth, on the behalf of this Commonwealth, the Justice of their Cause against Spain* (London: Henry Hills and John Field, 1655), 138.

traces out in their social ramifications. Of course, the reader/spectator gains no insight into the Priest's psychical economy. The colonized individual's inauthentic ambivalent interiority is projected outward onto its "civilized" model (the English) and anti-model (the Spanish). Bhabha's heterogeneously complex colonial subject is sequestered from this existential debate. This subtraction is an unguinous sleight-of-hand that precludes scrutinizing the full range of actions necessary for English colonization and invariably disowns England's own legal determinations of racial-political belonging that blurred the boundaries between religious affiliation and ethnicity (determinations that, by different means, accomplished what the Spanish are being accused of in Davenant's opera – denying "Christian Lawe" to indigenous subjects in order to transform them into capital).[169]

Jenny Shaw has dissected the legal evolution of English anxieties surrounding categories of religio-racial identity in the West Indies. According to Shaw, "Antigua's Act 'Against Carnall Coppullation between Christian and Heathen' demonstrates that from the very beginning of their Atlantic incursions the English experienced tensions in their ideologies about difference. Centered on religious categories . . . the language of the act . . . nonetheless effectively created a universe in which only 'white' people could be Christian."[170] Copulations between raced bodies were dangerous acts of defilement and the miscegenated progeny were banished along with their corrupted white mothers. By 1661 The Barbados Slave Code (which was transported to Jamaica under Governor Thomas Modyford) still "ignored the possibility that an African could also be a

[169] Despite the promulgation of humanitarian intentions, the most resilient object of English desire is the Spanish themselves. Rene Girard defines the situation as the triangulation of mimetic desire in which the ostensible object of cathexis (in this case, Peru) is interchangeable with other entities because the real object of desire is the mediator (the Spanish). Girard's example is Amadis de Gaul who models and mediates Don Quixote's object choices, despite any assertions otherwise. See Rene Girard, "Triangular Desire," in *The Girard Reader* (New York: Crossroad, 1996), 33-44.

[170] Jenny Shaw, *Everyday Life in the Early English Caribbean: Irish, Africans, and the Construction of Difference* (Athens, GA: University of Georgia Press, 2013), 35.

Christian" by laying out punishments for any "'Negro' offering 'any violence to any Christian as by striking or the like.'"[171] And the 1675 Nevis Law, "White Men Not to Keep Company with Negroes," continued the patterns of racializing Christianity by fixing darker skin tones as a categories of exclusion. This ideological evolution is the offstage context for the Peruvian Priest's Anglicized indictment of the Spanish, but it hovers on the fringes as an inadmissible negation. For all intents and purposes, the Priest in his speech has amalgamated identarian classifications, combining anti-Christian proclivities and intractable abuses of *jus gentium* into the monolithic, inhuman alterity of a Catholic Spain in diametric opposition to an English Christian modernity.

The matter of Spanish claims in Peru could easily be abrogated if Davenant simply followed Cromwellian logic and cited spiritual iniquity as the cause of Spain's contractual betrayals and providential clearance for English emancipation via intervention. As Janet Clare states, "Davenant makes no purchase on such apocalyptical language."[172] Divine prescriptions find no foothold in *Cruelty*'s texture of political theorizing. If theological rhetoric ranging from the perfunctory to the emotively powerful was so conventional as to become foundational, then why did Davenant eschew its inclusion?

"*Cruelty* and the Suspension of Anti-Theological Universals between Animality and Englishness"

For one caught in the interregnum morass of daily revelational struggles between Parliamentarians, Royalists, Independents, Presbyterians and Sectarians, one feeling himself carried aloft in the national flight from notions of divine kingship (and it must be recalled that

[171] Ibid., 37.
[172] Clare, "Production and Rece*ption*," 835.

Davenant was a committed royalist);[173] for such a person theological justifications must have seemed bankrupt and impossible to reconcile with the expansion of English commercial interests not, as was achieved in prior cases, determined by discrete corporate bodies or charter companies, but actively pursued and shaped by the central government and its military executives. The Revolution's disruption of censorship protocols combined with anti-Stuart motions for liberty of conscience militated against formal embodiments of centralized governance, and thus allowed the diffusion of authority across disparate cosmopolitical visions. The 1651 Muggletonian tract *A Transcendent Spiritual Treatise* conveys the founder's providential sense of a place beyond the reach of secular authority. God addresses the prophet, "Look into thy own body, there thou shalt see the Kingdom of Heaven, and the Kingdom of Hell . . . I have chosen thee my last messenger for a great work, unto this bloudy unbelieving world.

[173] Just prior to the English Civil Wars, Davenant became involved in a plot to persuade the army to march to London, free Strafford, and shut down Parliament. What was known as ill-carried The Army Plot was foiled by the Commons' discovery of the affair. Davenant escaped to France and later joined the Royalist army during the Civil Wars, serving in the capacity of Lieutenant-General of the Ordnance under William Cavendish, Earl of Newcastle and then (after being knighted at Oxford in 1643) as a spy for Queen Henrietta-Maria and Cavendish. After King Charles I surrendered himself to the Scots at Southwell on 5 May 1646, Davenant took up residence at St. Germain-en-Laye with Queen Henrietta Maria and the Prince of Wales. Later he moved to the Louvre in Paris to reside with Lord Jermyn. Between September 1649 and June 1650 Davenant rotated through three appointments without actually exercising capacity in any of them. He first received a commission as Treasurer of Virginia in September but the following February he was instead moved into the position of Lieutenant-Governor of Maryland to replace Lord Baltimore. On 3 June 1650 from Breda Davenant received a final commission appointing him one among sixteen in the Council of Virgina under Governor Sir William Berkeley for the suppression of rebellious colonists. Davenant had left Jersey in May 1650 bound for what he thought would be Maryland rather than Virginia, but he was captured by Captain John Green, commanding the frigate Fortune, and subsequently imprisoned in Cowes castle, "he having been an active enemy to the commonwealth." On the 9 July, Davenant and five others were ordered to be tried for treason. Although Davenant was spared from execution, most likely by the intercession of Henry Marten, he was held for two years in the tower of London until the Council ordered his release on 7 October 1652 at the encouragement of Bulstrode Whitelocke who spoke admirably on the poet's behalf. Shortly after his release from the Tower, Davenant was once again arrested, this time for insolvency. In the spring of 1654 he appealed to Cromwell who (with Council) approved of his release (22 July) and issued the warrant on 1 August. The next year on 10 August, Davenant obtained a pass for travel to France and eventually returned with his third wife, Henrietta-Maria du Tremblay, whom Davenant, it is presumed, first met during his time in exile at the Court of Charles II. Mary Edmond, *Rare Sir William Davenant: Poet Laureate, Playwright, Civil War General, Restoration Theatre Manager* (New York: St. Martin's, 1987), 116.

And I have given thee Lodowick Muggleton to be thy mouth."[174] The Ranter Jacob Bauthumley lowered God into a pantheistic community of his own creation: "Nay, I see that God is in all Creatures, Man and Beast, Fish and Fowle, and every green thing, from the highest Cedar to the Ivey on the wall . . . and hath his Being no where else out of the Creatures."[175] At the same time, Ranters, among other antinomian sects such as Seekers and Familists, elevated man above the possibility of carnal sin, throwing into question moral legislation and the basic tenets of all Christocentric doctrines; while the strongest voice among the Ranters, Abiezer Coppe subtracted the family unit from formulaic conceptions of Protestant godliness: "give over thy stinking family duties."[176] Regarding the General Baptists, Edmund Chillenden classified his congregation in strictly separatist terms as "a holy people called out of the world by the good word of his grace, they being begotten again, purged and cleansed from all uncleanness and unholiness . . . a holy nation, a chosen generation, a royal priesthood, a peculiar people."[177] J.F. McGregor cites the Baptist rough-hewn model of a contract society of free individuals as coming into conflict with "the traditional basis of political authority" and its patriarchal inflections.[178] For the Fifth Monarchists, the time was at hand for the millennial age of King Jesus to rule through his human instruments hand-picked from sectarian churches. In contrast, Natural and worldly subjects had no political rights to nor any place in determining policy, and by logical

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[174] John Reeve and Lodowick Muggleton, *A Transcendent Spiritual Treatise* (1652), in *The Acts of the Witnesses: The Autobiography of Lodowick Muggleton and Other Early Muggletonian Writings*, ed. T.L. Underwood (Oxford: Oxford University Press, 1999), 142.
[175] Jacob Bauthumley, *The Light and Dark Sides of God* (1650), in *A Collection of Ranter Writings: Spiritual Liberty and Sexual Freedom in the English Revolution,* ed. Nigel Smith (London: Pluto, 2014), 227.
[176] Byron Nelson, "The Ranters and the Limits of Language," *Pamphlet Wars: Prose in the English Revolution,* ed. James Holstun (London: Frank Cass, 1992), 70.
[177] Edmund Chillenden, *Nathans Parable: Sins Discovery, with It's Filthy Secret Lurking in the Brest of Men, or, Some Few Discoveries What the Sinfulness of Sin Is, and Spoil It Hath Made on Man, in Nine Particulars* (London, 1653), 8.
[178] J.F. McGregor, "The Baptists: Fount of All Heresy," in *Radical Religion in the English Revolution*, eds. J.F. McGregor and Barry Reay (Oxford: Oxford University Press, 1984), 41, 47-48.

extension nobility and kings were obviated by the spirit of Christ working through his chosen.[179] Quakers, too, translated a doctrine of perfectionism and the egalitarian distribution of the light within into a platform for dissenting religious activism.[180] Their ecstatic physical reception of God paralleled a shake-up of social stratigraphy in "[t]heir calculated disrespect for rank and degree, their disturbance of the worship of 'steeple houses' and of the preaching of 'hireling priests', [and] their encouragement of tithe strikes," all of which aroused "fear and bewilderment."[181] Transgressions of gender also fueled panic when Quakers organized approximately 8,000 women in the second of two anti-tithe petitions during June 1659.[182] Marvell called the spiritually inspired discord "The Shame and Plague both of the Land and Age,"[183] and according to contemporary Presbyterian heresiographer Thomas Edwards, such religious liberty was coextensive with cultural anarchy. His *Gangraena* (1646) asserts that "instead of a Reformation," England has

> grown from one extreme to another, fallen from Scylla to Charibdis, from Popish Innovations, Superstitions, and Prelaticall Tyranny, to damnable Heresies, horrid Blasphemies, Libertinisme and fearfull Anarchy, our evils are not removed and cured, but only changed, one disease and Devil hath left us, and another as bad is come in the room; yea, this last extremity into which we are fallen, is for more high, violent, and dangerous in many respects.[184]

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[179] See Bernard Capp, "Popular Millenarianism," in *Radical Religion in the English Revolution*, eds. J.F. McGregor and Barry Reay (Oxford: Oxford University Press, 1984), 165-189; and Austin Woolrych, "Oliver Cromwell and the Rule of the Saints," in *The English Civil War and After, 1642-1658*, ed. R.H. Parry (Berkeley: University of California Press, 1970), 63.
[180] Barry Reay, "Quakerism and Society," in *Radical Religion in the English Revolution*, eds. J.F. McGregor and Barry Reay (Oxford: Oxford University Press, 1984), 148.
[181] J.S. Morrill and J.D. Walter, "Order and Disorder in the English Revolution," in *Order and Disorder in Early Modern Europe*, eds. Anthony Fletcher and John Stevenson (Cambridge: Cambridge University Press, 1985), 162.
[182] See Stephen A. Kent, "Seven Thousand 'Hand-Maids and Daughters of the Lord': Lincolnshire and Cheshire Quaker Women's Anti-tithe Protests in Late Interregnum and Restoration England," in *Women, Gender and Radical Religion in Early Modern Europe,* ed. Sylvia Monica Brown (Boston: Brill, 2007), 65-96.
[183] Marvell, "First Anniversary," 294.
[184] Thomas Edwards, *Gangraena, or, A catalogue and discovery of many of the errours, heresies, blasphemies and pernicious practices of the sectaries of this time, vented and acted in England in these four last years as also a particular narration of divers stories, remarkable passages, letters, an extract of many letters, all concerning the present sects: together with some observations upon and corollaries from all the fore-named premises* (London, 1646), A3.

In Edwards's opinion, the restive repositioning of spiritual authority spawned social pathogenesis replete with an anarchic array of symptoms. One more political theory cast in the idiom of religious doxa would be one among many competitors speaking through an idiosyncratic theology, or as Nigel Smith epitomizes authoritarian displacement during the revolutionary years, an "internalized dynamic of godly selfhood."[185]

Cromwell was widely known personally and politically to have supported policies allowing "liberty of conscience," but the middle and later years of the Protectorate experienced austere limits placed on the exercise of that liberty. Blair Worden has stressed that for Cromwell, liberty of consciousness was not synonymous with toleration. To see the Lord Protector as constricting the periphery of what General Cromwell once deemed tolerable confuses the issue. "The goal of liberty of conscience was very different from that of modern liberalism. It was religious union, which persecution was held to have destroyed: the union of the believer with Christ, and the union of believers with each other."[186] Cromwell had not grown acerbic toward the same millennial spirit that compelled him to write to Hammond in November 1648, "I have waited for the day to see union and right understanding between the godly people (Scots, English, Jews, Gentiles, Presbyterians, Independents and all)," but chastened by the proliferation of sectarian assaults against that unity, Cromwell redefined godliness with a politic sobriety of expression and in progressively negative terms (by what it was not).[187] The godly were, for the most part, Presbyterians, Independents (Congregationalists), and Baptists.[188] Outside of those confessions were religious alliances of seditious activity, Quakers, Fifth Monarchists, Anglicans

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[185] Nigel Smith, *Literature and Revolution in England, 1640-1660* (New Haven: Yale University Press, 1994), 14.
[186] Blair Worden, "Toleration and the Protectorate," in *God's Instruments: Political Conduct in the England of Oliver Cromwell* (Oxford: Oxford University Press, 2012), 71.
[187] Abbott, *Writings and Speeches*, 1:677. See J.C. Davis, "Cromwell's Religion," in *Oliver Cromwell and the English Revolution* (London: Longman, 1990), 199.
[188] See Anthony Fletcher, "Oliver Cromwell and the Godly Nation," *Oliver Cromwell and the English Revolution*, ed. John Morrill (London: Longman, 1990).

and Catholics; or sectarian doctrines so radically removed from orthodoxy to be labeled heretical, Anti-Trinitarian Socinians, Ranters, Familists, Adamites, Seekers and other religious bricolage. Dismayed at the divisiveness of sectarian proliferation, Whitehall responded with a conservative retrenchment of liberties through military administration.

From autumn of 1655 to January 1657, Cromwell entrusted the oversight of twelve hastily outlined districts to major-generals acting as an alternative security detail and tasked them with "reforming the nation's morality and reducing what the government saw as the endemic irreligion and ungodliness of the English and Welsh people."[189] The generals were, in effect, a secular extension of commissions of Triers and Ejectors formed in 1654 to vet and expurgate clergy and schoolmasters guilty of moral and pastoral misconduct or gross doctrinal error. Other puritanical objectives of the major-generals included the reduction of ale houses, repression of illicit sexuality, extirpating the idle poor and vagrants, policing profanation and swearing, and quashing sports and games. According to the Buckinghamshire commissioners report to Cromwell, the actions taken by generals "speakes good, uniting the fellow sharers in the grace of Christ, the exciting of magistrates and ministers to the faithful discharge of their dutyes, the bridleing of idle and licentious persons, who threaten an innundacon of sinn and consequently wrath and ruine,"[190] and Edward Whalley, major-general in charge of the central northwest shires related, "our presence I fynde is desired in all places and gives lyf to all proceedings . . . You cannot imagine what an awe it hath struck into the spirits of wicked men, what incouragement it is to the godly."[191] Although data and hindsight do not bear out Cromwell's assertion that the period of martial law had been "more effectual towards the discountenancing of

[189] Christopher Durston, *Cromwell's Major-Generals: Godly Government during the English Revolution* (Manchester: Manchester UP, 2001), 154.
[190] Quoted in Durston, *Cromwell's Major-Generals*, 155.
[191] Ibid., 178.

vice and settling of religion than anything done these fifty years,"[192] the war against vice in the provinces did result in the suppression of hundreds of ale houses,[193] the arrest of several hundred "loose wenches," an overall reduction in the number of public spectacles and sports, and the ejection of ministers from at least thirty counties. Concomitant measures of institutionalizing catechism beyond its formerly domestic confines and the winter deportation of 40,000 Catholic landowners added up to an unprecedented assertion of state control at the parochial level. Despite Cromwell's censure of those who would "press their finger upon their brethren's conscience," he conducted his reformation of manners with the firmest of bellicose hands.[194]

Parliament's transition to a Presbyterian stronghold during the period of the Protectorate magnified Cromwell's existing antipathy toward sectarianism and compelled him to diagram more normative structures of English theocracy. In 1654 London Presbyterians generated a list of heterodox organizations while the House of Commons was prepared to interpolate a denunciation of "damnable heresies" into the Instrument of Government.[195] By 1656 Presbyterians and Anglicans were making a concerted effort to solidify a friable ecclesiastical hodgepodge. Dramatic episodes of agonistic religio-political theatre aided their efforts. In October 1656 the Quaker James Nayler made what would ultimately be deemed a blasphemous entrance into Bristol upon a donkey (in the manner of Jesus's Palm Sunday arrival in Jerusalem) as a portent of the Second Coming of Christ. Authorities promptly arrested Nayler and his bevy of female compatriots who were then examined before a London parliamentary committee. During the trial, the holy Nayler "received the outward worship of being kneeled unto and

[192] Ibid., 178.
[193] Durston, *Cromwell's Major Generals*, 176.
[194] See Derek Hirst, *Authority and Conflict: England, 1603-1658* (Cambridge, MA: Harvard University Press, 1986), 321-325.
[195] Worden, "Toleration and the Protectorate," 78-79.

having his feet kissed," and one woman repeatedly claimed that the Quaker magus had resurrected her.[196] Reactions to the event rippled into a wave of public fury, and although the death penalty was narrowly defeated, Nayler was branded, bored through the tongue, whipped, and pilloried in a theatrical exhibition of sovereign power.[197] It is no wonder, then, that the constitutional document the Humble Petition and Advice, which replaced the Instrument of Government in 1657, was significantly less tolerant of religious variety and markedly more reserved in its dispensation of freedoms. According to Blair Worden, "In place of the capacious term 'profess faith in God by Jesus Christ', the Humble Petition contained a long clause, progressively expanded in debate, which was designed to define and forbid heresy."[198] Cromwell was heartened by the added religious restrictions of the Humble Petition, which amounted to "the greatest provision that was ever made" for the protection of the people of God, but the new governing document still offered no formal definition of God's chosen nor did it carve out ecclesiastical coherence from the sectarian wreckage.[199] Thus, 1657 confusedly ushered in a spectacular circumscription of prior liberties that formed the bedrock of revolutionary action without positively formalizing acceptable religious praxis.

For William Davenant, to justify English colonialism in his opera on providential grounds meant appealing to the amorphous theology and emaciated ecclesiology of Cromwellian caprice. J.C. Davis views Cromwell as a defender of public peace through a staunch anti-formalism that maintained order by regulating the valuation of godliness as part of his

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[196] James Naylor, *A true narrative of the examination, tryall, and sufferings of James Nayler in the cities of London and Westminster, and his deportment under them. With the copies of sundry petitions and other papers, delivered by severall persons to the Lord Protector, the Parliament, and many particular Members thereof, in his behalf. With divers remarkable passages (relating thereto) before his journey to Bristol, whither he is now gone towards the filling up the measure of his sufferings.* (London, 1657), 15.
[197] Reay, "Quakerism and Society," 158-59.
[198] Worden, "Toleration and the Protectorate," 85.
[199] Ibid.

providential bequest. For the Lord Protector, "the substance of God's will was not found in such forms [of government] but in the dynamic interplay of individual and corporate wills with a chain of mercies, a series of providential indicators which could in the end lead men, who had thought of no such things, to regicide and the overthrow of the old order."[200] In Cromwell's own words, governmental forms were "but dross and dung in comparison of Christ."[201] Cromwell's vice-chancellor and non-conformist minister, John Owen, likewise, cautioned against overvaluing forms of worship and discipline.[202] The Protector's "faith, as an actor of rich, providential experience, was that God would provide and that His custom was not to work through forms, institutions and rituals but inwardly through the hearts of men."[203] By focusing on theoretical political origins of territorial sovereignty, Davenant rejected Cromwell's central policy of anti-formalism, whose mixed messages under the Humble Petition proved ineffective at coordinating social consensus, and aligned himself with, at first glance, incommensurable positions of radical tolerationists (and later, natural theologians) that reimagined national religion by privileging familiar civil and commercial operations of the state.

Through the Whitehall debates of 1648 the official Leveller position had been a unitary and widespread toleration enabled by the protections of a representative state apparatus. Richard Overton, in his satirical pamphlet the *Araignement of Mr. Persecution*, places the most cogent argument for national unification in the mouth of "Mr. State-Policie":

> Since all by compulsion are to be forced to the Civill peace and publike unity, and all are to be defended and preserved under the publike freedome, one as well as an other; therefore to this end the Majestrate ought to bind all Religions, that no Religion have power over other, that all in the Generall have Toleration, and none in particular be offensive; for the Papist may be a Papist, the Protestant a

[200] Davis, "Cromwell's Religion," 189.
[201] Derek Hirst, "The Lord Protector, 1653-1658," in *Oliver Cromwell and the English Revolution*, ed. John Morrill (London: Longman, 1990), 127.

[202] Davis, "Cromwell's Religion," 202.
[203] Ibid.

> Protestant without the power of Compulsion . . . to this end a Nationall Covenant would not be inconsiderable, to engage all in this publike freedome, that as all should be sharers in it, so all should be defenders of it.[204]

Overton avers that "Nationall Covenant" is the precondition for the manifestation and maintenance of forms of spiritual devotion; the state precedes not one but many confessions whose multiplicity is unified by shared, contractual commitments to civic amity. In a similar vein but using a post-classical exemplum of Christian persecution, Henry Robinson in *Liberty of Conscience* questions, "But what matters it whether we be called Protestants or otherwise? or is truth and propriety the worse, because we endeavor, or attaine them by the helpe of Papists and of Brownists? or may not Papists and Brownists as lawfully serve their King and Countrey as those thundering legions of Primitive Christians did the Heathen Emperours?"[205] Paradigms for toleration were put forth such as Robert Greville, second Lord Brooke's 1642 proposition for an English settlement based upon the model of the United Provinces "who let every Church please her selfe in her owne way, so long as she leaveth the State to her selfe."[206] The separatist Roger Williams sketched the autonomy of church congregations with the temporal qualities of municipal evolution:

> The *Church* or *company* of worshippers (whether true or false) is like unto a Body or Colledge of *Physitians* in a *Citie*; like unto a *Corporation , Society or Company* of *East-Indie* or *Turkie-Merchants*, or any other *Societie* or *Company* in *London*: which companies may hold their *Courts*, keep their *Records*, hold *disputations*, and in matters concerning their *Societie*, may dissent divide, breake into *Schismes* and *Factions* . . . and yet the peace of the *Citie* not be in the least measure

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[204] Richard Overton, *The Araignement of Mr. Persecution*, (London, 1645), 30, in William Haller, *Tracts on Liberty in the Puritan Revolution, 1638-1647*, vol. 3, part 2 (New York: Columbia University Press, 1933), 240.
[205] Henry Robinson, *Liberty of Conscience, or, The Sole Means to Obtaine Peace and Truth*, in William Haller, *Tracts on Liberty in the Puritan Revolution, 1638-1647*, vol. 3, part 2 (New York: Columbia University Press, 1933), 108
[206] R. Greville, Lord Brooke, *A discourse opening the nature of that episcopacie, which is exercised in England* (London, 1642), quoted in Ann Hughes, "Religious Diversity in Revolutionary London," in *The English Revolution, c. 1590-1720: Politics, Religion and Communities*, ed. Nicholas Tyacke (Manchester: University of Manchester Press, 2007), 114.

> impaired, or disturbed; because the *essence* or being of the *Citie*, and so the *well-being* and *peace* thereof is essentially distinct from those particular *Societies*.[207]

In this passage Williams writes religion on the palimpsest of a corporate charter and claims for the city itself an indivisible quiddity. Civic bodies, like a congregational corpus, are hypostatic elements of spiritual essence and should be respected as such. On the Royalist side, Henry Hammond, a divine favored by Charles I, argued that all must "by the best Reason and revealed light we can, compose things according to our present estates, as we doe in Civill Affaires; and as the Councels and Fathers which were before us have done in Ecclesiasticall."[208] In Ann Hughes opinion, unorthodox positions that relied on distinctions between civil and religious institutions in which the civil was equally valorized, such as Winstanley's view that the parish was "made for *civil good sake*," marked "a radical departure from conventional understandings of the connections between religion and civil society . . . and pointed the way to a separation of religious belief from the suitability for civic or public service."[209]

Manufacturing a post-regicide national reverie in Davenant's *Cruelty of the Spaniards in Peru* required an analogous segregation of religiosity and hyperbolic piety from the political framework. In the preface to his heroic epic poem *Gondibert* (1651), Davenant lashes out harshly against "Divines" and what he identifies as their proclivity for disarticulating "the slippery joynts of Government" and exacerbating enmity in a "divided Nation":[210] "These quiet Couseners are amongst the People, esteemed their steddy Men; yet they honour the courage, and more active parts of such disobedient Spirits, as disdaining thus tamely to deceive, attempt bravely to rob the

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[207] Roger Williams, *The Bloudy Tenant of Persecution*, ed. Samuel L. Caldwell (Providence: Narragansett Club, 1867), 73.
[208] Henry Hammond, *Mysterium religionis recognitum: an expedient for composing differences in religions* (London, 1649), 14. See Sean Kelsey, "The kings' book: Eikon basilike and the English Revolution of 1649," in *The English Revolution, c. 1590-1720: Politics, Religion and Communities*, ed. Nicholas Tyacke (Manchester: University of Manchester Press, 2007), 157.
[209] Hughes, "Religious Diversity," 124.
[210] William D'Avenant, *Gondibert: An Heroick Poem* (London, 1651), 32.

State . . . a long, and notorious power hath continued with Divines."[211] Davenant is equally dismayed by the proliferation of "inspiration, a dangerous word; which many have of late successfully us'd . . . a spiritual Fit, deriv'd from the ancient Ethnick Poets, who then, as they were Priests, were States-men too, and probably lov'd dominon; and as their well dissembling of Inspiration begot them reverence, equal to that which was paid to Laws."[212] Ecclesiastical establishments serve at the pleasure of the state and should not, either in the capacity of a state church or the Commonwealth's sectarian free-for-all, reverse that relationship. To ensure the political association of mankind, order is essential, but spiritual leadership is not essential to maintain that order: "The good (who are but few) need not the power of religion to make them better."[213] In many circumstances religion is only demagoguery and "threatenings" veiled in piety, and a constant fount of disorder among the easily persuaded populace.

Clearly, Davenant viewed the primacy of religious schemas for socio-political formations as corrosive, but commingled with his rather unsophisticated social theory, were also personal affective reasons for denying theology a place in his Protectorate drama. His true king, the future Charles II, while in exile, signed the Treaty of Brussels on 2 April 1656 promising "that England would return Jamaica to Spain and suspend English penal laws against Catholics; in return, a Spanish army" would be granted to Charles for an invasion of Cromwell's Protectorate.[214] How could the God of Providence be with the Lord Protector when his bid for Empire was at odds with the divinely sanctioned monarch, and one to whom Davenant was personally loyal? In light of the Protectorate's act of 26 June 1657 rigidifying the prosecution of papistry, an act antithetical to Davenant's own Catholic commitments, providence could play no part in

[211] Ibid., 33-34.
[212] Ibid., 24.
[213] Ibid., 37.
[214] Randall, *Winter Fruit*, 174.

parliamentary actions.[215] Literary tropes of providential historicity were insubstantial and inexorably contentious when attempting to configure a national imaginary, like Roger Williams's "Citie," that would outlive the current religio-political fragmentation and stretch into a futurity of constitutional monarchy. All of this is not to deny the presence of any religious tonalities in the masque, but to make plain that Davenant was under pressure (internally and externally) to sever all universal claims from theological underpinnings, which at the time offered no coherent locus of control. The universality to which Davenant appealed had to be a different conception of naturalized knowledge.[216]

When the Dutchman Hugo Grotius published his magnum opus *De Jure Belli ac Pacis* (Rights of War and Peace) in 1625, natural law theory began moving assertively in the direction of secularized and individualistic abstractions. A conspicuous and sometimes infamous statement often culled from the text conveys its originators desire to formulate juridical grounds for international and interpersonal interaction that "would take place . . . even . . . [if] there is no God, or that he takes no Care of Human Affairs."[217] The very Constitution of Man and its recurrence of concomitant relations would undergird universal declarations and guide the evaluation of law and human proceedings. Human nature, according to Grotius, is constituted of two essential and integrated properties: the longing for self-preservation and "his Desire of Society, that is, a certain Inclination to live with those of his own Kind . . . peaceably, and in a Community regulated according to the best of his Understanding."[218] In this, Man participates with other sentient creatures "for even of the other Animals there are some that forget a little the

[215] See Davis, "Cromwell's Religion," 198.
[216] "The idea of a natural law can emerge only when men come to perceive that not all law is unalterable and unchanging divine law." Romnen, *Natural Law*, 4.
[217] Hugo Grotius, *The Rights of War and Peace*, trans. John Morrice, ed. Richard Tuck (Indianapolis: Liberty Fund, 2005), 1:89.
[218] Ibid., 1.79-81.

Care of their own interest, in Favour either of their young ones, or those of their own Kind."[219] But humankind alone has received "a peculiar Instrument, viz. the Use of Speech . . . and a Faculty of knowing and acting according to some general Principles.[220] Proceeding from the rational mind of Man is a heightened level of sociability, "a Care of maintaining society,"[221] that functions as the fundamental stabilizer for recognition of and relation to property rights, "to which belongs the Abstaining from that which is another's."[222] The future-oriented judgmental capacity of the human (aiming toward sociality when guided by the clear light of Reason) coincides with Natural Right or the Laws of Nature.[223] Therefore, the fulfilling of Covenants "belongs to the Law of Nature" and the "Mother of Civil Law is that very Obligation which arises from Consent."[224] For Grotius, then, the autonomy of human reason engenders and stabilizes Civil Law and the Laws of Nations, but subtending mankind's ratiocination is a compulsion toward sociality which Man holds in common with other animals. Grotius's construction of Natural Law is heavily indebted to Roman Law's subsumption of the stoic philosophical ideal of a universal rational mind flowing through all creation, characterized succinctly by the Roman jurist Ulpian's notion that *ius naturale* is "that which nature teaches to all animals."[225] The tenant of Grotius's theory I wish to highlight is that natural law exists at each stage on an anthropological continuum beginning with a kingdom containing all animal life and ending with the exclusive civil productions of human rationality. We could label these poles Natural Law_1 and Natural Law_2, the former being sentient sociability across species, the latter being the perfection of human Reason's emanations in civil arrangements. Speech leading to

[219] Ibid., 82.
[220] Ibid., 85.
[221] Ibid.
[222] Ibid., 86
[223] Ibid., 87.
[224] Ibid., 93.
[225] Romnen, *Natural Law*, 25-26.

axiomatic thought constructions is the obstacle placed between the two. Problems and deviations can occur at points along the continuum, specifically when the rational mind experiences parasitism from the influence of passions, errors of will, or sophistic customs; but the continuum allows (at least in Grotius's rational project of "withdraw[ing the] mind from all particular Facts" to get at the universal kernel of Right) the possibility of venturing back down the scale of cultural linguistic maturity towards an inchoate interspecies structure and adjusting a human society's progress to conform with "natural" (and thus universally viable) teleology.[226]

As an exile in Paris, William Davenant spent the latter 1640s in an erudite circle of royalists and sympathizers gathered around Cavendish and steeped in Grotian thought, and very much concerned with refining the universal and foundational formula for political rule. William Cavendish, now Marquess of Newcastle, Margaret Cavendish, his wife, Charles Cavendish, his brother, Rene Descartes, Marin Mersenne, Pierre Gassendi, William Petty, Thomas Hobbes, and, a correspondent in London, John Pell, filled out the circle; many of them would work closely with Samuel Hartlib's coterie of natural philosophers stationed in London in the 1650s (this will become important in the following chapter).[227] According to Davenant's biographers A.H. Nethercot and Alfred Harbage, "Davenant became very intimate with Hobbes," who became a reader for Davenant's epic poem *Gondibert*.[228] Nethercot recounts their fast friendship with a dash of histrionic eloquence, "D'Avenant had sat at his feet in Paris and drunk in his bracing ideas; the poet was well on his way to becoming a disciple; and Hobbes, flattered, could not well do less than lend him the full powers of his dissection and suggestion."[229] Hobbes's response to

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[226] Grotius, *Rights of War and Peace*, 1:132.
[227] See James R. Jacob and Timothy Raylor, "Opera and Obedience: Thomas Hobbes and A Proposition for the Advancement of Moralitie by Sir William Davenant," *Seventeenth Century* 6.2 (1991): 215.
[228] Alfred Harbage, *Sir William Davenant: Poet-Venturer, 1606-1668* (New York: Octagon Books, 1971), 108.
[229] A.H. Nethercot, *Sir William D'avenant: Poet Laureate and Playwright-Manager* (Chicago: University of Chicago Press, 1938), 241.

Davenant's heroic epic printed in the published poem's prefatory material ostensibly confirms Nethercot's assessment. Not only had the elder Hobbes not yet seen a "Poem, that had so much shape of Art, health of Morality, and vigour and beauty of Expression, as this of [Davenant]," but according to Hobbes, Davenant had certified his mental ambidexterity by being both Poet and "Philosopher, to furnish and square his matter; that is, to make both Body and soul, colour and shadow of his Poem out of his own Store," which Hobbes considered well performed in *Gondibert*.[230] Likewise, Davenant expressed gratitude to Hobbes for "correcting" his poem and allowing the humble poet to submit to Hobbes's philosophical acumen as a child must surrender to the wisdom of superiors. Indeed, the repetition of expressed distrust in the multitude and a habitual recourse to salutary phrases like "we must side with Reason, our dutie, according to the Law of Nature; Nature's Law" signals that Hobbes imprinted an indelible stamp upon the younger poet who interpreted their literary and philosophical objectives as entwined.[231]

Hobbes's theory found in *Leviathan* and its earlier enunciation *De Corpore Politico* lays mathematized political foundations upon conspicuous ideas of human nature, animality, the natural world, and the Americas, but absent from his list is any sense of direction supplied by a theistic God. Bruno Latour states that Hobbes in his *scientific politics* "wanted to wipe the slate clean of all appeals to entities higher than civil authority,"[232] while Alan Ryan sees a critical link between Hobbes's political blueprint and the *a priori* truths of geometry.[233] Hobbes had considered the "licence of interpreting Scripture [to be] the cause of so many several sects . . . to the disturbance of the commonwealth" and thus had abandoned arguments from Biblical

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[230] Thomas Hobbes, "The Answer of Mr. Hobbes to Sr. Will. Davenant's Preface before Gondibert," in *Gondibert: An Heroick Poem* (London, 1651), 63, 58.
[231] D'Avenant, *Gondibert,* 41.
[232] Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993), 19.
[233] Alan Ryan, "Hobbes Political Philosophy," in *The Cambridge Companion to Hobbes*, ed. Tom Sorell (Cambridge: Cambridge University Press, 1996), 213-14.

sanctions.[234] His concern was with unity in the guise of a chief political agent, the sovereign, maintained in his authority by the rational will of his subjects via mutual *covenant*. Hobbes's politicized view of the state of nature as a relentless "warre" of all against all, each driven by the desire for self-preservation, is well known.[235] Less sanguine and forgiving than Grotius's twinned drives of self-preservation and sociability, this singular desire for Hobbes defines human nature and does not dissolve upon association, but is managed in accordance with the laws of nature, defined briefly as humankind's ability to apply reason to precepts and provide them with a social form, to rationalize abstract propositions that universally apply and control the restive passions.[236] It is through such applications of reason that humans see government under the sovereign as the best modality to preserve the self, and thus divest themselves of certain natural liberties (natural right) to ensure the sovereign's continued authority. What receives less critical attention in Hobbes's outline of human nature is his renunciation of Biblical exegesis in favor of a comparative analysis between the innate and sometimes divergent capacities of humans and animals, with a weakly adumbrated America placed at the pinnacle of his political thought experiment. Much like Boyle's work conducted in the experimental laboratory (see Chapter Five), the nonhuman is the object through which the universals of human substance and sociability become known.

If anything, animal societies receive better treatment from Hobbes than exclusively human agglomerations in the Americas. Discoursing on the political organization of bees, ants, and other species, Hobbes states that "those living creatures aim every one at peace and food common to them all; men aim at dominion, superiority, and private wealth, which are distinct in

[234] Quoted in Hill, *Century of Revolution*, 173.
[235] Thomas Hobbes, *Leviathan, or, the Matter, Forme, & Power of a Common-wealth Ecclesiastical and Civill* (London, 1651), 76.
[236] Ibid., 106.

every man."[237] Hobbes interprets this animal-oriented cooperative structure as enabled by an innate lack of reason and sense of justice.[238] What the animal espies and arrives at instinctually and without speech "to signify" is the "common good" (synonymous with the private good), which is what humankind can only arrive at circuitously through the rational abstraction of language. Of course, Hobbes is no ethologist, no apiologist, no myrmecolgist. He detects organization without digging into modes of communication and social hierarchy. He is not really looking at how bee colonies and ant communes "signify." He mobilizes a neutered, pacified image of them as contented creatures devoid of reason, validated in their contentment because of a missing rationality, in order to generate a contrast with those natives of the Americas who abuse their inherited powers of reason through neglect. Hobbes condemns the embryonic and stillborn polities of the Amerindians: "For the savage people in many places of America, except the government of small families, the concord whereof dependeth on natural lust, have no government at all, and live at this day in that brutish manner, as I said before."[239] The indigenous population of America is, for Hobbes, his sought after state of nature, that is, a state of "warre," divested of the instinctual harmony of certain animal populations. "In identifying the New World with man's pre-political condition," as Vanita Seth avers, "Hobbes created a discursive space . . . within which the Americas could be located" and an illustration of an a-historical zone of savagery into which those of Europe could fall.[240] It is not the recrudescence of man's animality that causes civil strife, but rather a willful disregard of the human capacity for constructing

[237] Ibid., 105.
[238] According to Alan Ryan, Hobbes, unlike Aristotle, did not see humans as innately political, such as bees and cattle are political by nature. Rather, humans depend on rational agreements to observe justice and rules of distribution. See Ryan, "Hobbes Political Philosophy," 216.
[239] Hobbes, *Leviathan*, 78.
[240] Vanita Seth, *Europe's Indians: Producing Racial Difference, 1500–1900* (Durham, NC: Duke University Press, 2010), 75.

rational propositions (at the behest of drives toward self-preservation) that leads to the state of conflict naturally accompanying a brutish existence.

Hobbes's influence on the shape of *The Cruelty of the Spaniards in Peru* is most evident in the Fifth Entry song that, as Janet Clare surmises, parallels the philosopher's emphasis on the "human capacity for cruelty, subverting the humanist antithesis of the rational being":[241]

> 1.
> If man from sov'raign reason does derive
> O're Beasts a high prerogative,
> Why does he so himself behave,
> That Beasts appear to be
> More rationall then he? [*sic*]
> Who has deserv'd to be their slave.
> 2.
> How comes wild cruelty in human breasts?
> Proud Man more cruell is than Beasts;
> When Beasts by hunger are enrag'd
> They no long pains devise
> For dying enemies,
> But kill, and eat, and are asswag'd. [...]
>
> [CHORUS] When Beasts each other chase and then devour,
> Tis Natures Law, necessity,
> Which makes them hunt for food, & not for pow'r:
> Man for Dominion, Art's chief vanity,
> Contrive to make men die;
> Whose blood through wantoness they spil,
> Not having use of what they kill.[242]

Recall that at this point, the Peruvians are caught within a web of servitude and death initially spawned from their own departure from a time "When wildly we did live, / E're crafty Cities made us tame." Through greed for empire the Incans have fallen prey to the more dominant and inimical Spanish nation.[243] The song summons forth the animal as an ameliorating model of sociality in contrast to Spanish excess and Incan frailty underlying the culture's ambitious

[241] Clare, "Production and Reception," 838-39.
[242] D'Avenant, *Cruelty of the Spaniards*, 22.
[243] Ibid., 5.

presumptions. Spectators must be satisfied with the presentation of only one axis of the Grotian continuum: a reductive binary between human "Dominion" achieved through inordinate violence and the provident (yet non-speculative) polis of bestial life, between the artifice of decadent culture and "Nature's Law." Entangled in the middle of these poles are the Peruvians who rediscover their tranquil pre-history of self-possession in the calculus of beasts – "necessity." The (im)moral economy of the Spanish is one brambled potentiality of Incan becoming, but animal sociality is another. Though retrogressive, the animal model of being is a labile platform for re-establishing Incan identity along densely rational trajectories, those trajectories on which praxis and customs mirror the *a priori* human raciocinative subject. [244]

Cruelty's fifth entry dramaturgy articulates an anemic technology of race and species. If the beginning of the opera aimed at exotic transport by overdetermining and multiplying the attributes of Amerindian "nativeness," then this penultimate entry seeks to solidify fungibility between Inca and animal by denuding and abstracting both of their memberships into rigid taxa. "Beasts" in the nondescript plural are motile creatures who did not fall with mankind, and thus they are afforded a lionized otherness, but without respect for their particularities. As Derrida discusses in *The Animal that Therefore I Am*, the animal is "naked, without existing in nakedness, the animal neither feels nor sees itself naked," and it is this lack of ability to share in our sentiment of shame, the residue of our Fall, that "the animal" becomes a racist/speciesist objective category of human scorn.[245] The animal populates textual sites as a theorem ("the animal") for theorizing what is proper to man, rather than manifesting in an individual capacity. Davenant deploys such mammalian verisimilitude, painstakingly manipulating discrete animal

[244] Recall that the Peruvians never established a written covenant of government.
[245] Jacques Derrida, *The Animal That Therefore I Am*, trans. David Wills (New York: Fordham University Press, 2008), 5.

lifeworlds into a philosophical ideal, "beasts," whose sole function is to starve out social behaviors from classes of humans.[246] Our poet-philosopher withholds culture from "the animal," to deny culture, or at least cultural complexity, from certain *races* of Man and reduce the Inca and Beasts to somatic-behavioral isomorphism in "Natures Law."

The sixth and final entry carries on thematically with Davenant's anthropological machine and clarifies the opera's position on cultural evolution. An armed contingency appears in the distance, the "Van is led by the English" replete in the "Red-Coats" of Parliament's New Model Army; the "Reer is brought up by the Peruvians, who are known by their feather'd Habits, Glaves, and Spears."[247] The Spaniards are depicted in disorganized retreat. Davenant comments on this battle's purposive historical anachronism, informing the reader that "These imaginary *English* Forces may seem improper, the *English* had made no discovery of Peru, in the time of the *Spaniards* first invasion there, but yet in Poeticall representations of this nature, it may pass as a Vision discern'd by the Priest of the Sun, before the matter was extant, in order to his Prophecy."[248] Poiesis is crucial here for its blithe transformation of providence into prophecy. None of this vision exists in the objective space of real-time, but rather intersubjectively in the indigenous phenomenological orientation toward religio-cultural futurity and the English aestheticization of fluid conquest. English intervention in Peruvian geopolitics is an internally generated dynamic, not an external imposition justified by appeals to God's prejudice or eschatological temporality. Additionally, there is an anthropological hierarchy envisaged in the mode of confrontation: England takes the vanguard, Peru brings up the "reer." Davenant proffers restitution to the Peruvians in the form of a transcultural palindromic chain – England becomes

[246] Ibid., 40-41.
[247] D'Avenant, *Cruelty of the Spaniards*, 23.
[248] Ibid., 23-24.

the object of Incan cathexis when the pall has been lifted (by abandoning custom) from their innate human reason, just as the Incas come into fully realized, rational humanity when the English cultural model appears as an intentional object.

> Experience now (by whose true eyes, though slow, lead
> We find at last, what oft too late we know)
> Has all their cous'ning miracles discern,d:
> 'Tis she that makes unletter'd mankind learn'ed
> She has unmask't these Spanish Dark Divines:
> Perhaps they upward go,
> But hasten us below,
> Where we, through dismall depths, must dig in Mines
>
> When first the valiant English landed here
> Our reason then no more was rul'd by fear
> [. . .]
> Our griefs are past, and we shall cease to mourn,
> For those whom the insulting Spaniards scorn,
> And slaves esteem
> The English soon shall free.[249]

The dialectic interplay between false Christianity and true experience creates a frictional glow that illuminates knowledge, even for the "unletter'd." The language employed by the Priest is demystified mysticism venerating the "English" commonwealth as the paragon of political formation. The appearance of England dispels terror's reign over reason and relegates Spain from divine status to a petulant immaturity in the timeline of nations (the Spaniards will be "digging for [the English]").

Davenant makes a provocative choice to represent the English nation to the Protectorate with no charismatic center; neither Lord Protector nor past reigning monarch is vouchsafed as sovereign in conquest of Peru. England appears as a multiplicity of "Red-coats" without extra-egalitarian dependence on a singular subjectivity. Raphael Falco has analyzed the dissolution of charismatic groups in early modern tragedies and identified a fraught relatedness of "the natural

[249] D'Avenant, *Cruelty of the Spaniards*, 24-25.

body" to both "the disposition of individual power" and "the mythification of group power."[250] Decrying glabrous schemas of emerging individualism in the early modern "unified subject" as "either a continuous interiority or discontinuous collocation of exterior impressions," Falco ensconces subjective formation in "the ambiguous status of group identity and intrasubjective dependence."[251] Individual identity is permeably viscous, and it is decisively incomplete in the absence of a group. Davenant has removed the self-defining exchange between persona and personnel, between sovereign and subjects, in preference of a faceless egalitarianism that lends credence to the supramundane unity of English *culture* as the firm center of national dilation. Even though Davenant, as Rachel Willie notes, "avoids defining military success through allusions to monarchy" in *Sir Francis Drake,*[252] he still pins expansionist fervor on a historical celebrity of noble stature and one who abases himself to the position of Queen Elizabeth's "Slave."[253] Davenant's exclusion of regal cynosure from the opera's dramaturgy of deliverance places the onus squarely on endemic Englishness as Reason's quintessence of sovereign association.

With the repulsion of Spain, Peruvians find themselves suspended between alternating political models of the animal and Englishness which colonize indigenous epistemic space with an implacable tangibility. As a mournful tune plays, "three Peruvians, limping in silver fetters" are driven into the woods after a bout of physical torment by their captors. Their bodies disappear presumably back into the mines and, in literal representation, off the stage. Elizabeth Maddock Dillon claims that "the murdered and absent Indian body becomes a sign of native

[250] Raphael Falco, *Charismatic Authority in Early Modern English Tragedy* (Baltimore: Johns Hopkins University Press, 2000), 8.
[251] Ibid., 10.
[252] Willie, "Reinventing the Masque," 102.
[253] Davenant, *Sr Francis Drake,* 12.

'consent' to English sovereignty in the New World,"[254] and she is correct, but the absented Indian corpus also opens the space for English confrontation with the land's unsubdued bestial representatives. After the Priest's subsequent speech praising the English forces for their salvific aid, a cohort of apes and a baboon emerge and do what the indigenous population could not accomplish: extirpate the remaining Spanish colonials. English moral aptitude is not solely predicated on recognition from the indigenous subject, but also upon its incorporation into the ape's phenomenological orientation at the nadir of human dis-ease. The simian attack upon lingering Spanish colonials validates English presence in Peru, as if the alliance were ecologically pre-existent. But there is a more subtly forceful argument being made about aboriginal socio-politics. Apes initially appear at the close of the First Entry to witness the Peruvian epoch of Edenic immediacy "When none could want, and all were innocent" (that era prior to civilization building) and then disappear until the arrival of the English during the Incan Great Awakening unto Reason in the Sixth Entry.[255] In the interim, as Peru is layered over with the dross of specious customs: first, "two Indians in their feather'd habits of Peru" assume the spectatorial placement of the ape and fall into a Mimick Dance" (Third Entry),[256] second, "two Spaniards . . . cloth'd and arm'd according to the custom of their Nation" command the view of and direct "Native" associations (Fourth Entry).[257] Each period of acculturation brings with it further degeneration from the political ideal until naturally equable affiliation is supplanted by a militarily forced subjection. The ape in this scenario is a sort of memory machine, an ambulatory repository of historical record. Simian coalition with the English reactivates the "natural" predilections of the Incas that existed before the slow erosive process of living under customs

[254] Dillon, *New World Drama*, 75-76.
[255] D'Avenant, *Cruelty of the Spaniards*, 6.
[256] Ibid., 10.
[257] Ibid., 18.

sans legal covenant brought on a condition of alienation under Spanish rule. But why specifically animate an anthropical transference of power through the body of the ape? Why, of all fauna available to early modern chimeric zoology, does Davenant represent an embrace of the English and New World ecology with the geographic dislocation of various species of the infraorder of simians?

Since the twelfth century, European primatology *avant la lettre* had been concerned with amassing an encyclopedic compendium of classical, Biblical, and contemporary medieval sources of ape lore. Joyce Salisbury has revealed that even though the frequency of simians in moralizing fabulae ranked below classical exemplars like the lion and toad, apes predominated categories of representation in marginalia.[258] To the late medieval and Renaissance episteme, apes and monkeys were liminal or hybrid creatures between the human and God's lesser productions, and often they were depositories for socio-sexual anxieties concerning ethnic transgressions or cultural degeneracy. They occupied an intermediate territory for the deposition of queasy ambiguities and uncomfortable likenesses between humanity and those entities outside (or that should be outside) the anthropic sphere. For most, the category of beasts was taken up by quadrupeds, but simian motility was a distinct challenge to the neat mathematical divisions of biped and quadruped. According to Salisbury, "Albert was the first to establish three distinct 'species' in the hierarchy of creation, humans, 'man-like creatures' (*similitudiens hominis*), and beasts. Albert's establishment of this third category that included apes, Pygmies, and other ambiguous border creatures may have seemed to solve an intellectual problem about the nature of these creatures, but it opened the door for a new paradigm."[259] Edward Topsell, like Thomas of Cantimpré in the thirteenth century, was still working through the knots of this paradigm in

[258] See Joyce E. Salisbury, *The Beast Within: Animals in the Middle Ages* (New York: Routledge, 1994), 135.
[259] Ibid., 144.

1607 in *The historie of four-footed beastes*, which contains an astonishing array of late-medieval *factoids* about apes. For example, he recites Albertus and Niphus proclaiming that "pigmaes," although like men, are "a kinde of apes . . . because they have no perfect use of reason, no modesty, no honesty, nor justice of government, and although they speak, yet is their language imperfect; and above all they cannot bee men because they have no Religion, which (Plato saith truely) is propper to every man."[260]

Albertus's three tier structure of motile creation (humans, anthropoids, and beasts) generally held sway with two accompanying lines of thought about simians. The first was that apes were inferior and vapid mimics of humankind. The twelfth-century Aberdeen bestiary begins with what appears to be an optimistic complementarity between the two, "Apes are called *simie* in Latin because the similarity between their mentality and that of humans is felt to be great," but as the passage advances we are cautioned that "every part of the ape is foul" and bears resemblance to the grand deceiver, Lucifer.[261] With a physician's dispassion, Hildegard of Bingen in her twelfth-century medical treatise *Physica* wrote that an ape's "behavior is neither completely human nor completely animal."[262] Medieval woodcuts defended human exceptionalism by disparaging apes in their foolishly inept attempts to utilize human technologies like the hatchet or fire.[263] Again, Topsell also conjectured with jaundiced disgust,

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[260] Edward Topsell, *The historie of foure-footed beastes Describing the true and liuely figure of euery beast, with a discourse of their seuerall names, conditions, kindes, vertues (both naturall and medicinall) countries of their breed, their loue and hate to mankinde, and the wonderfull worke of God in their creation, preseruation, and destruction. Necessary for all diuines and students, because the story of euery beast is amplified with narrations out of Scriptures, fathers, phylosophers, physitians, and poets: wherein are declared diuers hyerogliphicks, emblems, epigrams, and other good histories, collected out of all the volumes of Conradus Gesner, and all other writers to this present day* (London, 1607), 3.

[261] *The Aberdeen Bestiary*, folio 12b, Aberdeen University Library, MS 24, available at https://www.abdn.ac.uk/bestiary/ms24/f12v, accessed 12 April 2018.

[262] Quoted in H.W. Janson, *Apes and Ape Lore in the Middle Ages and the Renaissance* (London: Warburg Institute, 1952), 77.

[263] See John Sorenson, *Ape* (London: Reaktion Books, 2009), 39.

"And as the body of an Ape is Ridiculous, by reason of an indecent likenesse and imitation of man, so is his soule or spirit; for they are kept only in rich mens houses to sport withal, being for that cause easily tamed, following every action he seeth done, even to his own harme without discretion."[264] Caliban in Shakespeare's *The Tempest* compares Prospero's officious, surveilling spirits to "apes, that mow and chatter at me / And after bite me,"[265] and in *A Midsummer Night's Dream*, Oberon adds anthropomorphic adjectives (though in actuality not the sole property of humans) to the "meddling monkey" and "busy ape" alone, exclusive of the lion, bear, wolf, and bull that appear on his list of forest inhabitants.[266] The most pernicious instantiation of the inferior mimic ideology was the horse-and-ape baiting, prevalent as early as the mid-sixteenth century.[267] These were bloody spectacles in which apes ("Jack-an-apes" - most likely chimpanzees), functioning as surrogates for human combatants, were tied to horses and baited to death by mastiff dogs. Alessandro Magno, an Italian merchant's son visiting the Bear Garden in London, jotted down his eye-witness account of the event in 1562: "In this sport it is wonderful to see the horse galloping along, kicking up the ground and champing at the bit, with the monkey holding very tightly to the saddle, and crying out frequently when he is bitten by the dogs."[268] No doubt the monkey's terror-filled vocalizations and mannerisms that smacked of the human were a main causal factor in Magno's "wonder." Human similitude juxtaposed with abyssal difference allowed for a vexing and violent degree of psychical displacement onto the ape and transumuted

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[264] Topsell, *Historie*, 4.
[265] William Shakespeare, *The Tempest* (New York: W.W. Norton, 2004), 2.2.9-10.
[266] William Shakespeare, *A Midsummer Night's Dream*, in *The Riverside Shakespeare*, 2nd ed., eds. G. Blakemore Evans and J.J.M. Tobin (Boston: Houghton Mifflin, 1997), 2.1.180-81.
[267] See Oscar Brownstein, "The Popularity of Baiting in England before 1600: A Study in Social and Theatrical History," *Educational Theatre Journal* 21, no. 3 (1969): 243.
[268] Alessandro Magno, "The London Journal of Alessandro Magno," eds. Caroline Barron, Christopher Coleman, and Claire Gobbi, *The London Journal* 9, no. 2 (1983): 144.

otherwise socially transgressive behavior into distracting forms of entertainment, thus allowing for the containment of manifold frustrations (particularly from the lower estate).[269]

The second argument concerning ape origins was that they were monstrous interspecies or demonic procreations. According to Justin E. H. Smith, "In the Aristotelian zoological tradition and in folk science more broadly, it was generally not presumed that there are [sic] fundamental natural barriers to infertility between members of different species."[270] Therefore, as H.W. Janson imparts, most accounts of great apes "would have been explained as the result of an illicit union of humans and simians, or identified as one of the various species of semi-human *monstra* . . . such as the *pilosus* or homo *sylvestris*" (Wild Man of the Woods).[271] This well-traveled mythography was recalcitrant stuff, with *homo sylvestris* making its appearance in the 1736 edition of Linnaeus's *Systema Naturae*.[272] Echoing the Aberdeen bestiary, Bernard de Clairvaux spoke out against harrowing bestial representations appearing in the sacred space of the "cloisters, before the eyes of the brothers while they read – what is that ridiculous monstrosity doing . . .? What are the filthy apes doing there?"[273] Concerning ape sexuality in particular, Topsell takes his reader through quixotic imaginings of a romantic ethic, for the

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[269] See Scott Venters, "'The ransome of Prides fury': The Executions at the Hope Bear-Garden and the (De)Mythologization of the English Commonwealth," *New England Theatre Journal* 26 (2015): 1-20; and Erica Fudge, *Perceiving Animals: Humans and Beasts in Early Modern English Culture* (Urbana, IL: University of Illinois Press, 2000.

[270] Justin E. H. Smith, *Nature, Human Nature, and Human Difference: Race in Early Modern Philosophy* (Princeton: Princeton University Press, 2015), 131.

[271] Janson, *Apes and Ape Lore*, 332.

[272] Benjamin Schmidt cites a moment of European proliferation for this type of lore intrinsic to Asia with the publication of Dutch traveler Johan Nieuhof's 1665 book relating his experiences in China, *Het Gezandtschap der Neêrlandtsche Oost-Indische Compagnie . . . a't leven in Sina getekent.* According to Schmidt, the escalation of textual and visual motifs of exotic feminine human bodies being violated by ape-like hominids made two points in the later seventeenth century: 1. through sexual (and other forms of) violence, the exotic body can and must endure a massive volume of pain and, 2. the exotic body experiences and senses pain differently, thus widening the somatic and racial gaps between Europeans and Asians (and others to which the interspecies rape imagery was applied). Benjamin Schmidt, *Inventing Exoticism: Geography, Globalism, and Europe's Early Modern World* (Philadelphia: University of Pennsylvania Press, 2015), 216-18.

[273] Quoted in Brigitte Resl, "Beyond the Ark: Animals in Medieval Art," in *A Cultural History of Animals in the Medieval Age*, ed. Brigitte Resl (Oxford: Berg, 2007), 189.

Prasian ape, "another kind of monkey, for stature, bignesse, and shape like a man, for by his knees, secret parts, and face, you would iudge him a wilde man . . . No creature except man can stand so long as he; he loveth women and children dearly, like other of his own kind, and is so venereous, that he will attempt to ravish women."[274] Sir Thomas Herbert in *A relation of some yeares travaile begunne anno 1626* . . . diagrammed, in caustic racial-nationalistic and speciesist strokes, kinship patterns between African tribes on the Cape of Good Hope and ape enclaves: "comparing their imitations, speech, and visages, I doubt many of them have no better Predecessors then [sic] Monkeys: which I have seen there of great stature."[275]

In the mid-seventeenth century the insouciant body of European ape fabulae received an injection of Baconian empiricism. Dale Peterson provides the precise date of 1607, as the Scottish sailor Andrew Battell returned to England from his imprisonment by the Portuguese in Africa, when "biology and the discovery of the great apes would begin to remove humanity from an isolated, splendid centrality in the natural world."[276] With some accurate field notes burdened by the usual Eurocentric biases, Battell describes what are presumably gorillas, which he calls by the native name *Pongo*: "The Pongo is in all proportions like a man, but that he is more like a giant in stature than a man; for he is very tall an hath a man's face, hollow-eyed with long hair upon his brows."[277] Battell even goes so far in his comparison with the human to recognize the gorilla's ability to use implements in hunting (pieces of wood as clubs), but he avidly denies

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[274] Topsell, *Historie*, 10.
[275] Thomas Herbert, *A relation of some yeares travaile, begunne anno 1626. Into Afrique and the greater Asia, especially the territories of the Persian monarchie: and some parts of the Orientall Indies, and iles adiacent. Of their religion, language, habit, discent, ceremonies, and other matters concerning them. Together with the proceedings and death of the three late ambassadours: Sir D. C. Sir R. S. and the Persian Nogdibeg: as also the two great monarchs, the king of Persia, and the great mogul* (London, 1634), 17.
[276] Dale Peterson and Jane Goodall, *Visions of Caliban: On Chimpanzees and People* (Boston: Houghton Mifflin, 1993), 4.
[277] Andrew Battell, *The Strange Adventures of Andrew Battell of Leigh, in Angola and the Adjoining Regions* (London: The Hakluyt Society, 1901), 54.

them higher cognitive functions for "they cannot speak, and have no more understanding than a beast."[278] His phobic protection of human exceptionalism is bolstered by the mounting instances of similitude, those fascinatingly frightening moments when exceptionalism flattens out.

More impactful than the appearance of Battells's memoirs was the first anthropoid ape specimen brought to Europe specifically for dissection (in this case, an orangutan) as described and sketched by Dutch Physician Nicolaes Tulp. His 1641 *Observationum medicarum libri tres*, bestowed the familiar title of *Homo Sylvestris* but appended the Malay word for man of the forest, *Ourang Outang*. Tulp's explanatory model, although the first published empirical description, was still based on degrees of human likeness and it achieved veridical purchase by analogizing the chimpanzee to pre-pubescent human ontogeny: "This satyr had four feet, but because of the human appearance [*gedaante*] it shows, it is called *Orang Outang* by the Indians, or forest man, and by the Africans *Quoias Morrou.* It is as tall as a child of three years and as stout as one of six."[279] *Homo Sylvestris* (Orang-Outang), in Tulp's estimation, was best correlated to an early phase in Man's life cycle. In many ways, rather than completely reconfiguring taxa, the empirical evidence of apes' existence gave theoretical heft to the more fantastic details surrounding what were often considered interchangeable series of primates that retained a medieval kinship with humans. For example, Jakob de Bondt's (Jacobus Bontius) sighting published posthumously one year later in 1642 stated that "Orang Outang[s]" (though whether he was referring to forest-dwelling humans or orangutans is unresolved) "are the result of the lust of the women of the Indies, who slake their detestable desires with apes and monkeys."[280]

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[278] Ibid.
[279] Nicolaes Tulp, *Geneeskundige Waarnemingen* (1740 [1641]), 371–372, quoted in J. Robert Cribb, Helen Gilbert, and Hellen Tiffin, *Wild Man from Borneo* (Honolulu: University of Hawai'i Press, 2014), 10.
[280] Jacobus Bontius, *De Medicina Indorum* (1642) quoted in Cribb, Gilbert, and Tiffin, *Wild Man from Borneo*, 14.

While Tulp's image gained increasing momentum it accrued speculation as to the anthropoid's ability to use speech and its true relation to the races of man. The ponderous interspecies possibilities arise in Margaret Cavendish's utopian meditation on the sciences, *The Description of a New World, Called the Blazing World* (1666), which positions ape-men as chemists to their new empress (our protagonist) who "commanded them to give her an account of the several transmutations which their art was able to produce."[281] When her group of natural philosophers begins to argue about first principles and the number of irreducible elementals in the universe, the empress abruptly halts their disputations and substitutes a Spinozan doctrine of nature as "but one infinite self-moving body . . . which parts being restless, undergo perpetual changes and transmutations by their infinite compositions and divisions."[282] Cavendish's emphasis during the inter-primate exchange, as has been the historical preoccupation, is on the propensity for unity and transmutation, but additionally the dialog hammers out an interspecies agreement on first principles. That hybridized ape-men are necessary collaborators in discovering the cosmo-genetic origins of an anthropocentric universe expresses the simultaneous persistence of medieval mythography and enlightenment projects for stabilizing rational-empirical classifications of humans in relation to all other organisms. Susan Wiseman details that as late 1699 Edward Tyson's anatomy of a chimpanzee, which he referred to as a Pygmie, used ape myth "in conjunction with anatomy and empiricism" to draw the ape closer to the human on the taxonomic scale.[283] Through anatomical observations of the brain and larynx ("the whole structure of this Part as 'tis in Man"),[284] Tyson saw no reason why the "pygmie" (chimpanzee)

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[281] Margaret Cavendish, *The Blazing World and Other Writings*, ed. Kate Lilley (London: Penguin, 2004), 153.
[282] Ibid., 154.
[283] Susan Wiseman, "Monstrous Perfectibility: Ape-Human Transformations in Hobbes, Bulwer, Tyson," in *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period*, eds. Erica Fudge, Ruth Gilbert, and Susan Wiseman (New York: Palgrave, 1999), 216.
[284] Edward Tyson, *Orang-Outang, sive Homo Sylvestris: Or, the Anatomy of a Pygmie compared with that of a Monkey, an Ape, and a Man, To which is added, A philological Essay Concerning the Pygmies, the Cynocephali, the*

should not be able to speak and left open the possibility that apes might learn language.[285] In his written report, Tyson confirms the *Pygmie* "to be wholly a *Brute*, tho' in the formation of the Body, and in the *Sensitive* or *Brutal* Soul, it may be, more resembling a Man, than any other Animal; so that in this *Chain* of *Creation*, as an intermediate Link between *Ape* and a *Man*, I would place our *Pygmie*."[286] Wiseman muses that "Tyson articulates a transformable ape even as he tries to generate anatomical and species difference."[287] "In looking for the ape as animal [he] repeatedly found the ape as human."[288] In 1543, Andreus Vesalius in *De humani corporis fabrica* countermanded centuries of Galenic medical authority on human anatomy (in actuality underwritten by manifold ape dissections) by repeating practical demonstrations of human anatomical uniqueness. In the latter half of the seventeenth-century, that uniqueness was under intense interrogative pressure as were theories of humankind's monogenetic origins.

Because of numerous shared traits with humans, apes continue to be very malleable semiotic-material substance used to address anthropocentric concerns. Haraway uses the term *simian orientalism* to pin down how "western primatology has been about the construction of the self from the raw material of the other, the appropriation of nature in the production of culture, the ripening of the human from the soil of the animal."[289] We can read such orientalism into Richard Jobson's report of 1623, which states that the Spaniards regard the *Babownes* (a broad term for a kind of ape; not the genus *papio*) as 'a race of people, who . . . refuse to speak' so they will not be forced to work and live in subjection."[290] Was Davenant drawing on Jobson's

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Satyrs, and Sphinges of the Ancients, wherein it will appear that they are all either Apes or Monkeys, and not Men, as formerly pretended (London, 1699), 51.

[285] See Ramona and Desmond Morris, *Men and Apes* (New York: McGraw Hill, 1966,) 131.

[286] Tyson, *Orang-Outang, sive Homo Sylvestris*, 5.

[287] Wiseman, "Monstrous Perfectibility," 225.

[288] Ibid., 221.

[289] Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989), 11.

[290] Janson, *Apes and Ape Lore*, 337.

anecdote in his illustration of ape and baboon resistance? The yarn was well circulated and geographically malleable. Bontius had stated similarly that "[a]ccording to the Javanese, [orang-outangs] are able to speak, but choose not to do so, to avoid being forced to work."[291] The baboon's refusal to submit in *Cruelty*'s dramaturgy contrasts with the striking images of Indians enslaved in silver fetters. Could we say that one effect of Davenant's mobilization of simian resistance to Spanish rule is to reaffirm the Aristotelian concept of natural slavery touted by Juan Ginés de Sepúlveda? That is doubtful given his extensive pains to establish their innate reason. Another more likely effect would be a reiteration of Hobbes's critique that the Indians of the Americas, though fully human, perform humanness inadequately and appear lost in the metaphorical and somatic space between man and beast because they lack the literal political model of the covenant; in short, they are culturally deficient. Nobility is found among the animals, but to be enfranchised as human, one must be a particular type of human – an Englishman, or at least its linguistic-social corollary. In that respect the ape possesses a sensitivity to the proper cultural manifestations of speech. Unrestrained by custom or coercion, it knows what Others to acknowledge and when to refuse intersubjective parlay, and that makes the ape an apt conduit for natural laws of association. The ape is, according to her emplotment in the masque, a deep underlying intuition of intercultural (and panspecies) grammar or the embodied cognizance of a prototypical ur-language of the senses.

Davenant's coupling of the sensible and the rational via the anthropoid ape (the middle term between Man and Beast) is the precursor for ecumenical adhesion to a set of communicative-behavioral ethics. This move Davenant makes bears the inscriptions of the universal language projects of the mid-seventeenth century. Recall that through his interactions

[291] Bontius, *De Medicina Indorum*, quoted in Cribb, Gilbert, and Tiffin, *Wild Man from Borneo*, 14.

with the Cavendish circle in Paris, Davenant was introduced (by John Pell and William Petty) to another intellectual cadre of natural philosophers, Samuel Hartlib's circle, whose objectives included the distillation of language to real characters referring not to words but directly to things just as numbers referred to fixed quantities. Since Francis Bacon first characterized science(-in-the-making) as procedures of observation and collection, philosophers had been troubled by the inability of literal languages to accurately represent the limpid and true phenomena of nature. According to M.M. Slaughter, these language projectors "opined [that] an artificially created language could rectify this anomaly between words and things."[292] To uncover this inerrable correlation between entities and representation, nature in itself had to be properly analyzed and understood. Nature was interpreted as a living discourse most sincerely represented in ideographic symbols (real characters) that in themselves referenced a "repository . . . of universal 'mental affections' [as] the universal component of the universal languages, the universal, mental deep structure of which individual languages are but the less interesting surface manifestations."[293] Hartlib and those of his circle, particularly Comenius and Lodowyck, have been labeled vulgar Baconians because they sought social and religious reform by instigating a philosophical language rather than pursuing graphic reduction purely for the taxonomic production of knowledge. In the final analysis, ideograms were valorized for their irenic potentiality, but that potentiality was contingent on the presupposition of their universal availability. In Comenius's words, "things themselves present themselves in the same way to the senses of all men," therefore every grapheme of the new language "must be adapted to the exact

[292] M.M. Slaughter, *Universal Languages and Scientific Taxonomy in the Seventeenth Century* (Cambridge: Cambridge University Press, 1982), 2.
[293] Ibid., 87.

and perfect representation of things [themselves]."[294] The path to rational unification could be charted through senses, as long as the essential and immediate gestural symbols of a universal 'primitive language' were derived first.

In the instance of Davenant's ape, it is the refusal to abstract presence into the artificial signs of diluted speech and the refusal to take on anthropic culture that feed natural liberty. The ape's 'primitive' gestural economy and interpretation of signs encapsulates a remarkably rational choice of affiliation with the English that portends legal protection. Adopting the wrong type of culture, as we have witnessed, can end in base slavery and perdition. These themes find their expression in the works of a royalist contemporary of Davenant, the English physician and fellow Baconian philosopher of Hartlib, John Bulwer. *Chirologia: or the naturall language of the hand. Composed of the speaking motions, and discoursing gestures thereof* (1644) is a dictionary of gestures that seeks to strip artifice away from "the unalterable laws and institutes of nature" that, when unimpeded by friction of culture, "proceed from mere instinct" in the language of the hand, "the only speech that is natural to man." For, "it speaks all languages, and as an universal character, is generally understood and known by all nations among the formal differences of their tongue."[295] With a return to the primacy of gesture, Bulwer's dictionary even forms an ontological bridge between species through this "common tongue of beasts, who by gestures declare their senses, and dumb affections . . . [and] by their reciprocal kindness which we see in them, we easily infer there are some other means of intercommunication: their gestures treat, and their motions discourse."[296] In sympathy with Montaigne yet followed up with a

[294] John Amos Comenius, *The Way of Light*, trans. and ed. Ernest Trafford Campagnac (Liverpool: Liverpool University Press, 1938), 191.
[295] See John Bulwer, *Chirologia: or the Natural Language of the Hand AND Chironomia: or the Art of Manual Rhetoric* (Carbondale, IL: Southern Illinois University Press, 1974), 16.
[296] Ibid., 18.

serious enumerated study, Bulwer's text conveys an early modern posthumanism that does not deny reason, but places this universal conceit in the embodied communication of all motile species. The cross taxonomic possibilities gesture toward infinity.

But before we get ahead of ourselves and fully embrace Bulwer as a new materialist, let us heed Stephen Greenblatt's notice that Bulwer was "respond[ing] to the utopian element in Bacon's program, the dream of recovering the primal power whose key was the primordial language spoken before the confounding of tongues."[297] When juxtaposed with his work of 1650 scurrilously titled, *Anthropometamorphosis: Man Transform'd, or the Artificial Changeling. Historically presented, in the mad and cruel Gallantry, foolish Bravery, ridiculous Beauty, filthy Fineness, and loathesome Loveliness of most Nations, fashioning & altering their Bodies from the Mould intended by Nature. With a Vindication of the Regular Beauty and Honesty of Nature, and an Appendix of the Pedigree of the English Gallant*, the animal serves once again as the critical foil for the excesses of certain types of culture. Bodily mutilation and adornment are held up for endless ridicule in what Stephen Greenblatt calls "a strange precursor of ethnography written out of loathing and disgust" that reveals the corporal blasphemy of endlessly "tampering with Nature."[298] Mary Baine Campbell writes that, for Bulwer, constrained and sober "English customs are the very definition of Nature" while a decadent and degrading surplus of culture is written on the superfices of the foreign and monstrous body, especially in those communities of the New World.[299] The animal, ruled by instinct and unerring gestural language as enacted by a "natural" body, is a better indicator of universality and ontological stability than both "primitive"

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[297] Ibid., 232.
[298] Stephen Greenblatt, "Mutilation and Meaning," in *The Body in Parts: Fantasies of Corporality in Early Modern Europe*, eds. David Hillman and Carla Mazzio (New York: Routledge, 1997), 235.
[299] Mary Baine Campbell, *Wonder and Science: Imagining Worlds in Early Modern Europe* (Ithaca, NY: Cornell University Press, 1999), 243. See also Kim F. Hall, *Things of Darkness: Economies of Race and Gender in Early Modern England* (Ithaca, NY: Cornell University Press, 1995), 87-89.

and "overly refined" tribes of men. But the animal is only there to gesture toward the apogee of the natural, the Englishman. Like Davenant's depiction of Spanish cruelty, a politicized natural circumscribes the proper politics of the cultural.

At the denouement of *Cruelty of the Spaniards in Peru*, English sovereignty is synecdochic for natural law itself. Englishness is the only viable cultural semiotics able to mediate between full ecological presence and superstructural politics, in essence, naturalizing the conjunction. In the mode of Hobbesian absolutism, the Peruvians follow the gesture of the ape and invite "th'English . . . [to] sit and rule as [their] guests."[300] At last they have formalized covenantal relations that secure the protection of property and liberty necessary for the exercise of natural/rational conduct, which in Davenant's model is a reversion to localized environmental immersion and non-speculative forms of social engagement.

> High, high, and high
> Our Arrowes shall flie,
> And reach the winged for our prey
> Our Nets we'l cast, and Sprindges lay
>
> The Ayre, the river, and the Wood,
> Shall yield us sport and change of food.[301]

The protocols of utility are all encompassing: foraging, hunting, fishing. "Natures Law, necessity" distends through the surplus space of non-subsistence cultural activities. With apes as the paradigm of colonial relations, Peruvians approximate the languorous Heideggerian *poor in world* of animality – a deprivation of a vigorously layered, "uniquely" human framework for contemplating intentional objects in the world.[302] Davenant does not disallow the possibility of contemplative activity, but he places it just beyond the Peruvians' scope of conscious evaluation,

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[300] D'Avenant, *Cruelty of the Spaniards*, 27.
[301] Ibid., 26.
[302] See Martin Heidegger, *The Fundamental Concepts of Metaphysics: World, Finitude, Solidtude*, trans. William McNeill and Nicholas Walker (Bloomington, IN: Indiana University Press, 1995), 177, 197-98.

delimiting their openness and "responsivity to the level of instinct."[303] That instinctual existence is awash in the mirthful indulgence of a contented people. The dramaturgical logic of *Cruelty* argues that the sacrifice of indigenous sovereignty is *freely* and *naturally* given to a system of governance most capable of liquidating problematic heterogeneity and complexity. In the discourse of the 1655 *Declaration . . . Against Spain*, the English are well within their rights of "Converse and Commerce" with the "Indians" by "Law of Nature, and of Nations," and the proof resides in the contractual nature of native self-submission.[304] Davenant's chauvinism appeals to his audience's own sense of the correctness of English authority in transnational matters.[305] For example, Thomas Herbert said of Southern Africans, "And though these savages be treacherous, yet doubtless they esteem more of an Englishman than of Portugal or Flemming."[306] Likewise, the Western Design in its moment of inception was constructed on the very idea that the Amerindians would naturally "esteem" the English and alacritously cede their territorial rights. Remember that Thomas Gage suggested, "the just right or title to those Countries appertains to the Natives themselves; who if they shall willingly and freely invite the English to their protection, what title soever they have in them, no doubt but they may legally transferr it or communicate it to others."[307] For Davenant, the desirability of this hegemonic arrangement is verified in primordial but universally recognizable gestures that reduce a plurality of complex socio-cultural negotiations to a few sensible ideograms in a "grand Dance":

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[303] Matthew Calarco, "Heidegger's Zoology," in *Animal Philosophy: Ethics and Identity*, eds. Matthew Calarco and Peter Atterton (London and New York: Continuum, 2004), 24.
[304] Cromwell, *Declaration . . . against Spain*, 123.
[305] According to Kristen Block, Cromwell and company clung to the vision that colonial subjects oppressed by the Spanish would swiftly and happily surrender fealty to English "liberators." William Davenant's *History of Sr Francis Drake* is founded on the eponymous hero's quasi-mythical alliance with Panamanian maroons. In actuality, during the conquest of Jamaica nearly all of the island's maroon population, rather than welcoming the newly arrived Protectorate forces, colluded with Spanish colonists in a protracted guerilla warfare against English occupation. See Block, *Ordinary Lives*, 134-46; and Davenant, *Sr Francis Drake*, 12.
[306] Herbert, *relation of some yeares travaile*, 17.
[307] Gage, *English-American*, A5.

> . . . three Indians entering first, afterwards to them three English Souldiers distinguisht by their Red-Coats, and to them a Spaniard, who mingling in the measures with the rest, does in his gestures expresse pride and sullenesse towards the Indians, and payes a lowly homage to the English, who often salute him with their feet . . . whilst the English and the Indians, as they encounter, salute and shake hands, in signe of their future amity.[308]

The opera culminates in a truncated gestural economy of cultural and territorial acquisitions. The ape has been the gateway for abstraction and reduction to the natural signs of Englishness and their capacity for sloughing off unnatural customs and conquerors alike. By resetting epistemological vectors, the ape serves as a laboratory for transforming locutionary inefficacy and cultural delinquency into the political common denominator of ineffable but unequivocal somatic gestures for territorial transfer. One cost of this transvaluation is, of course, the apes themselves. On one hand, though integral to giving an arc to "future amity," apes are physically excluded from the final tableau of unity. On the other hand, just as the Peruvians are dehumanized (extracted from familiar social modes and native systems of value assignation and communication) members of ape species are de-animalized (denuded of their own fecund social lives and customary behaviors). Jean Luc-Guichet defines this interspecies alchemy of Enlightenment philosophy as "The infantilizing, even de-animalizing sugar-coating of beasts [that] leads eventually to a watered down and unilateral vision of them while by extension doing much the same to images of the human downgraded into an anthropomorphically saturated world where the wild in the sense of the savage has been oddly expunged from nature."[309] To become the tabula rasa for rewriting the colonial subject, the ape's otherness is blighted in manufactured, uneven transactions of territorial expropriation, and the final result is a "unilateral" and tendentious vision of intercultural unification all paying "lowly homage to the English."

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[308] D'Avenant, *Cruelty of the Spaniards*, 27.
[309] Jean-Luc Guichet, "From the Animal of the Enlightenment to the Animal of Postmodernism," *Yale French Studies* 127 (2015): 77.

"*Cruelty* and the Social Palliative of Interspecies Worlding"

That is one coda to a reading of *Cruelty of the Spaniards in Peru*, but one I shall amend. I prefer not to end this chapter with a broadly scoped, rather bleak hermeneutics of suspicion. There is an undeniable, tenebrous history of simian genocidal campaigns in the West Indies of which Davenant was and would be unaware. The legislation against green and vervet monkeys on the islands of Barbados and Saint Christopher roughly follows the contours of biopolitical exclusions and immunities lobbed against refractory maroon populations. The situation was one of defining distinctions for the management of entire categorically regarded populations (vermin) that could be killed with impunity. Death in life was ratcheted up to a technology of mass death, or what Deborah Bird Rose associates "primarily with hierarchical societies and state formation" and defines as "imagining a future emptiness, and then working systematically to accomplish that emptiness."[310] In December 1679 a Barbadian motion was initiated "for destroying monkeys,"[311] and although it was tabled until February the next year, the motion eventually passed in an umbrella act ordering the destruction of monkeys, raccoons, and "prohibiting negroes from learning trade."[312] The fact that the Bill was reiterated in 1682, 1684, and 1700 underscores the persistent challenge monkeys posed to the production of agricultural-economic surplus just as the mastery of a trade challenged the racialized schematic of slavery.[313] There is

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[310] Deborah Rose, "What if the Angel of History Were a Dog?" *Cultural Studies Review* 12, no. 1 (2006): 67-78.
[311] "America and West Indies: December 1679," in *Calendar of State Papers Colonial, America and West Indies: Volume 10, 1677-1680*, ed. W Noel Sainsbury and J W Fortescue (London: Her Majesty's Stationery Office, 1896), 448-462. *British History Online*, accessed April 18, 2018, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol10/pp448-462.
[312] "America and West Indies: February 1680," in *Calendar of State Papers Colonial, America and West Indies: Volume 10, 1677-1680*, ed. W Noel Sainsbury and J W Fortescue (London: Her Majesty's Stationery Office, 1896), 477-492. *British History Online*, accessed April 18, 2018, http://www.british-history.ac.uk/cal-state-papers/colonial/america-west-indies/vol10/pp477-492.
[313] In Hegel's master-slave dialectic, the master becomes wholly dependent on the slave and his labor for both the sustainment of his life and the recognition/validation of his self-consciousness; whereas the slave, by shaping nature into products for the master, begins to see the world as an outgrowth of his labor and comes to a complete self-consciousness. In a parallel manner, mastery of trade unintentionally manufactures aveneues for manumission of consciousness and livelihood.

an extremely complicated and pitiable record of the interconnected crusades prosecuted against simian and maroon populations, but this chapter lacks the space for that particular narrative. Asking again, "Why Davenant incorporates the ape into his entertainment?", I am beckoned toward something occurring more locally within the genre of the masque itself, something upon whose surface I identify an affinity with the writings of cognitive ethologists like Smuts, Strum, and Bekoff.

In *A proposition for advancement of moralitie, by a new way of entertainment of the people* (1653), Davenant endorses the sensorium of the theatre as the most apt medium for moral improvement and governance. Religion, armies, and laws are not the proper universal aids in regulating the national temper. The universal guide to improvement he proclaims is "Morality; not speculative morality but that which is brought home to the senses. And we are to consider that the generality of mankind are solely instructed by their senses, and by immediate impressions of particular objects."[314] Divinity speaks in abstractions that do not generate union, but disunion among the people. Davenant's program, alternatively, consists of pleasing spectacles, parables in paintings, and, most importantly, music. In sum, he calls for the medium of the masque replete with its ecumenical glue of sense impressions, and their ability to procreate a moment of shared embodiment, or what Maddock Dillon has called an "ontology."[315] In one sense, Davenant proposes a national theatrical or operatic nexus, something that, as John Brewer states, would not find expression in England until Handel's sacred oratorios or Garrick's patriotic productions of Shakespeare.[316] The theatre in Davenant's plan corresponds to Ranciere's

[314] William Davenant, *A proposition for advancement of moralitie, by a new way of entertainment of the people* (London, 1653), 9-10.
[315] Dillon, *New World Drama*, 63.
[316] See John Brewer, *Pleasures of the Imagination: English Culture in the Eighteenth Century* (Chicago: University of Chicago Press, 1997), 405-06.

communitarian perspective on theatre as an "aesthetic constitution," sensing "the community as a way of occupying a place and a time, as the body in action as opposed to a mere apparatus of laws; a set of perceptions, gestures, and attitudes that precede and pre-form laws and political institutions."[317] In another sense, what Davenant proposes is more organismic, tactile, immersive, and corporally entangled – a shared *worlding* orienting the nation toward intersubjectivity and objective unification. His co-production of "a world" is reminiscent of Tim Ingold's conjecture that music and art give form to feeling and that "feeling is a mode of active perceptual engagement, a way of being literally 'in touch' with the world."[318] The ecology of this art is a distributed sentience, an unfolding field of relations that do not necessarily signify (as music doesn't) but emerge as experience. Some might say this is a stretch in reasoning, but it is within the material, non-linguistic, pre-cognitive immediate proximity of objects (human and otherwise) that Davenant is able to resuscitate the imaginary of the English nation. The masque itself is not unidirectionally communicating meaning, but is an interactive, experiential being and thus actively molds the body politic.

Here is where I would like to dwell once again on the question of the ape and recall Barbara Smuts's reflections on her time immersed in baboon social networks. Smuts observes that "Meaning in interactions . . . does not reside in the specific behaviors shown, nor does the interaction refer to something out there in the world. Rather, meaning is mutually constituted, literally embodied as two individuals' behaviors ('the parts') combine to create something new ('the whole').[319] "Meaning" lies in the "emergent properties."[320] Meaning inheres in sociality, in

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[317] Jacques Rancière, *The Emancipated Spectator,* trans. Gregory Elliott (London and New York: Verso, 2009), 6.
[318] Tim Ingold, "Culture, Nature, Environment: Steps to an Ecology of Life," in *Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (New York: Routledge, 2000), 23.
[319] Barbara Smuts, "Embodied Communication in Non-human Animals," in *Human Development in the Twenty-First Century: Visionary Ideas from Systems Scientists,* eds. Alan Fogel, Barbara J. King, and Stuart G. Shanker (Cambridge: Cambridge University Press, 2008), 137
[320] Ibid., 138.

the minutia of olfactory, auditory, tactile, and visual productions and receptions, which makes meaning kinetically unstable and prone to even slight pheromonic perturbations. Yet meaning is also made possible, bounded, and reinforced by the filaments of sociality. Davenant's model of the national theatrical sensorium is politically conservative, but more importantly his masque of state propounds an affiliative mental ecology more akin to that of nonhuman primates than the revolutionary ebullitions of interregnum England. According to Dorothy Cheney and Robert Seyfarth in *Baboon Metaphysics,* social knowledge in primate communities fosters a cognitive syntax similar to the linguistic precursory apparatus (core knowledge) present in human infants. Baboons and other monkeys are limited to a "small repertoire of acoustically fixed, species-specific calls that are closely tied to particular social contexts . . . [but] when it comes to perception and comprehension monkeys have a much larger repertoire and display an almost open-ended ability to learn new sound-meaning pairs throughout their lives."[321] The "open-ended ability" to produce linkages between sounds or signs and meaning in simians is less hindered by the stony constraints of literal language. In much the same way, the early modern belief that apes contemptuously refused exposing their capacity for language bolstered conceptions of their near infinite communicative receptivity and propensity to form propositional attitudes towards interspecific representations. Communicative production limited to a contained suite of gestures and audible cues swells the receptive combinatory apparatus for detecting subtlety in corporeal signals and paralinguistic markers. In sum, the existent yet unnamed social-cognitive syntax of apes probably intensified mid-seventeenth century mytho-scientific proposals for simian communication and ultimately proffered potentialities for new intra and interspecies affiliations.

[321] Dorothy L. Cheney and Robert M. Seyfarth, *Baboon Metaphysics: The Evolution of a Social Mind* (Chicago: University of Chicago Press, 2007), 257.

I think Davenant's moral project for congenial state operatics finds kinship with the open-textured networks of primate groups, hence the clumsily optimistic inclusion of the latter within the former in *Cruelty*'s climactic arc. These are not, I should stress, mutual systems of egalitarianism but synonymous hierarchic cartographies governed by self-regulating moral economies embedded in vulnerable sensory praxes. True, as James Knowles adroitly uncovers, masques were a frequent venue for appearances of trained ape-actors and actors playing apes, like Thomas Greene. In a manner, Davenant is assertively mining that tradition.[322] However, I conjecture that Davenant invokes the ontological uncertainty of the ape (most likely actors in costume) not, as may have been the case with Jacobean or Caroline masques, to limn the grotesque shades of the medium's masque-antimasque chiaroscuro, but to disallow foreshortening the horizon of cooperative alliances within a natural (viz. functional) group hierarchy.[323] The playwright's solicitations to primates, however sloppily or inadequately made, are desperate entreaties to an other-than-human moral ecology inextricable from a sentience of its social-sensual structuration.

Marc Bekoff and Jessica Pierce argue that several species exhibit unique forms of morality, which they define as "a suite of interrelated other-regarding behaviors that cultivate and regulate complex interractions within social groups."[324] A certain neocortical complexity is required for achieving moral conditionality (e.g. conditions of generalized reciprocity or reciprocal altruism), but Bekoff and Pierce assert that they are not looking for "human precursors" rather than active moralities in intelligent forms of sociality that have evolved

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[322] See James Knowles, "'Can ye not tell a man from a marmoset?': Apes and Others on the Early Modern Stage," in *Renaissance Beasts: of animals, humans, and other wonderful creatures*, ed. Erica Fudge (Champaign: University of Illinois Press, 2004).
[323] Ibid., 146.
[324] Marc Bekoff and Jessica Pierce, *Wild Justice: The Moral Lives of Animals* (Chicago: University of Chicago Press, 2009), 7.

independently on disparate trajectories.[325] For example, rats have been known to operate in modalities of generalized reciprocity when they assist other hitherto unknown rats in obtaining food, if they have been beneficiaries of that service themselves in the past (a sort of pay it forward mentality). With primates the framework for moral action expands with "the vast majority of actions [being] affiliative rather than agonistic or divisive."[326] Cooperation prevails because functional sociality is biologically (e.g. the release of dopamine, oxytocin, etc.) and culturally valued. Of course, Bekoff and Pierce reiterate, these forms of cooperation are species-specific, but alliances do form and, especially in primates, across sometimes self-compromising boundaries. Vervet monkeys have been known to manage conflict in captivity by avoiding eye contact, but chimpanzees form industrious coalitions on trade networks that exchange currency such as grooming and sex to limit potential tyrannizing effects of alpha-male dominance. Thus, a subordinate male might be allowed to invite a female to coitus after a long grooming session with his masculine superior.[327] Likewise, older, weaker free-ranging baboons will form reciprocal alliances to mitigate a younger male's despotic, unlimited access to estrus females. Additionally, rhesus macaques are rigidly organized into contiguous matriarchal units, and although individual members of rhesus communities are reluctant to militate against standing hierarchies, there is no genetic preclusion to adopting an infant of inferior status or social endorsement to pull a chain producing food when a visible neighbor of differing rank is electrically shocked in the process.[328] More bewildering than these examples are (dare I say) empathic or moral engagements of group maintenance that reach across divides of species, such as Shirley Strum's observations of Ray, a Kenyan olive baboon working to ingratiate himself

[325] Ibid., 9, 49.
[326] Ibid., 4, 57.
[327] Frans de Waal, *Peacemaking among Primates* (Cambridge, MA: Harvard University Press, 1989), 83.
[328] Ibid., 94, 104.

into a troop known as the Pumphouse Gang, and his struggle against two males, Big Sam and Sumner, in which he importuned Strum for aid: "I checked his gestures quickly to make sure. There was no doubt about it: he was slapping the ground with his hand, looking first at me, then staring at the two males, then back at me to see what I was going to do. This handsome, powerful male struggling to become a part of the troop spoke strongly to something in me."[329] I contend that Davenant incorporates the material-semiotics of the ape in the hopes of making a similar discovery: that there might be a morality plastic enough and gesturally universal enough to extend across that ambiguous rupture denoted as species difference, and how that discovery might sweep away the wreckage of internecine struggles to expose an untried locus for *becoming* human.

Any political model in need of naturalizing could be done so by cherry-picking particular behaviors from individuated species, and a paranoid interspecies reading of *Cruelty of the Spaniards in Peru* bristling with New Historicist skepticism might offer just that: "exposing and problematizing hidden violences in the genealogy of the modern liberal subject," according to Eve Sedgwick.[330] Numerous examples of discursive leeching on animals to support hegemonic constructions of gender, race, or political inclusion can be validly trumpeted to satisfy such a reading. Thelma Rowell informs us that the extremely protective behavior of rhesus monkeys towards their infants in conditions of claustrophobic confinement was weaponized in the 1950s to prove that it was "natural" for human women to remain in constant, close domestic contact with their own children.[331] Or, take for example, Robert Ardrey's popular 1960s incorporation of

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[329] Shirley C. Strum, *Almost Human: A Journey into the World of Baboons* (Chicago: University of Chicago Press, 1987), 37.
[330] Eve Kosofsky Sedgwick, *Touching Feeling: Affect, Pedagogy, Performativity* (Durham, NC: Duke University Press, 2003), 139.
[331] Thelma Rowell, "A Few Peculiar Primates," in *Primate Encounters: Models of Science, Gender, and Society*, eds. Shirley C. Strum and Linda M. Fedigan (Chicago: University of Chicago Press, 2000), 59.

occasional chimpanzee intraspecies murder and cannibalism as evidence of our innate biological aggression and paleoanthropological origins in violence.[332] Such selective ethology that levels differential biology and environments can be found in a plethora of modern scientific moments, but so can counterevidence like observations that many macaque groups "have large overlapping home ranges and do not defend territorial boundaries."[333] The political paradigms that can be inferred from these behavioral repertoires are widely divergent and can fulfill the shifting etiological motives of instrumental rationality. But my assumption is that Davenant, lacking sufficient field or laboratory knowledge, was capitalizing on that early enlightenment uncertainty surrounding apes – the hybridized, ontological disruption and surprise that apes presented. Sure, *The Cruelty of the Spaniards in Peru* is a document of imperialism but that does not nullify its almost naïve hopefulness to view acts of territorial and political transfer as something other than bloodsoaked affairs; to reparatively read from the ape the open-ended possibilities for group consciousness; to reconfigure the traumatized, fractured nation and "entertain the profoundly painful, profoundly relieving, ethically crucial possibilities . . . that the past . . . could have happened differently from the way it actually did."[334] Davenant's aesthetic overtures are not so far removed from Frans de Waal's intensely inspired musings on human sexual-political possibility when confronted with the female-centered bonobo who uses "varied, almost imaginative, eroticism" as non-dimorphic, pansexual substitutions for aggression.[335] According to Francine Patterson with whom this chapter began, what stabilized and maintained her relationship with Koko as the continual expanse of an interlocked phenomenological compass

[332] See Nadine Weidman, "Popularizing the Ancestry of Man: Robert Ardrey and the Killer Instinct," *The History of Science Society* 102, no. 2 (2011): 269-299
[333] Rowell, "Peculiar Primates," 67.
[334] Sedgwick, *Touching Feeling*, 146.
[335] Frans de Waal and Frans Lanting, *Bonobo: The Forgotten Ape* (Berkeley: University of California Press, 1997), 4.

was Koko's push to the "most creative uses of language through her obstinate refusal to submit meekly to dull routine."[336] Perhaps the seventeenth-century world of the operatic masque, the platform encapsulating the "creative to and fro of political life" and the subtle, still largely unknown gestural world of simian embodied consciousness were not so far apart; maybe one was not merely parasitic upon the other; but they shared a space of embodied communication able to generate ontological possibilities in moments of widespread social illness.[337]

[336] Patterson and Linden, *Koko*, 6.
[337] Martin Butler, *The Stuart Court Masque and Political Culture* (Cambridge: Cambridge University Press, 2008), 18.

Part II:

"Beyond Hybrid Bodies in Early Enlightenment Laboratories: Epistemological Sovereignty as Interspecies Constitutions"

"Introduction"

The eponymous witness of Addison and Steele's *The Spectator* began atomizing the felt-experience of social confluence in its very first issue (1 March 1711), "Thus I live in the World, rather as a Spectator of Mankind than as one of the Species . . . ."[1] By claiming to isolate himself from the "Species," Mr. Spectator could *unself*-consciously gaze upon public life and profess an objective judgment about its display. Already there was a circular trajectory of fallacious reasoning embedded in the journal's platform – a co-implication of its promulgated objective epistemology and the sociological object. Early in the journal's lifespan, the writing team made explicit their goals: "to enliven morality with wit, and to temper wit with morality . . . to bring philosophy out of the closets and libraries, schools and colleges, to dwell in clubs and assemblies, at tea-tables and coffeehouses."[2] The very laboratory for their observations, the coffeehouse, was simultaneously the distribution site of their periodical, thus supporting a reciprocal, autopoietic production of the bourgeois public sphere that the gazette alleged simply to observe. Rather than merely observing and analyzing, *The Spectator* politely policed the performance of bourgeois Englishness, or the proper exhibition of the private person in public, it assisted in manufacturing, thus shaping the most intimate domains of consciousness through the circulation of the periodical as tacit social contract.

The tautological use of the coffeehouse *qua* laboratory for abstracting embodied, affective encounters into standardized signifiers of social assemblage was not novel with the introduction of journalistic print. No doubt *The Spectator*, at least in part, appropriated its validity claims to empirical distance from experimental philosophy's multiple sites of inquiry,

[1] Joseph Addison and Richard Steele, *The Spectator*, no. 1 (March 1711).
[2] Joseph Addison and Richard Steele, *The Spectator*, no. 10 (March 1711).

the public coffeehouse being among them for strategic reasons of unfettered assent formation. Earlier seventeenth-century writings characterized the caffeinated hub as a non-hierarchical commonwealth and social leveler:

> Now being enter'd, there's no needing
> of complements or gentile breeding,
> For you may seat you any where,
> There's no respect of persons there."[3]
> […]
> Of speech and words should be allow'd
> Where men of differing judgements croud,
> And that's a *Coffee-house,* for where
> Should men discourse so free as there?
> *Coffee* and *Commonwealth* begin
> Both with one letter, both came in
> Together for a *Reformation,*
> To make's a free and sober *Nation.*[4]

Of course, the idea of unlimited access and unrestricted sociability promotes a false utopian vision; not only because the coffeehouse was supported by slavery and ecological exhaustion in the colonies, but also because sitting "any where" one desired was never an option in praxis. The materiality of space was marked and delimited by various coteries and societies. Dryden's chair at Will's Coffeehouse was set aside in his honor, and the literary circle he maintained there was anything but democratically open.[5] It was the *appearance* of liberty and free association that gave meetings at the coffeehouse a certain liberalizing rhetorical force and the *appearance* of un-coerced assent to aesthetic judgments, ethical stances, or scientific propositions. According to Markman Ellis this veneer of free association is what prompted Robert Hooke to present *experimental labor* "he knew would succeed" in front of a select circle of Royal Society

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[3] Anonymous, *The character of a coffee-house wherein is contained a description of the persons usually frequenting it, with their discourse and humors, as also the admirable vertues of coffee / by an eye and ear witness* (London, 1665), 2, quoted in Markman Ellis, *The Coffee-House: A Cultural History* (London: Weidenfeld & Nicolson, 2004), 59.
[4] Anonymous, *Character of a coffee-house*, 6.
[5] Ellis, *The Coffee-House*, 155.

members already inclined toward confirming Hooke's demonstrations.[6] During one such engagement in 1679, Hooke spearheaded a curious experiment with Edward Tyson. After stumbling across some of the fishing industry's collateral damage at Ulbars on November 14th, Hooke took down a terse note in his diary: "Paid for porpise 7s 6d . . . Opend fish (at Garways) at 3, fat skin, etc., drew figure."[7] Over the next week Hooke dissected and sketched the sea mammal, marshalling his findings toward a demonstration at Garraway's Coffeehouse before select Royal Society members who lent their expressed validation to Hooke's discoveries, methodology, and nomenclature. The final illustrations of the porpoise (six in all) were published the next year under the auspices of the Royal Society in its entirety, with the Society's imprimatur ultimately functioning as metonym for a host of obscure network assemblages, ineluctable contradictions, and asymmetrical interspecies constitutions that controverted the ostensibly open, spontaneous caricature of the coffeehouse.

The anecdote illuminates some entanglements around a central, disconcerting activity of the Royal Society – the transmutation of *material nature* into actionable but equivocal political contract. What sanctioned natural knowledge in the anatomical event was not the materiality of the porpoise per se (excised from the intentional framework of the food chain), but the carefully managed assembly of experts the arrival of the porpoise convoked and the concomitant processes of judgment, classification, and assent to its final reification as *naturalized* artifact (the six sketches). At issue were various scalar, locative, and species discrepancies in the manufacture of objective knowledge as the foundation of human sociability. The chief apologist and historian for the Royal Society, Thomas Sprat, diagramed Society meetings as a "Publick Council wherin the

[6] Ibid., 160.
[7] Robert Hooke, *The Diary of Robert Hooke, M. A., M. D., F. R. S., 1672-1680: Transcribed from the Original in the Possession of the Corporation of the City of London (guildhall Library)* (London: Taylor & Francis, 1935), 431.

various dispositions of all" nations, professions, and religions "may be blended together," an "Assembly at one time, whose privileges shall be the same; whose gains shall be in common; whose members were not brought up at the feet of each other."[8] In reality and by Sprat's own confession, this utopic conciliar arrangement never manifested. The institution admitted, through informal but austere vetting practices, gentlemen of quality, further divided into elite or specialized subsets whose ratifications of experimental knowledge took place most often outside of regular meetings, like the above dissection carried on between Hooke's residence at Gresham and Garraway's coffeehouse.[9] In addition to rhetorical inflations of England's philosophical select into an ideal state, what swelled cumbersome anxieties over the Society's new science was its propensity for sovereign association obtained via the prosthetic/instrumental deracination of nature from familiar literary imaginaries and utilitarian phenomenology. At this unanticipated site lay the unstable juncture of theatrical performance and natural philosophy; the nexus, more specifically, of Davenant's interregnum aesthetic constitution found in his *A Proposition for Advancement of Moralitie* (see Chapter 2) and the praxis of England's Royal Society. Through their mutual dramaturgical testing of limits to human sensation and manipulations of the sensible into alternative epistemological foundations for political assemblage, theatrical practitioners and philosophical societies in late-seventeenth-century England not only circulated in the same social energies of influence and occupied the same sites of public validation (e.g., the coffeehouse), but also participated in modalities of the same empirical, if at times failed utopian, political project. It is more than coincidental that Davenant's 1653 treatise promoting an edificatory opera

[8] Thomas Sprat, *The History of the Royal-Society of London, for The Improving of Natural Knowledge* (London, 1667), 64, 70.
[9] Steven Shapin, *Never Pure: Historical Studies of Science as if It Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority* (Baltimore: Johns Hopkins University Press, 2010), 77.

manufacturing the "immediate impressions of particular objects," as the only force powerful enough to generate civil cohesion, displayed a strong affinity with an equally forceful Restoration argument for "sensible objects" to outline knowledge, limit speculation, and shape socio-political conduct – poet and playwright Abraham Cowley's *A Proposition for the Advancement of Experimental Philosophy* (1661). Cowley's and Davenant's programs were counter-revolutionary in their ultimate aims of political quietism, but that does not negate the fact that there was a restive radicalism in their complicated negotiations of the sensible and its revelatory power to transform social space. What exactly constituted a "sensible object" and how was it conceived as potent enough to countermand the prevailing tidal forces of historical fracture and civic disunity?

This unit of chapters rummages through the tattered warp and weft of crosshatched anxieties surrounding the limits of human sensation, political sovereignty, and non-human materiality littering the conjoined territories of theatre and experimental philosophy. I argue that beyond the periphery of nude sensation, sovereign contracts with animate and inanimate non-human materiality offered forms of systemic political open-endedness (worked into various aberrant forms of political closure) that countervailed anthropocentric epistemological boundaries prevalent in the late seventeenth century. By this I do not solely mean that mechanisms of the theatre and scientific academy imposed respective versions of verisimilitude on the organization of naturalized knowledge and epistemic parameters, but also that the very processes of determining, classifying, and qualifying both aesthetic and natural empirical knowledge constituted the felt experience of novel political affiliations and their permutational potentiality. The most natural, asocial, and divinely sanctioned objects that could be apprehended as evidence by the senses in both social fields (theatre and nascent science) were filtered through

zones of mediation and meticulously cultivated. Whether in modes of fabricating theatrical scenography or experimental procedure and its dissemination through various media, received poetical or Biblical/classical conceits of non-human life yielded to concepts and practices of mechanical incorporation across species divides, and this process carried with it vast implications for interspecies and interscalar political associations.

My argument stretches along two connective fibers. The first lies between the Royal Society fellows and Restoration theatre as a shared, anti-dogmatic corporate sociality of royal neglect making necessary close affiliations with non-human life, mechanical arts, trades, and the mercantile apparatus. The second ligament situated between theatre and scientific community is that of a mutually involved politicized motivation toward non-speculative matters of fact garnered from prosthetic and artificial productions (or augmentations) of the sensible, which ultimately functioned as firmament for world-making: in one sense, as a naturalized religio-political fabric (natural theology) inclining toward low Anglican, or latitudinarian, unification; in another sense, as interspecies obstacles to the reproduction of ancient-constitutionally bound Englishness associated with the country household. These tendinous bands span three formal investigations. Chapter Three is an analysis of the of the virtual and phenomenological politics cross-pollinating the manifestos of pre-Restoration theatre and science, and how these politics would eventually shape institutional bodies around sensible objects. Chapters Four and Five dissect the performative protocols and scientific institutional management of human and non-human life in the Royal Society (founded in London, 1662) and its network associations with outlying experimental communities, all of which materially benefitted from overseas trade and colonization of the Americas explored in previous chapters.[10] It is my working assumption that

[10] When expanding the dissertation to a book, I would like to embed in this section a comparative analysis of the Royal Society and Academie des Sciences. As the unit stands now, that explicit contrast is not present. This is not to

experimental procedures, repositories, and modes of exhibition for living and dead matter were shaped by specific organizational relations to sovereign power, and that a trial-and-error manufacture of experimental domains and repositories molded epistemologies and the possibility of interspecies communicative acts. Modes of institutional conduct, assent formation, public performance, and spatio-discursive ways of obtaining, displaying, and being with non-human material life altered (if subtly) epistemological parameters and the actualization of extra-human agency. In Chapter Six I map out anxieties surrounding the encroachment of non-human materiality on anthropic domains by reading the ontological queasiness prevalent in Thomas Shadwell's satirical play *The Virtuoso* (1676) and then tracking nodes of contention with the developments of a proto-liberalized public sphere and national resistance to arbitrary government associated with the events of 1688-89. Standing alongside David Zaret I cite experimental philosophy's role in the creation of anti-dogmatic public knowledge/reason and law anchored to natural religion, but my concern is with brambled implications of its more-than-human necessity.[11] I believe wading into the interpenetrating socio-performative domains of Restoration theatre and Royal Society can lay bare and clarify the political potency of non-human life as a supple yet strained band in the social connective tissue between performance and experimental philosophy.

assert that absolute differences in experimental method and philosophy resulted in each locale. They did not. But modes of institutional conduct, assent formation, and spatio-discursive ways of obtaining, displaying, and being with non-human material life altered (if subtly) epistemological parameters and the actualization of extra-human agency.

[11] See David Zaret, "Religion, Science, and Printing in the Public Spheres in Seventeenth-Century England," *Habermas and the Public Sphere*, ed. Craig Calhoun (Cambridge, MA: MIT Press, 1992), 212-235.

Chapter Three

"Virtual Politics and the Sensible Object in Pre-Restoration Cultural Manifestos"

In Chapter Two I detailed how William Davenant's response to the religio-political discord of the Commonwealth and Protectorate eras of the 1650s was to promote a state opera engaged in manufacturing "immediate impressions of particular objects." *A proposition for advancement of moralitie, by a new way of entertainment of the people* (1653) endorses the sensorium of the theatre as the most apt medium for moral improvement and governance. Religion, armies, and laws, according to Davenant, are not the proper ecumenical aids in regulating the national temper; all of these, either through obfuscation, intolerable severity, or inaccessibility miss the mark of "making the people our direct object."[12] The universal guide to improvement, he proclaims, is "Morality; not speculative morality but that which is brought home to the senses. And we are to consider that the generality of mankind are solely instructed by their senses, and by immediate impressions of particular objects."[13] Davenant's theatrical program consists of "*Heroicall Pictures* and change of *Scenes,* their Eares civiliz'd with Musick and wholesome discourses by some Academie where may be presented in a Theater severall ingenious Mechanicks, as Motion and Transposition of Lights."[14] He builds upon both the French academic model and the performative dominion of court masque to "charm" the senses, but goes beyond their narrow social confines by demanding the repeated transgressions of physical boundaries to "civilize" the common people into collective consciousness. Violations of expectations and the perceived limits of theatricality open new sensory fields in which subjects

[12] William Davenant, *A proposition for advancement of moralitie, by a new way of entertainment of the people* (London, 1653), 9.
[13] Ibid., 9-10.
[14] Ibid., 14.

are dislocated and together must fabricate a shared basis for cognition and interpretation. For Davenant, aesthetic/sensory violations are conducted without hitherto employed state violence: "Since there hath not been found a perfect meanes to retaine the people in quiet . . . and that Perswasion must be joyn'd to Force, it can be compass'd no other way then by surprisall of their Eyes and Ears."[15] These violations reduce theoretical religio-politics to the level of shared sensation and construct an empirical, non-speculative ground for political association. Revelation of political being arises from the communally sensible; it is literally sensed through undeniable, pre-theological aesthetic and corporeal entanglements.[16] Davenant's proposition is counter-revolutionary and superficial in its bold hegemonic outlines, but to admit such does not negate its relative radicality in a swirling mass of counter appeals to providential authority. Rather than engorging a style of governance with unverifiable theoretical and textual claims or repressive violence, Davenant condenses political association into participatory and formal modes of embodied sensation in which "a variety of objects" themselves make the people's "reason familiar with Sense."[17]

At the restoration of Charles II to the throne of England, another playwright, Abraham Cowley, made a similar argument for sensation and knowledge production in the area of natural philosophy. His *Proposition for the Advancement of Experimental Philosophy* (1661) introduces the concept of a state-funded college for the improvement of natural knowledge and education in experimental philosophy. Cowley valorizes his quasi-independent corporate structure as a congregation of equals pursuing an "Inquisition into Gods [sic] Creatures" by noting that "Our Reasoning Faculty as well as Fancy, does but Dream, when it is not guided by sensible

[15] Ibid., 11.
[16] See page 203.
[17] Davenant, *Proposition*, 23, 17.

Objects."[18] The existing university system has generated qualified masters in the "humane arts" (logic, rhetoric, and grammar), but the study of nature, Cowley contends, has been "slenderly provided for, or rather almost totally neglected."[19] The discovery of America reveals that it is possible to venture further than the received wisdom of the ancients and to actively interface with a vast amount of unknown natural entities. Although operating under the auspices of royal charter and funded by parliamentary grants of 4,000 l per annum, Cowley's hypothetical college gains autonomous status through a specialized prosthetic/mechanical "conjunction" of professors with God's "creatures themselves."[20] Furthermore, corporate longevity is secured through active, highly technical and instrumentalized projects owned by the institution. "For the protection of the Company," no intellectual and physical resources are to "be diverted to the private gain of the Professors"[21] and the college will in all instances lay claim to two-thirds of the profits reaped from an individual member's invention.[22] Cowley's *Proposition* explicitly forbids his experimental college to "check or enterfere with any parties in State or Religion, but [rather is] indifferently to be embraced by all Differences in opinion."[23] The College will only concern itself with "Natural Philosophy, . . . the Contemplation of the immediate or mediate Creatures of God" and all experimental investigations are to be conducted within a monastic style academic sanctuary rivalling Bacon's Salomon's House of *The New Atlantis.*[24] Cowley's scheme calls for a chancellor and eight governors to oversee twenty philosophers, sixteen scholars, assistants, chemists, servants, and others sedulously scurrying about private lodgings, a lecture hall, public school house, library, gallery, repository, dining hall, chapel, menagerie, and botanical gardens.

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[18] Abraham Cowley, *A Proposition for the Advancement of Experimental Philosophy* (London, 1661), Preface.
[19] Ibid.
[20] Ibid.
[21] Ibid., 19.
[22] Ibid., 36.
[23] Ibid., 32-33.
[24] Ibid., Preface.

The proposed college reads as a closed, self-regulating system of epistemic production for professors and the world trove of natural objects.

Upon further inspection Cowley's proposition exposes itself to be a microcosmic interspecies polis on which the state could model a national pedagogical apparatus, and this is where some pivotal theoretical planes of contact between Davenant and Cowley come into view. For the college to successfully obtain and organize empirical knowledge, constant cohabitation with other species of flora and fauna is necessary. Hypotheses and speculation are eschewed in favor of submersion in procedures of sensation and recording with "all sorts of Creatures."[25] Humans are limited repositories of rationalist knowledge; only recurring "conjunction and application" across forms of human and non-human life draw working information from the limitless "Fountains of Nature."[26] Where Cowley most reflects Davenant's *Proposition* is in his recommendations for the demonstration and dissemination of this experiential knowledge. Lectures shall be offered once a day to the public "at the hours in the afternoon most convenient for Auditors from London,"[27] and professors from the college, in addition to sponsoring apprentices, shall operate a school for two hundred boys matriculating at the age of thirteen.[28] Students are to be "bred" simultaneously in words and things, "Poetry" and "Natural Science,"[29] and no student "shall pay any thing for their teaching."[30] Cowley's collegiate architecture at times appears cloister-like but its aims to alter the naturalized terms of knowledge and its sensory acquisition are really more broadly cultural and political. Corporate muscle is flexed in practices of charity and pedagogy that refashion epistemology and uses of technology beyond the demands

[25] Ibid., 27.
[26] Ibid., Preface.
[27] Ibid., 32.
[28] Ibid., 43.
[29] Ibid., 47.
[30] Ibid., 44.

of the college corporation itself. The majority of the two hundred students will enter trades, the Inns of Court, or university, and afterwards participate in crafting English political culture. What they take with them is a methodology of learning molded by active physical and sensory engagement with human and non-human materials – a co-production of knowledge as empirical event.

Our playwright Cowley promulgates a highly theatrical epistemology: knowledge produced as an emergent property (an event) in the collision of material bodies. This is why Cowley's manifesto subtly and effortlessly saunters from pedagogical exercises of performing Terence and Plautus to anatomical dissections of animal life. Both are legitimate forms of dynamic, embodied epistemic manufacture. The former fleshes out the word and transmutes classical text into a multitude of transactional bodies, at the same time expanding a Tudor era Christmas-time diversion into a monthly educational affair;[31] the latter plunges students into "the Figures and Natures of . . . Creatures . . . [in order to] disabuse them . . . of those Errours which are universally admitted concerning many."[32] The radicality of Cowley's *Proposition*, like Davenant's, is that visual, aural, and tactile "Divertisements" are the only sufficient grounds for verifiable knowledge, and these activities mandatorily repudiate textual transmission to enable the "conjunction" of multispecies bodies. The union is far from democratic, but Cowley's vision vindicates individual sensation and necessitates the sensible object in knowledge production as a multi-bodied, interspecies event. From the beginning to the end of his text, Cowley's exhortation to distance learning from rationalist doctrine and textual theorization takes shape around a common, state-funded cause of transspecies knowledge production. Analogous to Davenant's

[31] See Bruce R. Smith, *Ancient Scripts and Modern Experience on the English Stage, 1500-1700* (Princeton: Princeton University Press, 1988), 105-110.
[32] Cowley, *Proposition*, 49.

state opera, eliciting revelation from the sensible is always concomitantly a politics of association and shared activity encircling that production; knowledge is synonymous with engagement – a repetitious union of human, techno-instrument, and non-human organism.

For Davenant and Cowley, the sensible was provided a controlled locus; it took on a regulated and equipped architecture – respectively, the theatrical and collegiate sensoriums. This residential impulse was responsive to the general theoretical shift in sensation and perception under the stewardship of seventeenth-century mechanical philosophy. Scholastic doctrines of cognition were variations on Aristotelian *hylomorphism* that imputed common (size, shape, position, local motion, rest) and proper (color, sound, odor, flavor, temperature) sensibles to the inherent properties of objects in the manner that they appear to the senses. There was a formal consistency between properly functioning sense organs and the external objects stimulating perception. Sensible species resembling the properties of bodies were transmitted intact to the organs of sensation, which propagated reliable perceptions of the cognized world.[33] Although differences existed among them, exponents of mechanical philosophies (Descartes, Boyle, Hobbes, Hooke, More, Newton, Locke, Reid, etc.), according to Alison Simmons, introduced an "ontological" distinction between Aristotle's categories in the form of primary and secondary qualities. While the litany of attributes aligned between classifications of common/primary and proper/secondary, only primary qualities were interpreted to be fundamentally intrinsic to the external object; secondary qualities emerged in the perceiver during the process of sensation. Locke asserted that primary qualities "are utterly inseparable from the body in whatever state it is" whereas, secondary qualities "are nothing in the objects themselves but powers to produce

[33] See Jed Z. Buchwald and Mordechai Feingold, *Newton and the Origin of Civilization* (Princeton: Princeton University Press, 2013), 16-28; and Alison Simmons, "Perception in Early Modern Philosophy," *The Oxford Handbook of Philosophy and Perception*, ed. Mohan Matthen (Oxford: Oxford University Press, 2015), 82-85.

various sensations in us."[34] Moreover, sensation was no longer thought to be a hylomorphic reflection of objectified attributes, but a chain of intermediate transformations of a single atomic-aggregate stimulus – motion – into ideation occurring in some undisclosed physical "sensorium." Even primary qualities, as Locke averred, are not apprehended unaltered by the senses but rather through corporeal transcription "produce simple ideas" in the perceiver.[35] Buckwald and Feingold sketch out the existential fissure between scholastic and mechanical configurations of sensation: "Hylomorphism accepts, indeed it embraces an association between a form of an entity and a related formal property of the sensing organ. Mechanism, whether Cartesian or atomist, cannot do anything like this because qualities, properly speaking, exist in perception but not in the unperceived world."[36] Atomic interactions received through a concatenation of transmutations must be constructed into intelligible percepts by the perceiving subject. To many mechanical adherents, this intricate process of unavoidable alteration and re-assemblage meant that sense organs were apodictically sites of distortion and error that required the improvement of physical instruments or what Descartes referred to as "Artificial Organs."[37] Hobbes said of the senses: "whatsoever accidents or qualities our senses make us think there be in the world, they are not there, but are seemings and apparitions only."[38] Similarly, Hooke stated that "mistakes of humane actions" deriving "from the narrowness and wandering of our Senses" may be rectified by "artificial instruments and methods."[39] The "remedies" for our *infirm* senses, he stoutly

[34] John Locke, *An Essay Concerning Human Understanding*, ed. Peter H. Nidditch (Oxford: Oxford University Press, 1979), 2.8.9, 2.8.10.
[35] Ibid., 2.8.9.
[36] Buchwald and Feingold, *Newton*, 21.
[37] René Descartes, *Discourse on Method, Optics, Geometry, and Meteorology*, trans. Paul J. Olscamp (Indianapolis: Hackett, 2001), 127.
[38] Thomas Hobbes, *The Elements of Law Natural and Politic* (Oxford: Oxford University Press, 1994), 1.2.10.
[39] Robert Hooke, "Preface" to *Micrographia: or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses with Observations and Inquiries thereupon* (London: Royal Society, 1667), A2, A1.

proclaimed, "can only proceed from the real, the mechanical, the experimental Philosophy."[40] And John Wilkins, concerning the benefits to be weighed from implemental enhancements of observation, opined, "It is certain that our senses are extremely disproportioned for comprehending the whole compass and latitude of things."[41] Additionally, Malebranche skeptically admonished that "the senses mislead you vastly more than you can imagine . . . there is no accuracy nor truth in the information they give us."[42] And Bacon before them repeatedly cautioned that "the evidence of the sense" should be "helped and guarded by a certain process of correction," and that the intellectual labor that follows sensation could "not be left to its own course, but guided at every step; and the business be done as if by machinery."[43] For the multitude steeped in scholastic paradigms of sensation, instruments were unnecessary, potentially harmful and delusory interventions into the reliable isomorphic equipment that God had imparted to his creation. But forward-thinking moderns and mechanical philosophers interpreted accurate knowledge production as just that, an ineluctable intervention made dependable via the multiplication of controls and externalities.

The correlation to be drawn between Davenant's operatic sensorium and Cowley's experimental philosophical college is that they transgress the bounds of raw anthropocentric sensation and craft knowledge production as an intercession into the natural, making the instruments of sensation and perception reliable only in localized cases of artefactual manipulation.[44] Robert Sharrock, the publisher for the second edition of Boyle's *Some Considerations Touching the Usefulnesse of Experimental Natural Philosophy* purported that

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[40] Ibid., A2.
[41] John Wilkins, *The Mathematical and Philosophical Works* (London, 1802), 152.
[42] Nicolas Malebranche, *Dialogues on Metaphysics and on Religion*, trans. Morris Ginsberg (New York: Routledge, 2013), 70.
[43] Francis Bacon, *The Works of Francis Bacon*, vol. 4, eds. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath (London: Longman and Co., 1858), 40.
[44] I return to this topic in Chapter Six.

"Severing and Mixing, Making and Marring, and multiplying variety of Experiments on all Bodies, to discover their hidden virtues, and so enlarge the Power and Empire of Man" constituted true philosophical inquiry.[45] The singular event is refined into reproducible experiments by controlling external laboratory conditions and the instrumental apparatus for detection and data collection. Molding perception and its cognitive products in scenographic and perspectival shifts is consanguine with the subtle capture of the previously imperceptible in mircrographic and telescopic productions of verifiable Society spectacles. For both Restoration theatre and experimental philosophy, approaching sensation as a growing series of linked transitions meant that instrumental and professional sites of intervention necessarily increased along specialized corporate and network lines (philosophers, company managers, assistants, artisans, stagehands, machinists, etc.), thus multiplying loci of skilled control. These manipulated but secure sites were avowed to produce the most natural, unadulterated knowledge, despite bristling allegations of falsity, infidelity, and abstruse inutility from critics of the new science.

Following Francis Bacon, Cowley's *Proposition* plotted out one controversial version of a program for a physico-theology (natural theology) that would dominate the interests of England's Royal Society during the Restoration's drift toward a subsequent revolutionary epoch – the1680s. Did the Royal Society's delineation of a divinely sanctioned natural history honed in the contested, sensuous site of the academic laboratory, of discovering God's revelation in objectified, refracted, and classificatory nature, in some ways complete Davenant's momentous moralizing project of the 1650s? Part of the argument conveyed in this unit of chapters is that Society activity did, in fact, carry on Davenant's expressed aims, and to understand their common goals and practices it is foundational to recognize that theatre and experimental

[45] Robert Sharrock, "The Publisher to the Reader," in Robert Boyle, *Some Considerations Touching the Usefulnesse of Experimental Natural Philosophy* (London: Robert Sharrock, 1664), 3.

philosophy were not mutually exclusive social fields. In addition to the collaborative projects between members of both fields, mutual emphases on corporate sociality and non-speculative matters of sensory-garnered facts recurred in the aesthetic output, meeting minutes, findings, and published documents of the two royally sanctioned, but not royally dominated, cultural enclaves. In both, *the natural* as affecting and affected by the mediation of *the mechanical* outlined contracts of embodied politics and their reiteration in various media.[46] But before wading into the institutional parameters of the Royal Society and Restoration Theatre, both secured by sovereign ascendancy and patronage, it is beneficial to understand the multiplicity of sometimes chafing political imaginaries proliferating during the unsettled years of the Interregnum. In them we detect, along the lines of Davenant's and Cowley's propositions, political implications for diagraming social convalescence though the conjoint action of humans and sensibly objectified nature, and how the coexistence of these various manifestos concurrently hobbled and enabled interspecies contracts for social action.

"The Palliative of Praxis"

If anything has been solidly assessed about the founding of the Royal Society, it is that its origin was neither linear nor the conscious, proactive labor of sovereign authority exercising control over a burgeoning cultural domain.[47] The first Royal Charter granted by Charles II in 1662 formulates the Society's corporate political powers as sprouting from a substrate of methodology: "philosophical studies, especially those which by actual experiments attempt either to shape out a new philosophy or to perfect the old" (philosophicis studiis quae solidis

[46] Chapter Six contains a detailed examination of this phenomenon in the cultural domain of Restoration theatre.
[47] Michael Hunter, Steven Shapin, and Simon Schaffer have been in the vanguard of this research. See footnotes that follow.

experimentis conantur aut novam extundere philosophiam, aut expolire veterem).[48] Contrary to a sufficient devotion to any theoretical position or religious inflection, biopolitical agency of the Royal Society's executive committee of twenty-one was affirmed by the collection of and experimentation on what could be neutrally summarized as "the actual" (*solidis*), although the formal composition of association was pluralistic. As Michael Hunter suggests, "the motivation to scientific activity in this period was convergent rather than specific – in other words, it was not inspired by any single religious position but by a range of religious and secular stimuli, which brought people together in pursuit of shared goals which were largely defined by the internal dynamic of scientific enterprise."[49] Chartered rights to assembly in London, protection under the law, property ownership, pursuance of lawsuits, foreign correspondence, and corporal possession of executed criminals were inextricable from the repeated appropriation and trial of nature. It was a methodology that constituted corporate identity, and the methodology itself was an act of political formation contingent on both the diffuse network of seventeenth-century experimental philosophy and the multiple tentacular lines of Society development, with their roots in the blood-soaked soil of civil dissonance and political experimentation of the Interregnum.

The corporate body of the Royal Society was a voluntary association of individuals invested in the unifying force of experimental praxis, and though a legal singularity in perpetuity, it was a network composite of shifting self-governing communities reliant upon but sometimes stretching beyond the constraints of a national frame.[50] The Society's political character was

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[48] Royal Society, *Translation of First Charter, granted to the President, Council, and Fellows of the Royal Society of London, by King Charles the Second, A.D. 1662*, 1, https://royalsociety.org/~/media/Royal_Society_Content/about-us/history/Charter1_English.pdf?la=en-GB

[49] Michael Hunter, *Establishing the New Science: The Experience of the Early Royal Society* (Woodbridge, Suffolk: Boydell Press, 1989), 60.

[50] On the character of early modern corporations, see Philip J. Stern, *The Company State: Corporate Sovereignty and the Early Modern Foundations of the British Empire in India* (Oxford: Oxford University Press, 2011), 3-16.

fashioned in the friction of revolution and hence its methodological impetus toward an encyclopedic knowledge of organic substance carried with it utopic, or at least sanguine alternative-public, affirmations. The two most cited precursors to Royal Society institutionalization were interregnum coteries of London and Oxford, infused as they were with what Michael Hunter calls "a strong social element" of informal association in coffeehouses and private lodgings.[51] According to Birch's History, John Wallis, later Savilian Professor of Geometry at Oxford, recalled that about the year 1645, "several worthy persons residing in London, who were inquisitive into natural, and the new experimental philosophy, agreed to meet weekly on a certain day, to discourse upon such subjects." In Wallis's own public defense of the Royal Society, he claimed that meetings were held at a particular "hour, under a certain Penalty, and a weekly Contribution for the charge of Experiments, with certain Rules agreed upon amongst us."[52] The group, which before moving to Gresham College met at Dr. Goddard's lodgings and occasionally at the *Mitre in Wood-street*, "barred all Discourses of Divinity, of State-Affairs, and of News (other than what concern'd our business of Philosophy) confining our selves to Philosophical Inquiries, and such related thereunto." Among the members of the Gresham group were John Wilkins, Jonathan Goddard, later fellow of the college of physicians, George Ent (William Harvey's chief exponent and acolyte), Charles Scarbrough, Francis Glisson, and Christopher Merret, doctors in physic; Samuel Foster, professor of astronomy at Gresham college, and Theodore Haak, a transplant from Palatinate Germany affiliated with the Hartlib-Comenius Circle, and the first to suggest the regularization of meetings.[53] Over the

[51] Michael Hunter, *Science and Society in the Restoration England* (Cambridge: Cambridge University Press, 1981), 33.
[52] Thomas Birch, *The History of the Royal Society* (London, 1756), 1:1-2.
[53] John Wallis, *A Defence of the Royal Society and the Philosophical Transactions* (London, 1678), 7. Birch, *History*, 1:1-2; A. Rupert Hall and Marie Boas Hall, "The Intellectual Origins of the Royal Society, London and Oxford," *Notes and Records of the Royal Society of London* 23, no. 2 (1968): 157-168.

course of 1648-49, Wallis, Wilkins, and Goddard removed to Wadham College at Oxford and continued to meet regularly and more formally there during the 1650s, with the inclusion of Seth Ward, William Petty, Ralph Bathurst, Christopher Wren, Thomas Willis, and later, Robert Boyle, before returning to London and Gresham College shortly preceding the restoration of Charles II.[54] John Aubrey in his life of John Wilkins claims that the "experimentall philosophical Clubbe, which began 1649 [at Oxford] . . . was the *Incunabula* of the Royall Society."[55] Seth Ward in a February 1652 letter to Sir Justinian Isham provides more details than Aubrey, explaining that the Oxford "Clubb . . . of about 30 persons" were involved in two lines of business: the first, "to gather such things as have already been discovered and to make a booke with a generall index of them"; the second, to form "a collection of those wch are still inquirenda and according to our opportunityes to make inquisitive experiments, the end is that out of sufficient number of such experiments, the way of nature in workeing may be discovered."[56]

Drawn from the accounts of Ward and Wallis is a Baconian program of collective and non-speculative research able to bridge religious and political divisions. John Wallis was a moderate Presbyterian who signed the remonstrance against the execution of Charles I; Seth Ward, future Bishop of Salisbury, proved his high Anglicanism through opposition to comprehension and non-conformity; Francis Glisson was listed as one of two heretical doctors in the College of Physicians;[57] William Petty was imbued with Erastian heterodoxy; Robert Boyle encamped with the latitudinarians; John Wilkins was a supporter of Cromwell and a parliamentary nominee; Boyle and Petty were mentored by and corresponded with puritan

[54] Wallis, *Defence,* 8.
[55] John Aubrey, *Aubrey's Brief Lives*, ed. Oliver Lawson Dick (Boston: David R. Godine, 1999), 320.
[56] H.W. Robinson, "An Unpublished Letter of Dr. Seth Ward Relating to the Early Meetings of the Oxford Philosophical Society," *Notes and Records of the Royal Society of London* 7, no. 1 (1949), 68-70.
[57] See G.H. Turnbull, "Samuel Hartlib's Influence on the Early History of the Royal Society," *Notes and Records of the Royal Society of London* 10, no. 2 (1953): 108.

Samuel Hartlib who maintained close ties to the parliamentary government of the Commonwealth; Thomas Willis was royal physician to Charles I; Seth Ward, along with Matthew and Christopher Wren were staunch royalists. Attempts to unify and summarize the ideology of Society precursory clubs must necessarily curtail any broad expression to the narrower interests of subsets or atomic individuals.[58] In the accounts of Wallis and Ward there is no preformed consensus about the "politics" that should inform experimental activity but, as Hunter declares, a sense that "science already had a unity which could overcome party loyalties" and attracted those wishing to moderate the social enactments of radicalism and confessional conflicts.[59] I would add to this that the problematic and unresolved actions of natural, "sensible objects" *provoked* the political formation of overlapping publics, if public is defined in the terms Jane Bennett borrows from John Dewey as "a confederation of bodies, bodies pulled together not so much by choice (a public is not exactly a voluntary association) as by a shared experience of harm, that, over time, coalesces into a 'problem.'"[60] In other words, in forming a public, diverse bodies are inducted into affective assemblage by mutual precarity and "conjoint action."[61] Thus, the elements of nascent science were not simply a refuge for those turning away from radicalism; they were *actants* or agential properties beckoning responsive methodological postures that constituted an alternative political ecology during a saga of social precariousness. It was precisely the lack of closure instantiated by the circulation of the blood, action of veins, pathology of herbal pharmaceuticals, motion of comets, and the orbital lines of Jupiter's

[58] See Hall and Hall, "Intellectual Origins."
[59] Hunter, *Science and Society*, 27.
[60] Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010), 100.
[61] Ibid.

satellites that provoked the interactive and conjoint assemblages of human and inhuman agents in these pre-Society communities.[62]

During the first three quarters of the twentieth century, scholars were excavating archival sites and proffering evaluations of the Royal Society's corporate and intellectual lines of descent, specifically the relation of the founding members to Puritanism and the Commonwealth Puritan projector Samuel Hartlib, but more recent studies focusing on philosophical correspondence networks and concatenated circles of influence have drafted a picture of early experimental activity as the interaction of linked social enclaves with varying degrees of devotion to Baconian empirical imperatives.[63] Specifically in a nexus city like London, as Ian Archer notes, institutional complexity brought together interests from "dispersed localities" into "a variety of interlocking communities (parishes, wards, guilds) each of which generated loyalties, the mobilisation of which would vary according to context."[64] Communities of natural philosophy were intersectional structures populated by individuals enmeshed in mobile social frameworks. What united them was a methodological cognizance, although perhaps not a full embrace, of the sensible object in Bacon's inductive schema, while the porosity of these philosophical circles (laying them open to competing discursive and social demands) produced disparate versions of political/public formation. Contra the Scholastic-Thomist doctrine promoting the irrefutability of Aristotelian axioms, Bacon advocated a standardized method to enable objectivity as a controlled production of social consensus.[65] Induction, for Bacon, required that philosophers should

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[62] See Hall and Hall, "Intellectual Origins," 159.
[63] See Paula Findlen, ed., *Empires of Knowledge: Scientific Networks in the Early Modern World* (London: Routledge, 2018); and Michael Hunter, ed., *Archives of the Scientific Revolution: The Formation and Exchange of Ideas in Seventeenth-Century Europe* (Rochester: Boydell, 1998).
[64] Ian W. Archer, "Social Networks in Restoration London: The Evidence from Samuel Pepys's Diary," *Communities in Early Modern England*, eds. Alexandra Shepard and Phil Worthington (Manchester: Manchester University Press, 2000).
[65] See Julie Robin Solomon, *Objectivity in the Making: Francis Bacon and the Politics of Inquiry* (Baltimore: Johns Hopkins University Press, 1998).

"analyse experience and take it to pieces, and by a due process of exclusion and rejection lead to an inevitable conclusion . . . submitting to examination those things which the common logic takes on trust."[66] The process was purposefully externalized and collective because the "mental operation which followed the act of sense," i.e. the intellect or understanding, was encumbered with habitual shortcuts and inert "dogmas and philosophies," or, the onus of textually transmitted misconceptions.[67] Instead of starting from universal propositions, one would begin with a "simple sensuous perception" of the recalcitrant natural object and follow it through a series of trials, allowing the intellect to be passively "guided . . . as if by machinery."[68] Bacon defined this form of science as anti-rationalist experimental procedures and inundated his descriptions with metaphors of cultivation and copulation between the philosopher's sensual capacities and nature. The artificial and natural, to Bacon, were not fundamentally different nor did they exist in dichotomous relation to one another; rather, "a chaste and lawful marriage between Mind and Nature" should be established, for "nature exhibits herself more clearly under the trials and vexations of art than when left to herself."[69] For Bacon, harnessing the power of nature was not accomplished through unilateral patriarchal aggressiveness. As Evelyn Fox Keller informs, the "formula" for courtship evident in Bacon's writings is also "responsive."[70] The sexual metaphor is a "dialectic" of "seduction" in which affiliation is the delicate rejoinder of sensual, erogenous bodies. The erotics of encounter may require the philosopher to assertively "hound nature in her wanderings,"[71] or, as her "servant and interpreter," reject the illusion of command and "obey" her by patiently submitting to "the subtlety of nature . . . greater many times over than the

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[66] Bacon, *Works*, 4:25.
[67] Ibid., 40, 55.
[68] Ibid.
[69] Evelyn Fox Keller, *Reflections on Gender and Science* (New Haven: Yale University Press, 1985), 36; and Bacon, *Works*, 4:294.
[70] Ibid., 36.
[71] Bacon, *Works*, 4:296.

subtlety of the senses and understanding."[72] These amorous trysts of induction forfend the recursivity and error associated with a purely rationalist coordination of axiomatic knowledge. Courtship is provided a space within which diverse bodily agents, through union and severance, take up affective and efficient shape. To be clear, Bacon is not advocating, along the lines of Levi Bryant, a flat ontology. He is not "striving to think a subjectless object" or describe a democratic collective of *actants* irreducible to representation.[73] Bacon attempts, rather, to map out and externalize an epistemological geography prevenient to subjective ideation; a domain where a heterogeneous congregation of sensible particulars ("things," not words) and instrumental aids are allowed to respond to the amorous petitions of the philosopher – in short, he diminishes the stature of the Scholastic-Thomist subject and demands the assistance of a pluralistic laboratory run by many hands.[74]

> For the subtlety of experiments is far greater than that of the sense itself even when assisted by exquisite instruments; such experiments, I mean, as are skillfully and artificially devised for the express purpose of determining the point in question. To the immediate and proper perception of the sense therefore I do not give much weight; but I contrive that the office of the sense shall be only to judge of the experiment, and that the experiment itself shall judge of the thing. [75]

Bacon's philosopher-lover is no potent, unruly ravisher of nature. His feeble senses must be cultivated by the ever refined observational implements of mechanics, and his intellectual virility is made manifest only through an intricate system of checks and balances that enable the natural inamorata to dictate her own terms of engagement.

The extroversion of knowledge production onto early modern spaces of experiment translated into an apodictically social praxis, and the resumption of Baconian epistemic

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[72] Ibid., 47-48.
[73] Levi R. Bryant, *The Democracy of Objects* (Ann Arbor, MI: Open Humanities Press, 2011), 19.
[74] Bacon, *Works*, 4:50.
[75] Bacon, *Works*, 4:26.

mappings during the 1640s and 50s meant that externalized desires for philosophical truth found comfortable residence in contrary political forms and imaginaries. The collaborative substrate of Baconianism also translated into a state of affairs in which cooperation and antagonism cut across social status (gentlemen, mechanics, artisans, merchants) and neat boundaries of ostensibly contiguous, but in actuality overlapping, community identities. Despite John Evelyn's distaste of "conversing with mechanical capricious persons" for his project on the "History of Trades," he nevertheless shared his "good friend [Samuel] Hartlib['s]" Puritan reformist estimation that recording the "History" of trades and technology was "so noble a work."[76] G.H. Turnbull discounts Hartlib's direct influence on the early Royal Society and Michal Hunter rightly sees Hartlib's republican and Cromwellian connections as cause for his rejection from Society membership, but it would be naïve not to rate Hartlib's wide correspondence network encompassing many founding Society members and his numerous Commonwealth projects of applied science for social improvement as influential enunciations of Baconian politico-philosophical possibility.[77] Turnbull himself painstakingly cites Hartlib's epistolary interactions with almost every member of the early Royal Society. According Charles Webster, "Puritans like Hartlib, Wilkins, Goddard, Boyle and Worsley played a leading part in the evolving complex of scientific "societies', 'colleges' or 'clubs' which emerged in England between 1640 and 1660," and the Hartlib Circle was one of the more aggressive and resonating social iterations of Baconian empiricism.[78]

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[76] Evelyn to Boyle, Aug 9, 1659 in Robert Boyle, *The Works of the Honourable Robert Boyle in Six Volumes*, vol. 6, ed. Thomas Birch (London, 1772), 287-288. See also William T. Lynch, *Solomon's Child: Method in the Early Royal Society of London* (Stanford, CA: Stanford University Press, 2002).

[77] See Turnbull, "Samuel Hartlib's Influence," 129-30; and Hunter, *Science and Society*, 24.

[78] Charles Webster, "'Conclusions' to *The Great Instauration*," in *Puritanism and the Rise of Modern Science: The Merton Thesis*, ed. I. Bernard Cohen (New Brunswick, NJ: Rutgers University Press, 1990), 284.

Hartlib was a devout Protestant émigré from Elbing, Prussia who had come to England in 1628 and associated himself with John Dury (a religious reformer aiming at unification) and the Czech intellectual Jan Amos Comenius, who sought to reorganize and consolidate education. Hartlib and Gabriel Platte's *A Description of the Famous Kingdome of Macaria* (1641), was, as vouched in the prefatory dedication to MPs, a descendant of influential reformist literature: Thomas More's *Utopia* and Bacon's *New Atlantis.*[79] Published during the embroiled Long Parliament just before the dawn of the civil wars, *Macaria* is "an idealised but essentially practical utopia" in the words of Carola Scott-Luckens, who draws attention to the fact that in the text all "inquiries into agriculture, technology and medicine are funded and coordinated by the state . . . for the wider public good."[80] In Macaria a General "Great" Council oversees five subsidiary, yearly councils (Husbandry, Fishing, Trade by Land, Trade by Sea, and New Plantations) that "have power to heare and determine, and to punish Malefactors severely, and to reward Benefactors honourable, and to make new lawes . . . like as Court Leets, and Corporations have within their owne Precincts and Liberties in England."[81] Notably, all Divines must be skilled in the art of practical medicine and perform communal service at the "Colledge of experience . . . [where] all such as shall be able to demonstrate any experiment for the health or wealth of men, are honourably rewarded at the publike charge, by which their skill in Husbandry, Physick, and Surgerie, is most excellent."[82] As a check on the power of religio-medical practitioners, the "Societie of Experimenters," can bring an action against any false

[79] I have attributed authorship of *Macaria* to both Platte and Hartlib, although different authorial attributions can be found in various scholarly interpretations. See Charles Webster, "The Authorship and Significance of 'Macaria'," in *The Intellectual Revolution of the Seventeenth Century*, ed. Charles Webster (London: Routledge and Kegan Paul, 1974).
[80] Carola Scott-Luckens, "Providence, Earth's 'Treasury' and the Common Weal: Baconianism and Metaphysics in Millenarian Utopian Texts, 1641-55," *The Arts of 17th-Century Science: Representations of the Natural World in European and North American Culture*, eds. Claire Jowitt and Diane Watt (Burlington, VT: Ashgate, 2002), 114.
[81] Samuel Hartlib and Gabriel Plattes, *A Description of the Famous Kingdome of Macaria* (London, 1641), 3-4.
[82] Ibid., 5.

claims, abuses or misrepresentations in the College of Experience.[83] Utilitarian aims and the objectives of natural inquiries are consolidated in the conciliar, corporate structure of Macaria, which maintains its socialist enterprise by correlating property ownership with productive husbandry and communal benefit. For Hartlib and Platte, natural philosophy is imaginable only when ensconced in the framework of participatory politics and utilitarian technological innovation. *Macaria* bears resemblances to Andreae's *Christianopolis* (1619), in which religious reform of the citizenry is inextricable from their being "steeped in learning and culture," but the reification of philosophical inquiry into the very form of the state comes closer to the geography of Salomon's House in Bacon's *New Atlantis*.[84]

Salomon's house, named after the island nation of Bensalem's founding monarch Solamona and "dedicated to the Study of Works and Creatures of God," is the state's *raison d'etre* and what sutures together a coherent national identity. In line with Macaria's millenarian utilitarianism, the pursuits of Salomon's House are, as Richard Serjeantson points out, immanently "practical, not theoretical";[85] a philosophical society whose activity is continually "enlarging the bounds of Human Empire, to the effecting of all things possible."[86] The House encompasses nothing less than the variegated topography of a polity within the state: "deep caves" for mining ore and the conservation of bodies; "high towers" for celestial observations; "Chambers of Health" to cure diseases; "Gardens" for experiments of grafting and inoculation; "parks and enclosures" for the examination and dissection of animals; "perspective-houses" for demonstrations of light and radiation; "sound-houses" for studying and reproducing the sounds

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[83] Ibid., 6.
[84] Johann Valentin Andreae, *Christianopolis: an ideal state of the seventeenth century*, trans. Felix Emil Held (New York: Oxford University Press, 1916), 147.
[85] Richard Sarjeantson, "Natural knowledge in the New Atlantis," in *Francis Bacon's the New Atlantis: New Interdisciplinary Essays*, ed. Bronwen Prince (Manchester: Manchester University Press, 2002), 84.
[86] Francis Bacon, *New Atlantis: A Work Unfinished* in *Three Early Modern Utopias*, ed. Susan Bruce (Oxford: Oxford University Press, 1999), 177.

of beasts and birds; "engine houses" for developing technologies of motion; and "mathematical-houses" for the improvement of instruments.[87] The cartographies of investigatory and utilitarian desires of Macaria and Bensalem amicably align, but their political sustenance diverges into what, by the 1640s, had become hostilely competitive forms of governmental authority – for Macaria, it is parliamentary councils; for Bacon's Bensalem it is the dynastic sovereign.

In England at the midcentury point, every Baconian virtuoso and natural philosopher recognized that the humanitarian and intellectual hopes of philosophical academies required a political structure of patronage. Utopian frameworks of governance (*New Atlantis*, *Oceana*, *Macaria*, *Leviathan*, *Law of Freedom*), as Webster acknowledges, "conceived their systems of social organization in the spirit of the new philosophy," while adherents of the new philosophy sought institutional homes reciprocally linked to various structures of governance.[88] Revolutionary fluctuations that continually dissolved and concretized forms of authority entailed that any preference for a particular patronizing state system was ineluctably encircled by febrile disputes. These disagreements were only augmented by explicit displays of devotion to one or another contentious metaphysical theory (Neoplatonism, Paracelsan Hermeticism, Mechanical Philosophy). As Allen Debus remarks, "We need only return to the chemical philosophers [e.g. Andreas Libavius and Robert Fludd] or read the scientific utopias of the seventeenth century to see described a 'new science' far removed from that of the mechanical philosophers [e.g. Descartes, Gassendi, or Hobbes]."[89] In voluntary experimental societies requiring the contributions of simultaneously converging and diverging individual perspectives, what eventually prevailed, then, was an ecumenical, reductive methodological principle that

[87] Ibid., 177-185.
[88] Charles Webster, "Introduction" to *The Intellectual Revolution of the Seventeenth Century*, ed. Charles Webster (London: Routledge and Kegan Paul, 1974), 4.
[89] Allen G. Debus, *Man and Nature in the Renaissance* (Cambridge: Cambridge University Press, 1978), 116.

encouraged open-ended, explanatory accumulation and inquiries into the behavior of nature under duress.

Despite a post-revolutionary impetus toward bare Baconian interventions into the natural world, a glut of actualized organizational precedents and an array of virtual politics populated the background of the first (pre-chartered) Royal Society meeting of 28 November 1660. Gilbert Wats 1640 English translation of Bacon's *De Augmentis Scientiarum* initiates with gushing overtures to monarchical patronage, "for Scepters and Sciences have the same revolutions" and "it is only the benigne aspect & irradiation of *Princes*, that inspires the Globe of learning, and makes Arts, and sciences grow up and florish."[90] Prior to the late seventeenth-century, aristocratic culture and patronage networks were the ascendant provinces of philosophical validation outside the universities. According to Mario Biagioli in his study on Galileo, "the court contributed to the cognitive legitimation of the new science by providing venues for the social legitimation of its practitioners, and this, in turn, boosted the epistemological status of their discipline."[91] Migrating between the Medici court of Florence and the Accademia dei Lincei of Federico Cesi, son to the Duke of Acquasparta in Umbria, Galileo fashioned himself from technical mathematician into a more venerated position with extensive judgmental mandate over natural phenomena – the court philosopher. Similar aristocratic academies existed in the late 1650s in Italy and France. Henri Louis Habert de Montmor, maître des requêtes (Master of Requests) in the state bureaucracy and member of the Académie française, funded his, according Christiaan Huygens, "pedantic" Académie of philosophical gentlemen in Paris with a prodigious

[90] Gilbert Wats, Dedication "To the Prince" in Francis Bacon, *Of the Advancement and Proficience of Learning or the Partitions of Sciences*, trans. Gilbert Wats (Oxford, 1640), 2,4.
[91] Mario Biagioli, *Galileo Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: The University of Chicago Press, 1993), 2.

fortune of 100,000 livres per year.[92] In Florence, the Accademia del Cimento operated on the whims of its patrons Prince Leopoldo de' Medici and his brother the Grand Duke of Tuscany Ferdinand II, who could instigate or suspend activity of their academic servants and redact formalized protocols according to their own changing inclinations. The bodily and financial presence of these aristocratic patrons controlled the substance and flow of inquiry, as the dedicatory epistle to the Accademia's collected *Essayes of natural experiments* attests:

> The favour of your patronage . . . above all, with the Honour of your Presence, sometimes stooping to our *Academy*, sometimes commanding us to your Royal Apartments, has bestowed upon it an Immortal Name; Kindled Active Desires in our Breasts, and given an happy increase to our Studies. These considerations easily demonstrate, with what duty we are engaged to Consecrate the first Fruits of our Labours to your Highnes's most Illustrious Name, wherein nothing can proceed from us, wherein you can have a greater share . . . whence we might at least flatter our selves, That we had made some small return which your Highness might impute in some degree to our choice . . . But we must rest satisfied with the bare desire of so just and deserved a Passion.[93]

Montmor's and Leopoldo's philosophical societies exemplified the limits of singular charismatic patronage – an ephemeral and capricious corporal-economic presence that might leave members in possession of the un-actionable nub of "bare desire." Both academies dissolved within ten years along with the commitments of their respective patrons.

For the Royal Society, informal para-university associations and the applied scientific divisions of Interregnum republicanism nested beside foundational visions of court patronage. The on-again-off-again Society fellow Henry More was a leading exponent of the Cambridge Platonists during the 1650s. Although he participated in and praised "the worth and value of

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[92] See Geoffrey V. Sutton, *Science for a Polite Society: Gender, Culture, and the Demonstration of Enlightenment* (Boulder, CO: Westview Press, 1995), 111.

[93] Secretary to the Accademia del Cimento, *Essayes of natural experiments made in the Academie del cimento, under the protection of the Most Serene Prince Leopold of Tuscany*, trans. Richard Waller FRS (London, 1684), a-a2.

Experimental Philosophy" conducted at the Royal Society,[94] More's university affiliation gave leverage to his animistic, spiritualist inflection on Cartesianism, pitting "the Spirit of Nature" ("the vicarious power of God upon Matter")[95] against the mechanical hypothesis of 'the spring and weight of the air' promoted by pneumatic philosophers Torricelli, Pascal, and Boyle.[96] Eleven of the twenty-seven members (e.g. William Croone, John Hoskins, William Petty, etc.) in James Harrington's Rota Club, which debated issues of republican governmentality at Miles's Coffeehouse at the Turk's Head, would join the Royal Society. While the Rota Club's discursive content would be anathema to the future Royal Society as an extension of sovereign patrimony, the Club's constitution became a paradigm for Society bylaws and the democratic ideals of individual members were by no means excluded from shaping collaborative research simply because they were legally unrecognized.[97] Cowley's College of Experiment and the Oxford and Gresham groups of the 1640s have already been cited as Royal Society precursors or variants on the philosophical club. Many individual members of these academies, in one way or another, were also either caught up in or affected by Hartlib and Plattes's millenarian utopianism in *Macaria*, a model which, according to Charles Webster, "provided a direct incentive to the Hartlib Circle."[98] *Macaria*'s utopian thematics found tangible expression in the Hartlib Circle's Office of Address. Members of Parliament offered encouragement and various forms of inadequate support for Hartlib's scheme, but his efforts never eventuated in a formal governmental bureau. The Office – originally envisioned as two branches, Address of Accommodations and Address of Communications – was to focus on social improvement and

[94] Henry More, "Preface" to *Enchiridion Metaphysicum*, quoted in A. Rupert Hall, *Henry More: Magic, Religion and Experiment* (Oxford: Basil Blackwell, 1990), 170.
[95] Henry More, "Preface" to *Immortality of the Soul* (London, 1659).
[96] See Hall, *Henry More*, 181.
[97] See Michael Hunter, *Establishing the New Science*, 8.
[98] Webster, "Authorship and Significance," 47.

the alleviation of poverty by patronizing technological developments and circulating intellectual reformist correspondence. Despite the retreat of bureaucratic patronage, Hartlib maintained his Office through grants, informal networks, and a great deal of personal assiduousness. His societal panacea assumed the forms of "new devices and techniques for agriculture, mining, and manufactures, and the promotion of schemes for employing the poor; the discovery of new alchemical processes and of new chemical medicines; the reform of education and the creation of new academic institutions; the creation and collection of natural and experimental histories and the design of scientific instruments; the reform of scientific communications" and the sponsorship of publications such as Richard Weston's *Discourse of Husbandry Used in Brabant and Flanders* (1650), Cressy Dymock's *Invention of Engines of Motion* and *The Reformed Husband-man* (1651), and John Beale's *Herefordshire Orchards a Pattern for all England* (1657).[99] On one occasion Hartlib backed the development of his acolyte and indispensable future Royal Society fellow William Petty's Double-Writing instrument, "whereby any Man, even at the first sight and handling, may write two resembling Copies of the same thing at once."[100] Petty returned the favor by championing Hartlib's intellectual and technological reformation in his first publication, *The Advice of W.P. to Mr. Samuel Hartlib for the Advancement of Some Particular Parts of Learning* (1647).

Petty's *Advice* is a thoroughly Baconian exercise in the social projections and improvements of the Hartlib Circle. Unlike *Macaria*, its pretensions to consummate political metamorphosis are mollified by a pragmatic immediacy spurred, in part, by omens of governmental collapse during the late civil war period. Inspired by "the great Lord Verulam

[99] Ted McCormick, *William Petty: And the Ambitions of Political Arithmetic* (Oxford: Oxford University Press, 2009), 43-44.
[100] William Petty, *The Advice of W.P. to Mr. Samuel Hartlib for the Advancement of Some Particular Parts of Learning* (London, 1647), A2.

[Bacon]," Petty builds his "Institution" for the Advancement of Learning from the diffuse raw materials and blueprints of "an Office of common Addresse according to the projection of Master Hartlib"

> whereby the wants and desires of all may bee made knowne unto all, where men may know what is already done in the business of learning. What is at present in doing, and what is intended to be done: to the end, that by such general communication of designes and mutuall assistance; The wits and endevours the world may no longer be as so many scattered coales or firebrands, which for want of union are soon quenched, whereas being but layed together they would have yeeled a comfortable light and heat.[101]

Petty's design to consolidate knowledge and ingenuity calls for several key elements. The first is a survey of all existing "Mechanicall Inventions" and "Reall or Experimental Learning,"[102] out of which a multi-volume compilation with facilitative indices is to be drafted. The second is the founding of "Ergastula Literaria, Literary work-houses, where Children may be taught as well to doe something towards their living, as to Read and Write."[103] This branch of Petty's Institution incorporates practices of intellectual and financial redistribution gaining currency in the disjointed Leveller movement.[104] "That all Children of above seven yeares old may be presented to this kind of Education, none being to be excluded by reason of the poverty and unability of their Parents, for hereby it hath come to passe, that many are now holding the Plough which might have beene made fit to steere the State."[105] Vocational training is integral to Petty's vision of maximizing personal and social productivity: "all Children, though of the highest ranke, be taught some gentile Manufacture in their minority, such as are Turning of curious Figures, Making Mathematicall Instruments, Dialls, . . . Graving, Etching, Carving, . . . Grinding of

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[101] Ibid., 1-2.
[102] Ibid., 3.
[103] Ibid., 3-4.
[104] A periodical for the promotion of the Leveller platform, *The Moderate*, would be in circulation from July 1648 to September 1649.
[105] Ibid., 4.

Glasses, . . . [etc.]" In the futurity of these trained schoolchildren lies the entirety of an industrialized free market England, figured as an aggregate unit of industrious individuals skilled in trades, "able to make Experiments themselves," and participate in a maximally engaged economy of fungible commodities and services.[106] A third element logically follows the Literary Work-houses, and that is "a place for the Advancement of all Mechanicall Arts and Manufactures," which Petty deems "a Gymnasium Mechanicum or a Colledge of Trades-men." In this facility "one at least of every Trade" would live rent free, perfecting their trade and instruments, enjoying "the quick sale which certainly they would have of their Commodities," so that "all Trades will miraculously prosper, and new Inventions would be more frequent."[107] The Gynmnasium is a nationalized research and development center that plays the vital function of mediating between enticements to personal profit (earned through education-driven expansion of capitalist markets) and the extraction of public benefits (supported by pedagogy and subsidized initiatives.)

Venturing "within the walls of this Gymnasium or College," one discovers Petty's fourth element and the germinal seed of the utilitarian-economic agenda – a functional multi-species repository and experimental space styled after Bacon's Salomon's House:

> A Nos[o]comium Academicum according to the most exact and perfect Idea thereof a complete Theatrum Botanicum, stalls and Cages for all strange Beastes and Birds, with Ponds and Conservatories for all exotick Fishes, here all Animalls capable thereof should be made fit for some kind of labour and imployment, thaa [sic] they may as well be of use living as dead; here should be a Repositorie of all kind of Rarities Naturall and Artificiall pieces of Antiquity, Modells of all great and noble Engines, with Designes and Platformes of Gardens and Buildings. The most Artificiall Fountaines and Water-works, a Library of Select Bookes, an Astronomicall Observatory for celestiall Bodies and Meteor [sic], large pieces of Ground for severall Experiments of Agriculture, Galleries of the rarest Paintings and Satues [sic], with the fairest Globes, and Geographcall [sic] Maps of the best descriptions, [also, "Chymicall Laboratorie, Anatomicall Theater, Apotheca, with

[106] Ibid., 6.
[107] Ibid., 7.

> all the Instruments and Furniture belonging to each of them"[108] (9)], and so farre as is possible, we would have this place to be the Epitome or Abstract of the whole world. So that a man conversant within those walls, would certainly prove a greater Schollar, then the Walking Libraries so called, although he could neither write nor read.[109]

In contrast to utopian frameworks, Petty does not place his Nosocomium in a distant kingdom, or on an obscure island; he proposes the site of London itself, that the institution "may be made out of one of our old Hospitals, without any new donations or creeping to Benefactors, onely with a little paines taken by the Reforming hand of Authority."[110] Petty does not specify who guides the "Reforming hand of Authority," but I would contend that in Petty's schematic experimental protocols and utilitarian ethics lies a self-authorizing extension of the London Corporation. The polis, or city-state, embraces "the Epitome or Abstract of the whole world," but it is also a world shorn of inherited preconceptions and restrictive social structures; a world stressed, elongated, anatomized, re-examined via novel instrumental analyses, and newly revealed to the senses; a world connecting its animate, sensible archive to the hospital's charitable "servitude among poore wretches" and the employment of marginalized community members.[111] Erudition is constituted in peak exposure to heterogeneous agents and participation moves fluidly across divisions of class, age, and species. Nonhuman life is not solely the object of scopophilic partition and annexation, but a co-laborer. If, for public benefit, an illiterate man can become a scholar, and a gentleman can be taught a trade, then "all Animalls capable thereof [can] be made fit for some kind of labour and imployment." This proposition bears a pensive consistency with Petty's other remarks that impute sentience to entities of the natural world (when one approaches them with a clean cognitive slate). In an undated letter to Hartlib, Petty personifies soil in the

[108] Ibid., 9.
[109] Ibid., 8.
[110] Ibid., 9.
[111] Ibid.

process of plant germination, reciting that "some earths . . . wanted lusts to conceive" while others "had competent vigor & lust" of which man might guide "the disposition" to bring forth beneficial crops.[112] Elsewhere in the *Advice* Petty declaims that in an economy of liberal manufacture "even Theeves and Robbers (made for want of better employment) shall be set on work . . . even hogs and more indocile beasts shall be taught to labour."[113] What Petty seems to argue is an inevitable kinship between a brimming open market economy and the reinterpretation and enfranchisement of untapped capabilities, including those of "strange Beastes and Birds . . . exotick fishes . . . all Animalls." Augmenting tributaries of contribution, commodity production, and platforms for social improvement are sprawling yet coterminous self-sanctioning activities (the spread fingers on the Reforming hand of Authority) in direct opposition to the monopolistic and arbitrary tendencies of (more or less) centralized absolutist monarchies, like those persisting under Charles Stuart's period of personal rule (1629-1640).

Underwriting the prospects of this political ecology is Petty's adherence to the ramifications of empirical epistemology: "For all knowledge must bee brought before their true Iudges w*hi*ch are either demonstration or sense and exp*e*riment, the rest is meere wit or Rhetorick."[114] He most scathingly details the basis of experimental, viz. true, knowledge in his "Letter in answer to Mr [Henry] More." To More's saccharine plaudits of Descartes, Petty remarks, "I cannot beleeve his principles of philosophy to be firme that stand upon such narrow feet as those few Experiments mentioned in his Works . . . I beleeve *tha*t judicious Men versed in Multitudes & varieties of Experiments (though slibber sawce ones) may better see the defects or vselesnes of Des Cartes his Philosophy."[115] Petty continues,

[112] William Petty, BL MS Add. 4292, f.141r., quoted in McCormick, *William Petty*, 48.
[113] Petty, *Advice of W.P.*, 23.
[114] *Hartlib Papers* 28/1/10A.
[115] William Petty, "William Petty to Hartlib, Undated," *Hartlib Papers* 7/123/1A.

> Meethinks it would make a dog laugh to see Men that doe not know *th*e things they talke and dispute soe much about, w*he*n they see them, to thinke themselves better philosophers then such as experimentally know them & there Operations one upon another, *tha*t are daily conversant in the Works of Nature, that doe diligently observe, compare & apply them & produce wonderfull artifices by so doing.[116]
> [. . .]
> I wish therefore *tha*t *th*e great wits of these times would employ themselves in collecting & setting down in good order & Method all lucriferous [profitable] Experiments & not bee too buisy in making inferences from them till some Volumes of that Nature are compiled.[117]

The convulsive laughter of the dog sets the rhythm for threading together Petty's patchwork of vitriol. In the tittering amusement of the canine one hears derision of the rationalist philosopher, for a dog knows that knowledge comes from keeping a nose to the ground and organizing responses according to bodily interaction with evidentiary stimuli, not from the autocratic process of mental system building. Knowing is an embodied act; it involves getting one's paws and sense organs dirty in the procedures of experimentation. Knowing derives from sacrificing egocentrism to perspectival and sensory multiplication, not its niggardly retention. Knowing is also synonymous with a degree of reluctance to preclude possible outcomes from the collision of material agents. Might a dog be considered capable of chuckling if the corporeal causative elements of laughter were experimentally understood? Might a sow be taught to labor if she were offered the most biosemiotically resonant incentives? In Petty's view, experimentation and collection emancipate the social organization of knowledge from obligatory submission to the past. His laboring hog is not the pig of Edward Topsell's *Historie of Foure-footed Beastes* (1607), which is bedraggled in an abundance of classical information on the swine's lazy and dim-witted character, making the species fit only for food and some medicinal purposes.[118]

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[116] Ibid., *HP* 7/123/1B.
[117] Ibid., *HP* 7/123/1B.
[118] In his naturalist tome, Topsell demurs against the porcine population, "Their brain is very fat, and in the waine of the Moone it is lesse than any other beastes" or "they are given much to sleepe in the summer time, they fall into

Above all, knowing through experimentation implies a reformation of hierarchical arrangements and erroneous assumptions that lead to oppressive warrants on the restorative conflux of social energies. According to Petty, "Conversan[ce] in the Works of Nature" is the basis of a more democratic, less humanistic covenant – a covenant built on the repetition of interspecies and cross-categorical synergism best guaranteed by the independent urban machinery of cosmopolitan London. But Petty's vision of interspecies urban renewal contrasts drastically with other contemporaneous, more eremitic propositions for advancing empirical philosophy.

In a 1659 letter to Robert Boyle, the Anglican royalist John Evelyn, FRS, whose book on forestry, *Sylva*, received the seldom bestowed Royal Society imprimatur, advocates an altogether different political and geographic arrangement for the authorization of experimental pursuits. Since court patronage for "a mathematical college, much less a Solomon's house," was not to be gained during the short-lived, "uncharitable" second Rump parliamentary period, Evelyn propounds a selection of "some gentlemen, whose geniuses are greatly suitable and who desire nothing more than to give a good example, preserve science, and cultivate themselves, join together in society . . . free from pedantry, and all affectation."[119] In Evelyn's scenario, capital garnered from traditional gentile land holdings would catalyze the formation of a monastic commune of like-minded Anglican naturalists "who would resign themselves to live profitably and sweetly together." Though presented as a hypothetical outcome, Evelyn's letter frequently encourages Boyle to "join in the design" through blandishments and avowals of mutual religiosity. He proposes purchasing approximately forty acres "in some healthy place" about twenty-five miles from London. There they would erect a "handsome pavilion, containing a

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Lethargies, and die of the same, the remedy whereof is, to keepe them from sleepe." See Edward Topsell, *The Historie of Foure-Footed Beastes* (London, 1607), 665, 684.

[119] John Evelyn, "Letter from John Evelyn to Robert Boyle, 3 September 1659" in Boyle, *Works*, 6:288-89.

refectory, library, withdrawing room and a closet," with a gallery, lodging and servant quarters above and kitchen below. In the forecourt would be "common seraglio, disposed into a garden" opposite a "pretty chapel." "There should likewise be an elaboratory [laboratory], with a repository for rarities and things of nature; aviary, dove-house, physic-garden, kitchen-garden, and a plantation of orchard fruit." At £1600, the construction of this scientific retreat, according to Evelyn, is quite feasible.[120] Although Evelyn appears to exult in a politics of pleasurable retirement from social urbanity, his communal estate is to be a house of serious lucubration and devotion for the progress of humanity: "All play is interdicted," there will be "weekly fasts," orders kept, "communion once every fortnight," strangers prohibited, "conversation hours," and most importantly, "every person of the Society shall render some public account of his studies weekly, if thought fit, and especially shall be recommended the promotion of experimental knowledge, as the principle end of the institution." One month of the year the Society will perambulate through London or the universities, sharing the commune's findings for "the public benefit."[121] At the time of composing this letter to Boyle, Evelyn was also in correspondence with Hartlib working on a History of Trades, and though there is an audible chord of utilitarianism reverberating from the halls of his remote pavilion, Evelyn's Society neither achieves nor desires the same level of civic integration and social leveling as Petty's eleemosynary Gymnasium. The remoteness of location and exclusivity of membership are not accidental or convenient attributes. Evelyn's plan emits a strong whiff of nostalgia for the autonomy of landed gentlemen ensured by patronage networks of stable monarchic regimes, save only that in Evelyn's proposition to *conglomerate* the capital of "some gentlemen," nostalgia is currently forced to seek compromise suitable to the limitations of the late Commonwealth era.

[120] Ibid., 289.
[121] Ibid., 290.

Insight into Evelyn's politics of reclusiveness, is found in his contemporaneous publication, *An Apologie for the Royal Party: Written in a Letter to a Person the late Councel of State,* in which he attempts to convince the parliamentarian Herbert Morley to abandon his service to the nefarious Rump and their permanent state of rebellion from the natural political order. The Commonwealth is characterized by "ignorant and furious zeal, this pretence to an universal perfection in the Religious and Secular, after all that blood and Treasure Rapine and Injustice";[122] "insatiable avarice, and prodigious disloyalty" at the behest of "that proud Leviathan [Cromwell]" and the "despicable Rumpe of a Parliament," that without king and God are nothing but "childish Chimeras," "wretched Interludes, Farces and Fantasmes" of state;[123] "intolerable oppressions, taxes, Excises, Sequestrations, Confiscations, Plunders, Customes, Decimations . . . All this dissipated and squandered away, to gratify a few covetous and ambitious wretches"; so many "*Schismes*, and *Heresies*, of *Jewes* and *Socinians, Quakers, Fifth-Monarchy-men, Arians, Anabaptists, Independents*, and a thousand severall sorts of *Blasphemies* and professed *Atheists*, all of them spawned under your government";[124] an infection of "Publicans who have eaten up the people as if they would eat bread"[125] and steered the ship of state disregarding "the known laws of the Land, and as obedient Subjects should do, who without the King and his Peers, are but the Carcass of a Parliament, as destitute of the Soul which should inform and give it being."[126] Whereas the time of the Stuarts under whose rule "we lived with so much sweetness and tranquility, as no age in the world, no government under heaven could ever pretend the like"; an era when there was natural "obedience to your superiours, and charity to

[122] John Evelyn, *An Apologie for the Royal Party: Written in a Letter to a Person the late Councel of State, by a Lover of Peace and of his Countrey: with a Touch at the Pretended Plea for the Army* (London, 1659), 2.
[123] Ibid., 3.
[124] Ibid., 4.
[125] Ibid., 5.
[126] Ibid., 6.

one another";[127] persisting in harmonious subservience to a royal family, "conspicuous to all the world for their Temperance, Magnanimity, Constancy and Understanding";[128] for only under a restored monarchy "the humble man will have repose . . . the Merchant will be secure, Trades immediately recover, Alliances will be confirm'd, the Laws reflourish, tender Consciences consider'd, present purchases satisfied . . . above all this, Christianity and Charity will revive amongst us . . . [and] righteousness and peace shall kiss each other."[129] The political shape of Evelyn's distant hermitage and hand-picked Society correlates to his bleak view of the public under corrupt and sinister Commonwealth authorities. Petty and Evelyn valorize the same terminus of righteousness, charity, and a flourishing economy, but the political manifestations that ensure Baconian voyagers find their destination, that is, the regimes that can rightly appraise and distribute the social value of experimental science to realize those three aspects, for Petty and Evelyn, move in different orbits.

Once the quarrelsome and socially volatile elements (educational reform, confessional and contrary forms of governmental assimilation) are muted, though never completely effaced, within these disparate mappings of Baconian collaboration (those of Bacon, Cowley, Hartlib and Plattes, Evelyn, Petty, and the various promoters of binding court patronage), there remains perceptible a unifying kernel of experimental and observational praxis, and within this core space, I argue, churn the vicissitudes of an (affectively) open, multispecies counter-politics. Wolfgang Van Den Daele asserts that "normative (social, political, religious) neutralization of the knowledge of nature . . . was a condition for the institutionalization of science in the seventeenth century" and that the criteria of what he terms "positive science" were only

[127] Ibid., 8.
[128] Ibid., 10.
[129] Ibid., 11.

cognitively legitimized through the demarcation of internal institutional dynamics from other cultural domains of prosecutable intelligence.[130] This implies that academies like the Royal Society, with differing degrees of self-consciousness, sought to establish "an alternative social structure of science,"[131] one that could rest upon internal measures of validity and its "capability to mobilize political power without itself being anchored in the cultural system."[132] However, the first few decades of the Royal Society were defined by a constant search for those stable forms of institutional authority that could incite unanticipated social and political responses. Thus, a continual appeal to a unifying reductionist explanatory paradigm exhorted the open-textured potency of the sensible natural object to craft an "alternative social structure" free from the encroachments of religious enthusiasm, virtual politics, and arguments to structural alternatives (including those nurtured but unenforced by Society members). For example, in his diary entry of 3 June 1658, John Evelyn extensively describes a whale harpooned to death near Deptford on the Thames. He meticulously measured its length of 58 feet, its height of 16, mentioned its "black skin'd like Coach-leather, very small eyes, great taile," but where he lingered the most was on its mouth, astonished that "an Animal of so greate a bulk, should be nourished onely by slime, thro' those grates" of whale bone (baleen).[133] The encounter prompted one of the few sketches to make the pages of Evelyn's diary. In a recent biography of Evelyn, Gillian Darley links the assault on the whale to providential portents of Crowmell's impending demise, but there is nothing to suggest that is how Evelyn narrowly interpreted the affair.[134] Elsewhere Evelyn heaps eschatological scorn upon Cromwell as that "proud Leviathan" to be condemned

[130] Wolfgang Van Den Daele, "The Social Construction of Science: Institutionalisation and Definition of Positive Science in the Latter Half of the Seventeenth Century," *The Social Production of Scientific Knowledge*, eds. Everett Mendelsohn, Peter Weingart, and Richard Whitley (Drodrecht, Holland: D. Reidel, 1977), 28.
[131] Ibid., 47.
[132] Ibid., 30.
[133] John Evelyn, *The Diary of John Evelyn*, ed. E.S. de Beer (London: Oxford University Press, 1959), 390.
[134] Gillian Darley, *John Evelyn: Living for Ingenuity* (New Haven: Yale University Press, 2006), 150.

by the righteous, but such terms of primeval mythographic abuse are not applied to the unfortunate beached whale.[135] The two are distinct socio-political problematics: the human, Cromwell, has conjured unconscious phobias and compelled his visceral relegation to the demonic by committing the abominable crime of regicide, while the ambiguity of the whale arrogates a conscious curiosity and summons forth an investigatory labor. Coming between the laconic entries of "an extraordinary storme of haile & raine" and the national uncertainties following the death of "that archrebell Oliver Cromwell," Evelyn's consuming engagement with Cetaceous materiality constituted a contemplative aside – an affective imbroglio around a critical question measuring the space between interspecies mechanical similitude and incommensurability. His query concerning the animal's size relative to sustenance and mechanisms of digestion birthed a problem around which a mobile political assemblage (of otherwise non-interactive agents) and its labors would find recurring life, as in the Royal Society's analysis of cetaceous anatomy and behavior according to the whaling industry in November 1663,[136] or Dr. Cox's reiteration of Evelyn's question in July 1678,[137] or Hooke's dissection of the porpoise at Garraway's coffeehouse with which this unit of chapters began. The irruption of the whale into Evelyn's purview was a liberation from what he considered the illegitimacy of the Protectorate and Cromwell's oppressive simulacra of regal bearing; it was an invitation to join an "alternative social structure" in which demarcations of political action were clearly etched into the materiality of a sea mammal and the promises extended through a mediated (and mediatized) afterlife.

[135] See Evelyn, *Apologie*, 3.
[136] See Birch, *History*, 1:324-27.
[137] See Birch, *History*, 3:422.

A line could be drawn through the "sensible object" buried in the centers of these proto-manifestos. Extending from Davenant's operatic *Proposition* through Cowley's, Hartlib's, and Petty's proposals to Evelyn's anchoritic ground plan, one finds a stubborn constant of sensually entangled objects violating the foreclosure of preconceived theoretical or theological epistemic fields. Pulling against each proposition's disparate virtual and phenomenological politics are unified assemblages of *actants*, cutting across species and bodily borders, and conjoining around an alternative empirical politics of the intercessory event. In Chapter Six I return to the sensible, usually nonhuman animal object as it circulated through the spatial and discursive domains of Restoration theatre that intimately consorted with experimental philosophy. For the epistemic flirtations and anxieties of those two imbricated cultural domains (experimental philosophy and theatre) to make sense, it is necessary now to unpack the agential action of animate and inanimate nonhuman life in Royal Society science-in-the-making to understand how precisely interspecies constitutions in the supremely performative spaces of laboratory and repository produced unsettling platforms of epistemological-political autonomy.

Chapter Four

"Ontological Vulnerability and the Establishment of Institutional Sovereignty in Early Royal Society Science-in-the-Making"

Marie Boas Hall in the second chapter of her text *Promoting Experimental Learning: Experiment and the Royal Society, 1660-1727* issues a dichotomous claim about the Restoration scientific institution: unlike other academies beholden to private patrons, the Royal Society "was to be both experimental and independent."[1] A number of unavoidable and unanticipated contradictions pulsate through Hall's statement. Chief among them is the corporate extension of sovereign will implied by the nomenclature "Royal Society" as it bumps up against Hall's chosen adjectival "independent." How exactly could a chartered agency of the restored Stuarts be assessed as acting autonomously? Hall is not completely incorrect, but I think she is too generous and reductively summative with her opening descriptors. Any independence that characterized Societal affairs was an internally wrinkled autarchy, a contentious dynamism of self-sufficiency attached to the phasic motions of political will. Many of the Society's integral members consistently importuned Charles II for greater benefaction; others abstained. Regardless, munificent encouragement along the lines of Louis and Colbert's Parisian Academie des Sciences was not to be achieved. Rather than a unified attribute, "independence" was a fractured composite of royal neglect, failed aspirations, and patches of corporate resistance in search of authorizing social agency. Societal autonomy was protean, transitory, tense, and inconsistent. Flashes of independence arose at the kinetic intersection of fickle sovereign support, clashing virtual politics, and the bare Baconian praxis of interspecies and inter-agential entanglements, all fluctuating along vectors of a broader socio-economic network. Moreover, "independence" was

[1] Marie Boas Hall, *Promoting Experimental Learning: Experiment and the Royal Society, 1660-1727* (Cambridge: Cambridge University Press, 1991), 9.

not an objective virtue positioned contiguously to the quality "experimental," but rather tessellated into the plasmatic foundation of experimental activity itself. Episodes of autonomy produced experiments and experimental undertakings strengthened an independent corporate identity. The privation of an imposed monarchical prerogative reinforced the autonomy of Royal Society nuclear praxis – those concatenated interventions into nature and the process of perceiving her micro-operations (otherwise known as experiment). This corporate interiority of experiment embodied a free-standing socio-political manufacture of knowledge claims, and although permeable to external constraints and conditions, it was culturally unassimilated and congruous enough in its methodological idiosyncrasies to accrue epistemic capital capable of "mobilizing political power." This chapter explores sovereignty (i.e., independence) within the corporate character of the Royal Society as the felt experience of dynamic interspecies constitutions. In contrast to the assertive royal dominion exercised over Louis's Academie des Sciences in France, Royal Society reliance upon a mosaic of cross strata supports, fortuitous donatives, regional correspondences, and the amateur talents or technical capacities of voluntary labor required that, in many instances, authorizing corporate validity emanate from saturated experimental praxis. Materializing from a corporate identity that would gain coherence relative to the density of its inter-organismic and instrumentally embellished experimental procedures (and consequent media) was a precarious agential capacity of nonhuman life to prod political momentum.

Corporate independence of the Royal Society of London for the Improving of Natural Knowledge was an adventitious property emerging from a combination of nullified aristocratic patronage channels and sociological ambiguity. William Blackstone, in his eighteenth century legal commentaries, lists the Royal Society as an exemplum of *aggregate* lay civil corporations

designated for a "special purpose,"[2] to which he subscribes the broad definition of "many persons united together into one society . . . kept up by a perpetual succession of members, so as to continue for ever."[3] The throne, as a *sole* civil corporation, shares with an *aggregate* the quality of perpetuity, but only the natural person of one individual can exercise the temporal office until it passes to a successor by way of the monarch's death or personal will. Where the lines of distinction became blurry is in the Society's *civil* character, because, like the corporate bodies of Oxford and Cambridge universities, the Royal Society did not sustain itself on charitable contributions, but unlike the universities, the precise mechanisms to generate "rewards *pro opera et labore*" (revenue streams for work and labor) were underdeveloped and always insufficient.[4] Remuneration eliminates equivocation surrounding categories of *opera et labore,* but it was here where the Royal Society as corporate institution was suspended between multiplicity and singularity, between its own aggregate desire for internal self-governance and potential emoluments associated with appendages of the sole corporate office of the King. As hopes for royal financial support waned over time, aggregation was forced to adopt patronizing tendencies that sometimes clarified and sometimes muddied, but nevertheless altered the modes of substantiating *opera et labore*.

The first two royal charters (1662 and 1663), which endowed the young corporation with vital independent rights to its own printing (circumventing the Stationer's Register) and the installation of foreign correspondence and collaborative networks, represented the king's consent and protection, but by no means were these charters commensurate with royal patrimony. Although Charles II expressed much interest in the new science, his interest fell short of

[2] William Blackstone, *Commentaries on the Laws of England, in four books* (Oxford: Clarendon Press, 1765-69), 1:457.
[3] Ibid., 469.
[4] Ibid., 471.

providing firm financial incentives and fully embracing either the objectives or qualified *researcher* status of Society members.[5] Societal gratitude to the king, like that expressed in an effusive speech by President Brouncker on 29 August 1662, was not always reciprocated.[6] During the winter months of 1667-68, Lorenzo Magalotti was on a diplomatic mission through northern Europe and England, with one of his obligations being to present bound copies of the Accademia del Cimento's publication *Saggi* to Charles II and the Royal Society. In a January 8 missive sent back to Prince Leopold, Magalotti carped that Charles was "accustomed to call his academicians by no other name than *mes fus* [fous – fools]."[7] Other instances of Charles derision were quite conspicuous. According to Pepys's *Diary* entry of 1 February 1663/4, Charles "stayed an hour or two [at Whitehall], laughing at Sir W[illiam] Petty" and his double-bottomed boat, which was followed by another few hours boisterous merriment spent at Gresham College "mightily laughing" at the Society "for spending time only in weighing of ayre, and doing

[5] To satiate his appetite for chemistry, natural history and mechanics, Charles maintained a menagerie and aviary at St. James Park and had two laboratories constructed for him, one in St. James Park and a more private "chymical" laboratory beneath his closet at Whitehall. He was also on intimate and collaborative scientific terms with Neile, Viscount Brouncker and Sir Robert Moray.

[6] On 29 August 1662, Lord Viscount Brouncker read Charles a letter composed by himself and the council in the most glowing and affectionate language, praising him for what they believed would be a solid patronage arrangement. "We you majesty's most loyal subjects, newly incorporated by your majesty's charter, and honoured with the name of the Royal Society, do with all humility present ourselves before your majesty, the royal founder thereof, to offer you our most hearty thanks, as the only way we have at present to express our deep sense of your majesty's grace and favour to us, and to assure your majesty of our constant veneration for your sacred person our devotion to your majesty's service, and our firm resolution to pursue sincerely and unanimously the end, for which your majesty hath founded this society, the advancement of the knowledge of natural things, and all useful arts, by experiments: A design, Sir, that is deservedly accounted great and glorious, and is universally reputed to be of that advantage to mankind, that your majesty is highly admired and extolled for setting it on foot; and this society is already taken notice of, and famous throughout all the learned parts of Europe; and doubtless in time will be much more by the continuance of your majesty's gracious favour, and the happy success of their endevours, to the great increase of the fame of your majesty's prudence, which hath justly intitled you to the honour of laying the first foundation of the greatest improvement of learning and arts, that they are capable of, and which hath never heretofore been attempted by any: so that men cannot now complain, that the favour and assistance of a potent monarch is wanting to this long-wished for enterprise." See Birch, *History*, 1:107.

[7] Quoted in W.E. Knowles Middleton, "What Did Charles II Call the Fellows of the Royal Society?" *Notes and Records of the Royal Society of London* 32, no. 1 (1977): 14.

nothing else since they sat."[8] Parsimony was the most injurious addition to these insults. Requests for endowments were met with refusals or temporizing negotiations that came to nothing. Funds raised from the Irish land settlement of 1663 ostensibly and initially apportioned for Society usage were ultimately diverted to favored rival claimants. And though Charles did grant Chelsea College to the Society in 1668, legal entanglements and property complications prevented the real estate from being serviceable in both spatial and financial capacities until the king re-purchased the building in 1682 with £1,300 he had invested in East India Company stock.[9] Similarly, Charles's brother James, during his brief royal tenure of 1685-88, neglected reallocating Gresham endowments to support pressing Societal needs of permanent housing and salaried curators.[10] Nor were bequests of objects to be distributed by royal benevolence in any noteworthy supply. Petitions for expired exotics retained in Charles's menageries in St. James Park were generally met with silence. On 9 March 1664, "Dr Charleton suggested, that Mr May should be Spoken to, to let the Society have all those fine Exotick birds of his Majesty that dye."[11] There is no mention of receipt of such rarities in the meeting minutes nor any details on repository inventories to indicate that May acquiesced on Charles's behalf. A renewed petition for rare "Beasts or Fowle" was made in April 1669, but it would appear that Charles's taciturn insouciance on the matter was also renewed.[12] Fretful complaints concerning the financial

[8] Samuel Pepys, "1 February 1664," *The Diary of Sameul Pepys,* eds. Robert Latham and William Matthews (Berkeley: University of California Press, 2000), 5:32-33.
[9] See Michael Hunter, *Science and Society in the Restoration England* (Cambridge: Cambridge University Press, 1981), 40 and 128.
[10] Ibid., 128.
[11] Royal Society, *Journal Book Original*, 9 March 1664, JBO/2/18.https://collections.royalsociety.org/DServe.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqDb=Catalog&dsqCmd=show.tcl&dsqSearch=(RefNo==%27JBO%2F2%2F18%27); see also Hunter, Establishing the New Science, 126; and Jennifer M. Thomas, "A 'philosophical storehouse': the life and afterlife of the Royal Society's Repository" (PhD dissertation, Queen Mary University of London, n.d.), 55.
[12] See Thomas, "Philosophical Storehouse," 55.

neglect of aristocratic donors resurfaced in the writings of Society fellows. John Evelyn in a March 1667 letter to Abraham Cowley brayed,

> Sir, we have a library, a repository, and an assembly of as worthy and great persons as the world has any; and yet we are sometimes the subject of satire and the songs of the drunkards; have a king to our founder, and yet want a Maecenas; and above all, a spirit like yours, to raise us up benefactors, and to compel them to think the design of the Royal Society as worthy of their regards, and as capable to embalm their names, as the most heroic enterprise, or any thing antiquity has celebrated; and I am even amazed at the wretchedness of this age that acknowledges it no more.[13]

In another outcropping of Society resentment, John Webster packed a short dedicatory epistle preceding his *Metallographia* (1671) with endeavors to hound Prince Rupert of the Rhine, Duke of Cumberland into a state of envious and beneficent culpability:

> That your Highness being a Member of the Royal Society (one of the happy fruits of His Majesties blessed and miraculous Restauration, and that which will speak him glorious to all succeeding Generations, beyond all his Royal Progenitors) stands thereby in some measure obliged to be an encourager, and cherisher of all attempts (though of the lowest and meanest persons) that tend to the advancement of Experimental Philosophy.[14]

Likewise, during the heated period of reform negotiations in 1674, a member represented by the initials A.B.,[15] opined that financial security could come from a greater pool of moneyed benefactors only if the Society

> ma[de] sure of the King in the first place, for more or less. For every man will say, why should he concerne himself more than the King, who is our Founder? . . . It is therefore necessary, that the King should as really be our patron, as our founder. Which I doubt not but he would heartily be, if this one thing were taken

[13] John Evelyn, "Letter from John Evelyn to Abraham Cowley, 12 March 1667," *Diary and Correspondence of John Evelyn, F.R.S.*, ed. William Bray (London: George Bell and Sons, 1908), 3:195.
[14] John Webster, "Epistle Dedicatory" to *Metallographia or an History of Metals* (London, 1671), A3-A4.
[15] Scholars disagree on the identity of the author A.B. who penned a letter promoting certain Royal Society reforms on 19 October 1674. Michael Hunter puts forth the hypothesis that the author might be Andrew Birch, since Birch was the only member with the initials A.B., or possibly William Croone. Marie Boas Hall, contrarily, claims that Walter Needham is the best candidate for authorship because Needham was present at the 7 October meeting when Petty put forth an alternative reform proposal and A.B. was most likely used by Needham in its usual capacity as an acronym for anonymous to avoid open dispute.

> care of; that is, That he be made acquainted with what we are doing & with what we have already done.[16]

Despite A.B.'s optimism, Charles would never become the philanthropic Maecenas of Evelyn's ambitions nor Rupert the "encourager and cherisher" of Webster's. The public corporate independence of the Royal Society was always interlarded with pique and peevishness engendered by the negligence of powerful social superiors and similarly plagued by a failure to realize the "favour and assistance of a potent monarch."[17] "Hence," as Michael Hunter asserts, "circumstances almost forced the Society to acquire the characteristics of a voluntary institution."[18]

The voluntary public disposition of the Royal Society was the marriage of intricate constitutionality guaranteeing a quasi-republican corporate longevity with a mélange of extemporized infrastructural and membership criteria conforming to the feints of perpetual financial crisis. Legal sophistication of governing documents obscured an almost illicit state of Society homelessness until the purchase of two houses in Crane Court, Fleet Street in 1710. Charters and statutes betray a byzantine complexity of stipulations for the annual elections of a President, Treasurer, two Secretaries, and provisions for a ruling council, oaths of appointment, formal fellowship nominations and elections, a calendar of membership fees, ad hoc committees, quorums for various decisions, and personnel, like the Sergeants at Mace and curator of experiments. These legalistic punctilios were highlighted by rococo lines of ceremoniousness at meetings. Samuel de Sorbière, during his journey to England in 1663-64, made several observations on Society decorum:

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[16] A.B., "A proposal for the Advancement of the Royall Society, 19 October 1674," in Michael Hunter, *Establishing the New Science: The Experience of the Early Royal Society* (Woodbridge, Suffolk: Boydell Press, 1989), 230.
[17] Thomas Birch, *The History of the Royal Society* (London, 1756), 1:107.
[18] Hunter, *Establishing the New Science*, 35.

> An Usher or Beadle . . . goes before the President with a Mace, which he lays down on the Table, when the Society have taken their Places . . . [around] a large Table before the Chimney, with Seven or Eight Chairs covered with Green-cloth, and Two Rows of Wooden and Naked Benches to lean on . . . the President sits at the middle of the Table . . . The Secretary sits that the End. . . . The President has a little Wooden Mace in his Hand, with which he strikes the Table when he would command Silence: They address their Discourse to him bare-headed, til he makes a Sign for them to put on their Hats; and there is a Relation given in a few Words of what is thought proper to be said concerning the Experiments proposed by the Secretary. . . . He is never interrupted that speaks, and Differences of Opinion cause no manner of Resentment, nor as much as a disobliging Way of Speech. . . There is nothing seemed to me to be more civil, respectful, and better managed than this Meeting.[19]

The more absurd ritualistic elements were really there as tangible and symbolic extensions of constitutional force into what Sprat called a "mixt *Assembly*," so as to reinforce the civility so highly valued by Sorbière.[20] To some degree, a Societal penchant for the punctiliousness of constitutional norms concealed the responsibility for regulating decorum shared by the interpersonal distribution of financial obligations. Behaviors emphasizing the corporate life embodied in stand-alone legal prescriptions, at least to visitors like Sorbière, occluded a coequal but fickle combinatory sovereignty inseparable from dependence on an ever-growing pool of individual subscription fees. Without secure independent revenue streams, decorum was, to a great extent, the product of economic constraints imposed by a very "mixt" and voluntary membership.

Tracking the ebbs and flows of finite but relatively stable fiduciary resources through democratic membership protocols reveals a coercive pressure placed on occasional endowments to feed into Society operations valorized by the majority of Fellows to promote consensus and dissuade conflict. Repeated recommendations to prune the Society of dilettantes, truants, and

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[19] Samuel Sorbière, *A voyage to England, Containing Many Things Relating to the State of Learning, Religion, and Other Curiosities of that Kingdom*, trans. M. Graverol (London, 1709), 35-37.
[20] Thomas Sprat, *The History of the Royal-Society of London, for The Improving of Natural Knowledge* (London, 1667), 379.

those who had fallen into arrears on subscription fees were rebuffed under the pressures of financial exigency. Larger membership meant a larger but never sufficient revenue. To maintain a paramount standard of quality among Fellows, early meetings of 1660 fixed the Society's number at fifty-five, but with yearly subscriptions set at two guineas per member and the unrelenting struggle to exact complete and timely payments, the initial limitation proved untenable. The number of Fellows ballooned to 228 at its apex.[21] Efforts to increase income through individual subscriptions occupy much of the agenda from the later 1660s to the sale of Chelsea College in 1682, with such schemes as raising the annual fee to £5 or configuring sliding scale membership rates.[22] For the most part, membership reforms toward professionalization came slowly and only when substantial alternative stipends could be located in the 1680s. The relationship between pivotal Fellows and peripheral members was thus sustained by a humble commixture of a grudging tolerance of difference across status, denomination, and scientific acumen with savory inducements to increase attendance and pecuniary investment. Actuarial expedients dictating a comprehensive body of those "interested" in the new science meant that core Royal Society programs had to be able to absorb divergence at the micro-scale of individual affiliations. According to Hunter, "The Royal Society was intended to be permanent, stable, safe, after the uncertainties of the mid-century . . . bringing together reasonable men from a wide range of ideological positions[,] . . . a structure within the parameters of which people could collaborate without risking the damaging divisions that the Civil War and Interregnum seemed to exemplify,"[23] or, to recall Sorbière, an assembly wherein "no manner of Resentment, nor as much as a disobliging Way of Speech" was allowed to detract from a reigning "civil[ity]."

[21] See Birch, *History*, 5; Hunter, *Establishing the New Science*, 55; Hunter, *Science and Society*, 41.
[22] See Hunter, *Establishing the New Science*, 192.
[23] Hunter, *Establishing the New Science*, 10.

Constrained by financial expedients and investigative objectives, Society members, at least in official pronouncements and statutes, made every attempt to promote civility by mitigating the variety of individualisms and contrary socialities brought together under its philosophical aegis. In part, this was a microcosmic reflection of Restoration ethics of placability and renewal. "Politeness," in John Evelyn's opinion, returned with cavaliers from France. Charles II "brought in a politer way of living" to quell the boorish proclivities of the preceding era which lacked the mannered direction of a royal court.[24] To take one example, "courtesy" took on an expanded exhibitory dimension, occupying more space on the body and its comportment with the elevated importance of the French dancing master in gentile modes of education.[25] But the restoration of courtly "politeness" did not proceed without sectarian objections and violence. As early as November 1660 it was broadcast that "a horrid intention of murdering the King and divers of the nobility by 5 Monarchy men" had been uncovered, and on the night of 6 January 1661, the Fifth Monarchist John Venner and fifty members of his Swan Alley congregation marched on St. Paul's and defeated an armed guard set against them only to return three days later to combat an entire regiment.[26] The subjects of King Jesus were calling for nothing less than the "Razing, Destroying and perpetuall Rooting out of the whole *Constitutions* and *Foundations*" of what they deemed "the *Antichristian Laws* and *Government* of these Nations."[27] Additionally, Samuel Parker, Royal Society Fellow and later Bishop of Oxford, was openly

[24] Evelyn, "6 February 1685," *Diary*, 789.
[25] See Keith Thomas, *In Pursuit of Civility: Manners and Civilization in Early Modern England* (Waltham, MA: Brandeis University Press, 2018), 28. The French dancing master is also the frequent target of satirical ridicule in Etherege's *Man of Mode* and Wycherley's *Gentleman Dancing Master*.
[26] Quoted in B.S. Capp, *The Fifth Monarchy Men: A Study in Seventeenth-century English Millenarianism* (Totowa, NJ: Rowman and Littlefield, 1972), 199; see also Bernard Capp, "*A Door of Hope* Re-opened: The Fifth Monarchy, King Charles, and King Jesus," *Journal of Religious History* 32, no. 1 (2008): page ##.
[27] Anonymous, *A Door of Hope: or, A Call and Declaration for the gathering together of the first ripe Fruits unto the Standard of our Lord King Jesus*, (London, 1660/1), 10.

denouncing self-proclaimed Rosicrucians as late as 1666 for "Poison[ing] mens minds and dispos[ing] them to the wildest and most *Enthusiastick Fanaticisme.*"[28]

Civility did not swiftly or effortlessly supplant passionate expressions of religiosity as the reigning custom; it had to be cultivated and reinforced if England were to advance in protracting global communities of exchange. "Polite" anti-dogmatism was integral to sustaining the precarious and idiosyncratic corporate sociality of the Royal Society. Remarking on "the early Royal Society['s] . . . carefully non-partisan character," Peter Dear states that "former royalists rubbed shoulders with parliamentarians, and even Anglicans with Catholics; an unusual kind of ecumenism that emphasized the Society's collective determination to turn away from divisive issues of politics and religion."[29] "A Body consisting of so many persons of, and of such different Nations," as Sorbière characterized meetings while relating "that if Mr. *Hobbs* were not so very Dogmatical, he would be very Useful and Necessary to the Royal Society."[30] Joseph Glanvill in his *Plus Ultra* expressed an impassive resistance to discourtesy and dispute as foundational for the "necessary" temperate unity of experimental praxis: for the progress of knowledge "there should be many *Heads* and many *Hands,* and *Those* formed into an *Assembly,* that might *intercommunicate* their *Tryals* and *Observations*, that might joyntly *work* and joyntly *consider*."[31] Thus, "Dogmatizing [was] the great disturber both of our *selves* and the *world* without us: for while we wed an *opinion,* we resolvedly ingage against every one, that opposeth

[28] Samuel Parker, *A Free and Impartial Censure of the Platonick Philosophie* (Oxford, 1666), 72.
[29] Peter Dear, *Revolutionizing the Sciences: European Knowledge and Its Ambitions, 1500-1700* (Princeton: Princeton University Press, 2001), 118.
[30] Sorbière, *Voyage*, 37, 40.
[31] Joseph Glanvill, *Plus ultra, or, The progress and advancement of knowledge since the days of Aristotle in an account of some of the most remarkable late improvements of practical, useful learning, to encourage philosophical endeavours : occasioned by a conference with one of the notional way* (London, 1668), 88.

it."[32] Members undersigned the corporate position that the importance of experimental method to institutional sustainability abrogated religious and theoretical allegiances or the traditional corpus of scholastic wrangling. Robert Hooke's Statutes emphasized that "The Business and Design of the Royal Society is: To improve the knowledge of natural things, and all useful Arts, Manufactures, Mechanics, Practices, Engynes and Inventions by Experiments (not meddling with Divinity, Metaphysics, Moralls, Politicks, Grammer, Rhetoric, or Logick)."[33] Abraham Cowley would allow no theology but the Ten Commandments in his philosophical College.[34] And Bishop Sprat reported in his *History* that the Royal Society freed natural philosophy "from the Artifice, Humors, and Passions of Sects to render it an Instrument, whereby Mankind may obtain a Dominion over *Things*, and not only over one another's *Judgements*."[35] Fellows of the Royal Society lamented the civil disruption caused by religious enthusiasm, myopic scholastic reliance on textual authority, and vexatious theorizing about nature and the origins of divinity and therefore immersed meetings in Baconian protocols for asserting bare, empirical "natural" facticity without the barbs of dogmatic allegiance or presupposed hypothetical determinism.

The production of non-speculative matters of fact became the sine qua non of Society legibility and legitimacy. Robert Boyle, knowing "that the way to get Reputation [was] . . . to explicate things, and promote Opinions . . . condemn'd [himself] . . . only to collect Experiments

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[32] Joseph Glanvill, *The Vanity of Dogmatizing: or Confidence in Opinions Manifested in a Discourse of the Shortness and Uncertainty of Our Knowledge and Its Causes; with Some Reflexions on Peripateticism; and An Apology for Philosophy* (London, 1661), 228.
[33] Martha Ornstein, *The Role of Scientific Societies in the Seventeenth Century* (Chicago: University of Chicago Press, 1938), 108, quoted in Wolfgang Van Den Daele, "The Social Construction of Science: Institutionalisation and Definition of Positive Science in the Latter Half of the Seventeenth Century," *The Social Production of Scientific Knowledge*, eds. Everett Mendelsohn, Peter Weingart, and Richard Whitley (Drodrecht, Holland: D. Reidel, 1977), 31.
[34] Richard Foster Jones, *Ancients and Moderns: A Study of the Rise of the Scientific Movement in Seventeenth-Century England* (Berkeley: University of California Press, 1661), 175.
[35] Sprat, *History*, 62.

for more rational and Philosophical heads to explicate and make use of."[36] Robert Hooke, Curator of Experiments and Cutlerian Lecturer in Geometry urged against "*Dogmatizing*, and the *espousal* of any *Hypothesis* not sufficiently grounded and confirm'd by *Experiments*,"[37] opting instead to correct Hypotheses, the work "of the Brain and the Fancy," with a "return to the plainness and soundness of Observations on material *and* obvious *things,"*[38] and with "a sincere Hand, and a faithful Eye, to examine, and to record the things themselves as they appear."[39] Henry Power exhorted throwing away "all the old Rubbish" and laying a "new Foundation of a more magnificent Philosophy . . . that will Empirically and Sensibly canvass the *Phaenomena* of Nature."[40] Sorbière noted that no "different Hypothesis or Principles have been a means to break in upon the good Harmony of the Society, who know very well they aim at the same thing . . . seeing they all desire to have the same Phaenomena's [sic] explained."[41] In his tract *The Vanity of Dogmatizing*, clergyman Joseph Glanvill, in lavish detail, warned "we have not as yet Phaenomena enough to make as much as *Hypotheseis*; much less, to fix certain Laws and prescribe Methods to Nature in her Actings" and inveighed against conjecture as problematically "describ[ing] and Imaginary World *of our* own making."[42] And Newton, as late as 1713 in the "General Scholium" of the second edition of his *Principia*, warned somewhat hollowly that "Hypotheses, whether metaphysical or physical, or based on occult qualities, or mechanical, have no place in experimental philosophy."[43] Bare "matters of fact" modeled on their manufacture in

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[36] Robert Boyle, *Certain Physiological Essays, Written at Distant Times and on Several Occasions* (London, 1661), 17.
[37] Robert Hooke, "Dedication to Royal Society" in *Micrographia: or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses with Observations and Inquiries thereupon* (London, 1667), Dedication Page.
[38] Hooke, "Preface" to *Micrographia*, 5.
[39] Ibid., 4.
[40] Henry Power, *Experimental Philosophy, in Three Books* (London, 1664), 192
[41] Sorbière, *Voyage*, 38.
[42] Joseph Glanvill, "Dedication to the Royal Society," in *Scepsis Scientifica* (London, 1665), b4.
[43] Isaac Newton, *Principia: Mathematical Principles of Natural Philosophy*, trans. and eds. I. Bernard Cohen and Anne Whitman (Berkeley: University of California Press, 1999), 943.

judicial and juried processes of English common law, as Barbara Shapiro, Steve Shapin, and Simon Schaffer have shown, would be verified by the Society's modest and credible witnesses, and simultaneously subtend and delimit (at least in theory) all ensuing philosophical investigations.[44]

Civil association in the Royal Society was thus constructed around the collection and verification of natural facticity in modes of experimentation and classification, and into these adjudicatory processes is where the pressures of voluntary corporatism funneled scarce financial resources. Limited capital, along with its partner empirical witnessing, mediated civility. In November 1662, Robert Hooke was appointed permanent curator of experiments, "offering to furnish them every day, on which they met, with three or four considerable experiments, and expecting no recompence till the society should get a stock enabling them to give it."[45] The position of experimental curator had hitherto been filled on an ad hoc and voluntary basis, as exemplified by impossible resolutions that "every member of the society shall consider against the next meeting of some experiment, which he will undertake himself."[46] Hooke's stable curatorship was made possible with the assistance of a generous grant from Sir John Cutler also establishing Hooke as the Cutlerian Lecturer of Geometry at Gresham, the first of only two major endowments received by the Society in its initial decade. The second bequest came from Fellow Daniel Colwall and was apportioned for the provision of a repository of rarities and natural artifacts. Michael Hunter asserts that the acquisition of this "highly regarded" resource "was a gesture deliberately intended to demonstrate the institutional vitality of the Society after the intermission of activities caused by the Great Plague."[47] The precursory Renaissance

[44] These legal processes regarding matters of fact are detailed on pages 279-87.
[45] Birch, *History*, 1:123.
[46] Ibid., 80.
[47] Hunter, *Establishing the New Science*, 32.

Wunderkammern (Cabinet of Curiosities) had used a profuse heterogeneity of *naturalia*, "singling out the exceptional, the anomalous, and the bizarre," to bring about dumbstruck wonder in the spectator and announce the emotional and expeditionary sovereignty of the princely collector.[48] By the seventeenth century, according to Katie Whitaker, the resonance of wonder could still be detected in repositories of natural of rarities but it was a "curious wonder . . . reasoned and articulate" that bespoke the perspicuity and epistemic self-determination of the naturalist.[49] Following the example of Charles II's own evolving cabinet of curiosities, the Society drew on Colwall's benefaction to procure the renowned cabinet of Robert Hubert, which had been on display at the Musick House near St Paul's Church, to serve as a foundational stockpile of a functional and developing repository.

The tandem arrangement of public museum and publicized experimentation were the visible edifices of Society praxis and corporate validity. As one of his primary responsibilities, Nehemiah Grew, operating on a rare salary of £50 per annum, was ordered in July 1678 to compile a catalogue of the of the repository to be sold on a subscription basis and make available the Society's collection to the rest of the world. Moreover, despite Society members' communicative deficiencies and poor French pronunciation, Sorbière was "mightily pleased with the Experiments that [he] saw," conflating them with both institutional decorum and longevity.[50] And Lord Brouncker's speech to Charles II on 29 August 1662 made it clear that "experiments" were the cultural currency of corporate sustainability and political intelligibility; that the juried protocols of producing natural knowledge could harden into an epistemological sovereignty animated by kings: "And, Sir, our assurance of this your majesty's favour and assistance is that,

[48] Lorraine Daston and Katherine Park, *Wonders and the Order of Nature* (New York: Zone Books, 1998), 273.
[49] Katie Whitaker, "The Culture of Curiosity," *Cultures of Natural History*, eds. N. Jardine, J.A. Secord, and E.C. Spary (Cambridge: Cambridge University Press, 1996), 80.
[50] Sorbière, *Voyage*, 39.

which gives vigour to our resolutions, and is the life of our hopes, that in due season we shall be able to make your majesty an acceptable present of choice and useful experiments, and accomplish your great design, being thereto engaged by so many powerful motives."[51] Experimentation and collection were the adhesive commixture of core Society operations that could rarify otherwise intrusive virtual political-theological commitments of individual members, generate voluntary consensus around investments of capital, and hollow out socio-political space for institutional residency and coherency. According to Biagioli, "Experiments were also a way out of the deadlock of noncommittal arbitration typical of patronage."[52] They were equivalent to sovereign corporate existence not contingent on the caprice of royal benefaction or mandate. But institutional autonomy was not yet a fait accompli. Infrastructure for a profession of science was primordial, permeable, and kaleidoscopic, widely distributed across social genres and negotiable bodies congealing through the methodological force of saturated experimentation and collection – a science-in-the-making.[53]

The intra-action of nonhuman life and sensible particulars must be interpreted within this Baconian frame of saturated praxes (experimentation and collection) coextensive with corporate autonomy of an institutionalized science-in-the-making. Objects of nature were looked upon as authorizing mediators of factual production, but the technologies of organization and verification

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[51] Birch, *History*, 1:107.
[52] Biagioli, *Galileo Courtier*, 357.
[53] Drawing on Elizabeth Potter's work, Donna Haraway unpacks the experimental laboratory as a site of men/gender-in-the-making to establish who was permissible to make validity claims on the production of factual data. For Haraway, the modesty of the masculine witness was integral to generating his legitimacy. He desired women, but was chaste and corporeally invisible so that his body did not pollute a necessary objective epistemological positionality. This form of masculine modesty, according to Haraway, informed but was concurrently made through experimental praxis. I am applying Haraway's structure to the experimental endeavor as a whole, noting that the parameters of science what practitioners (their race, class, gender, socialities, etc.) legitimized its findings was under construction in the seventeenth century, and thus the entire process of experimental philosophy was more open-ended and inherently contradictory than later instantiations of the laboroatory as socio-disciplinary space. See Donna Haraway, *Modest_Witness@Second_Millennium.FemaleMan ©_Meets_OncoMouse™: Feminism and Technoscience* (New York: Routledge, 1997), 23-39.

(e.g. social, political, discursive, gendered, technical-instrumental) were not yet built into an institutional architecture. Regarding the first decades of the Royal Society, it is best to view the formational process of infrastructural coherency and experimental methodology as a more desultory than linear motility between dialectic poles of phlegmatic voracity of inclusion and dynamic exclusions. By dialectical poles I mean that a specific internal authority of voluntary corporate association looked to the verifying participation of nonhuman life along a coarse axis of institutional intelligibility stretching from pole A, mandates to appease dispersed and variegated collective interest through a rudderless Baconianism of uncontested encyclopedic collection, spectacular performance, or experimental and discursive redundancy to pole B, processes of individuation including selective experimentation, conjectural formation, Societal fractioning or coalition creation, self-fashioning/publicizing, and technological and literary/generic mediation. Empirical density of experimental procedures and literary technologies remained fairly constant, but frequency, style, spaces, and social assemblies of factual validation were tested, rejected, or accepted in a rutted, vulnerable process of institutional determination. The Royal Society's development of criteria for what counted as "science" in its early decades was an unfinished matrix in which unfamiliar appropriations and agential actions of nonhuman animals continually crystallized and deliquesced.

Much of the criticism leveled at the early Royal Society concerned its lack of objective clarity. Although official documents claimed utilitarian motives for experiment and data collection, these were often submerged under an impetus toward ostensibly gluttonous acquisition producing what Michael Hunter claims might be interpreted as "a heap of miscellaneous information."[54] Emphasis on fastidious observation and a reluctance to draw

[54] Hunter, *Science and Society*, 15.

conclusions or generate hypotheses produced something of a methodological stalemate that kept practitioners afloat through encouragements to further observational density and accumulation of phenomena. Speaking for the Society, Sprat divulged that "their purpose was, to heap up a mixt Mass of Experiments, without digesting them into any perfect model" so they can "be nakedly transmitted to the next Generation of Men" as "bare unfinish'd Histories."[55] Sprat's rhetoric was revivified by many Society members as obloquies continued to come from without the corporation and apologetics produced within were tinged with critical disaffection. Henry Stubbe vented his vitriol against the Royal Society in *Legends No Histories,* in which he called the organization, among other animadversions, a site where "illiterate," "mean-spirited . . . comical wits [and] pitiful *Mechanicks*" called the Virtuosi "*entertain their Melancholy,* and *divert their idle hours*" against the intention of their royal founder; a place where "if we look *de facto* upon these *Experimental Philosophers*, and from too *fatal tryals* judge how little *they* are fitted for *those trusts* and *management of business* by that so famed *Mechanical Education,* . . . we must rise as high in our resentments . . . as the concerns of the *present Age* and of *our posterity* can animate *us*."[56] Leibniz complained of Boyle's nigh infinite procurement of facts by objecting that he "does spend rather too long on drawing from countless fine experiments no conclusions except one which he could have adopted on principle, namely that everything in nature takes place mechanically."[57] Richard Steele, though receptive to the benefits of natural philosophy, still critiqued the Society in 1710 for whiling away the hours "among insects, reptiles, animalcules, and those trifling rarities that furnish out the apartment of the virtuoso . . . by which

[55] Sprat, *History*, 115.
[56] Henry Stubbe, *Legends no Histories: or, A Specimen of Some Animadversions upon the History of the Royal Society* (London, 1670), Preface 4-10. (Emphasis in original)
[57] G.W. Leibniz, *New Essays on Human Understanding*, trans. and eds. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1981), 455.

means they expose philosophy to the ridicule of the witty and the contempt of the ignorant."[58] Steele's censure found its way into journalistic print despite the inexhaustible efforts fourteen years prior of Society defender William Wotton who denounced the "*public ridiculing* of all those [Men of Gresham] who spend their Time and Fortunes in seeking after what some call useless Natural Rarities; who dissect all Animals, little as well as great; who think no part of God's Workmanship below their strictest Examination and nicest Search."[59] In fact, Steele's polite disparagement was a near verbatim transmission of Wotton's defense, connoting that in the first fifty years of the Society's existence, public relations campaigns succeeded little in altering popular perceptions, except maybe in softening the critical tone.

The failure to convert public opinion is understandable when dissatisfactions with haphazard collection and unsystematic reportage kept coming to a boil within the ranks of the Society's own membership. William Neile proposed more rigorous planning and controlled execution for the circumscription and specification of experimental inquiry that, when conducted properly, should eventuate in the consideration of causes in committee: "The experiments themselves are but a dry entertainment without the indagation of causes. . . . it seems a little belowe the name and dignity of Philosophers to sitt still with the bare registring of effects without an inquiry into their causes."[60] And most civilly but also searingly, Robert Hooke recommended answering detractors with some product of immediate scientific utility assembled from the increasingly temporizing and inert agglomeration of data and artifacts:

> But as to what concerns this Honourable Society, I conceive it might be a satisfactory Answer to assure such Objectours that this Society have been imployed in collection such Observations, and making such Experiments and Trials as being fitly apply'd and judiciously made use of, will very much tend to the advancement of Natural Knowledge: And tho' the things so collected may of

[58] Richard Steele, *The Tatler,* no. 216 (August 24-26, 1710).
[59] William Wotton, *Reflections upon Ancient and Modern Learning* (London, 1697), 419.
[60] William Neile, "RS Domestic Manuscripts 5.11," in Hunter, *Establishing the New Science*, 224.

> themselves seem but like a rude heap of unpolish'd and unshap'd Materials, yet for the most part they are so qualified as that they may be fit for the beginning, at least of a solid, firm and lasting Structure of Philosophy.
>
> But because some of those may doubt whether really there be any such Collection made, and more of the practicableness of making such a Use and Application of them, and will not acquiesce and be satisfied with the effects hereof that future times may produce, but are desireous to see some Specimen of what be hoped for, by seeing the Ground designed and set out, the Foundation laide, and the Workmen beginning to raise the Walls and make use of the Materials that are said to be got in readiness for such a Fabrick.
>
> I conceive, it may not be altogether unseasonble this following Year nor improper for this *Honourable Society's Care* to make some attempt of that kind by shewing some Specimen of such a Structure raised from Observations and Collections of their own, that it may appear that they have not disquieted themselves in vain, in heaping up such a Treasure which they know not who shall enjoy or make use of.[61]

Hooke, like Neile, believed that a more defined and professionalized research agenda was better suited to the Society's mission of advancing natural knowledge than a facile accumulation of phenomena, which, though successful in wringing subscription fees from the purses of peripheral virtuosi, painted a grander public portrait of indolence and fatuousness.

The intrinsic and extrinsic critiques were not without warrant. "The chief task" of what was considered experimental philosophy by Society membership at the time, in the words of Richard Foster Jones, was "the accumulation of a vast supply of observational and experimental phenomena which might safely furnish the basis of general laws."[62] Henry Oldenburg echoed the universal, forestalling directives of the Council when he averred, "It is our business, in the first place, to scrutinize the whole of Nature and to investigate its activity and powers by means of observations and experiments; and in the course of time to hammer out a more solid philosophy and more ample amenities of civilization."[63] For Oldenburg, Boyle, Sprat, and others, the time-

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[61] Robert Hooke, "A Discourse of Earthquakes," in *The Posthumous Works of Dr. Robert Hooke*, ed. Richard Waller (London, 1705), 329.
[62] Foster Jones, *Ancients and Moderns*, 225.
[63] Henry Oldenburg, "Oldenburg to Van Dam," *The Correspondence of Henry Oldenburg,* eds. and trans. A Rupert Hall and Marie Boas Hall (Madison, WI: University of Wisconsin Press, 1973), 2:13-14.

scale of artefactual production from experimental inquiries spanned generations, which, in one sense could constitute solid, methodical empirical research, yet in another sense might work to sustain the voluntary, participatory nature of the corporation. Sir John Hoskyns's attitude was representative of many ancillary Fellows when he wrote to Aubrey that "meere compiling will content mee."[64] The genial, uncomplicated activities of exhaustive reportage and encyclopedic appropriation were centripetal motions for including peripheral membership and the centrifugal emblems of collectivity and consensus. The background to Boyle's publication of his article "General heads for a *Natural History of a Country*, Great or small" in the *Philosophical Transactions* (1666) was filled with Society committee-driven efforts to a accumulate ordered observations and artifacts from "the remotest parts of the world."[65] In February 1661, a committee of sixteen Fellows led by Brouncker and Moray (and including Boyle) generated a prototypical list of inquiries and directions for traveling Fellows and correspondents that would serve as the template for "a whole genre of inquires aimed at specific geographical areas," such as the East Indies, Virginia, Bermuda, Iceland, Turkey, Guinea, Greenland, Egypt, and Hungary.[66] Michael Hunter's reproduction of the Virginia document displays the Society's ambitions to comprehensive knowledge of exotic *animalia*: "What kind of animals, are peculiar to those places. 1. Insects, flyes, ants, wormes, spiders. Some of each kind to be sent over either alive or dead. 2. What strange fishes, Tortoises or Turtles. 3. What Birds. 4. What Beasts."[67] Similar directed inquiries resurfaced in numerous articles of the Philosophical Transactions: "Directions for Sea-men, bound for far Voyages," "Directions for Observations and Experiments

[64] John Hoskyns to John Aubrey, 16 March 1678, Aubrey 12. 220-221 quoted in Hunter, *Science and Society*, 68. See *Early Modern Letters Online*, http://emlo.bodleian.ox.ac.uk/profile/image/61362220-5b43-49ff-871b-206c09e70c17.
[65] Birch, *History*, 1:15.
[66] Michael Hunter, "Robert Boyle and the Early Royal Society: A Reciprocal Exchange in the Making of Baconian Science," *The British Journal for the History of Science* 40, no. 1 (2007): 15.
[67] Egerton MS 2395, fol. 297, quoted in Hunter, "Robert Boyle and the Early Royal Society," 16.

to Be Made by Masters of Ships, Pilots, and Other Fit Persons in Their Sea-Voyages," "Inquiries for Suratte, and Other Parts of the East-Indies," and others. And, of course, the apogee of instructional guides, Boyle's "General Heads," advised that for "the Composing of a good Natural History, to superstruct, in time, a *Solid* and Useful *Philosophy* upon,"[68] inquisitive travelers must tabulate the stock of bestial difference: "What Animals the Country has or wants, both as to wild Beasts, Hawks, and other Birds of Prey; and as to Poultrey and Cattle of all sorts, whether it have any Animals, that are not common, or any thing, that is peculiar in those, that are so."[69]

The Royal Society was not the first to attempt instructing delegates in procedures for the acquisition of exotic phenomena – in 1602 the naturalist Carolus Clusius had partnered with the Dutch East India Company and equipped the organization's surgeons and apothecaries with similar instructions – but the Society's program was the most extensively developed and, due to the accretion of individual members' active desires for a universal natural history of observable facts, the most redundantly zealous.[70] In the opinion of Alix Cooper, Secretary Henry Oldenburg articulated an "alternative vision" of natural history as an aggregate enterprise aiding the universal research agenda of the Royal Society.[71] Oldenburg made repeated requests to his vast network of contacts for exhaustive local natural histories. His letter sent to Boyle in 1666 boldly outlined his scheme:

> We have thoughts of engaging as many of ye Society, as are cordiall and have opportunity, to observe and bring in, what is any wayes considerable of Naturall

[68] Robert Boyle, "General Heads for a Natural History of a Countrey, Great or small, imparted likewise by Mr. Boyle," *Philosophical Transactions*, vol. 1 (London, 1666), 1:186.
[69] Ibid., 1:188-189.
[70] For further information on Clusius's partnership with the VOC, see Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006), 254-58.
[71] Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2007), 120.

> productions in England, Ireland, Scotland . . . as well as we intend to collect what is abroad, by enlarging our Correspondencies every where, we can.[72]

Robert Hooke believed that before any axiomatic assertions could be made, the Royal Society must be devoted to "a Method of collecting a Philosophical History, which shall be as the Repository of materials, out of which a new and sound Body of Philosophy may be raised . . . a great Store of choice and significant Natural and Artificial Operations, Actions and Effects, ranged in a convenient Order."[73] The symbolic and concrete valuations of a natural "repository," with its attendant methodology of voracious but orderly "compiling" of matters of fact, was the adhesive sine qua non of corporate identity and the ineluctable foundation of any valid future research.

The architecture of what was considered a plausible Baconian "matter of fact" in the production of natural histories heavily influenced motivations to socially enriched modes of encyclopedic compilation. For Bacon, the "grounds of experience" on which a natural history could be composed, and only from which natural philosophy could properly issue, was "a store of particular observations" derived from "dwelling purely and constantly among the facts of nature."[74] (In Bacon's ideation, nature was a threefold manifestation: "free . . . in her own ordinary course; or she is forced out of her proper state by the perverseness and insubordination of matter . . . ; or she is constrained and moulded by art and human ministry.")[75] During the seventeenth century, "experience" for many naturalists, translated into the repetition of firsthand observation of an isolated phenomenon or object,[76] or as Peter Dear states, "experience" in this

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[72] Oldenburg, *Correspondence*, 3:32.
[73] Robert Hooke, "The Method of Improving Natural Philosophy," in *The Posthumous Works of Dr. Robert Hooke*, ed. Richard Waller (London, 1705), 18.
[74] Francis Bacon, *The Works of Francis Bacon*, vol. 4, eds. James Spedding, Robert Leslie Ellis, and Douglas Denon Heath (London: Longman and Co., 1858), 94, 19.
[75] Ibid., 253.
[76] See Ogilvie, *Science of Describing*, 19.

new experimental-observatory idiom divagated from scholastic practice: "rather than being a generalized statement about how some aspect of the world *behaves*, it was instead a report of how, in one instance, the world had *behaved*."[77] Unlike what counted for "knowledge" in the Aristotelian paradigm – that is, knowledge of general causes informed by but not contingent on common experience – Baconian experiential knowledge was a thick sensory registry of the singular event examined either *in situ* or during the experimental process. Thus, a record of facts as things accomplished (from the Latin facere, "to do"), otherwise known as natural history, was, for Bacon and those who took up his mantle, the most valid, weighty, and trustworthy core of knowledge. According to Lorraine Daston, "What was genuinely novel about Baconian facts was not their bizarre character nor even their pointillist structure, but rather their promotion to an epistemological status worthy of natural philosophy" and their "promise" of "freedom . . . from theoretical bias."[78] Producing, agglomerating, and judging "matters of fact" was a collective endeavor of accreting concrete tasks that skirted the theoretical disjunctions of Royal Society Fellows and their various correspondence networks.[79]

Barbara Shapiro has revealed the inherent sociable and even collaborative nature of Baconian factualism by elegantly tracing seventeenth-century scientific "matters of fact" to their provenance in juried processes of English common law, which separated matters of fact or "factum" (action or event) from matters of law. The former were placed institutionally "in the hands of lay jurors, and the latter in the hands of professional judges."[80] Both Matthew Hale and John Locke asserted that juries of citizen peers should not only adjudicate on the validity of the

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[77] Peter Dear, "*Totius in Verba*: Rhetoric and Authority in the Early Royal Society," *Isis* 76, no. 2 (1985): 152.
[78] Lorraine Daston, "Baconian Facts, Academic Civility, and the Prehistory of Objectivity," in *Rethinking Objectivity*, ed. Allan Megill (Durham, NC: Duke University Press, 1994), 46,47.
[79] See Dear, "*Totius in Verba*," 157.
[80] Barbara Shapiro, "The Concept 'Fact': Legal Origins and Cultural Diffusion," *Albion* 26, no. 1 (1994): 2. See also Barbara Shapiro, "Testimony in seventeenth-century English natural philosophy: legal origins and early development," *Studies in History and Philosophy of Science* 33 (2002): 245.

facts themselves as provided through testimony, but also consider the number of testimonial witnesses, their quality and qualifications, status and credibility, "Carriage, Age, Condition, Education," etc.[81] In short, the testimony of multiple independent persons of middling to high standing counted for more in the determination of factual authenticity than that of a single witness or the testimony of dependents (servants, wives, the poor). Shapiro has argued that "credible witness testimony" (developed in the context of common law) "became important to natural philosophers when their attention shifted from universal statements about nature to statements about particular natural and experimental events."[82] Corroboration of how Lord Chancellor Bacon's legal training informed his experimental inductive methodology was never more resplendent than when he discussed the evaluation of matters of fact:

> And yet if the instance be of importance, either from its own use or because many other things may depend upon it, then certainly the name of the author should be given; and not the name merely, but it should be mentioned withal whether he took it from report, oral or written . . . or rather affirmed it of his own knowledge; also whether it was a thing which happened in his own time or earlier; and again whether it was a thing of which, if it really happened, there must needs have been many witnesses; and finally whether the author was a vain-speaking and light person, or sober and severe; and the like points, which bear upon the weight of the evidence.[83]

If we take Bacon's thoughts on the subject of "facts" as authoritative (and most members of the Royal Society did), then, Rose-Mary Sargent's definition holds up: "Facts differ from hypotheses, doctrines, and notions not by their degree of generality or by the absence of human agency in their construction, but by the degree of evidence upon which they are based."[84] Facts,

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[81] Sir Matthew Hale, *The History of the Common Law*, ed. Charles Gray (Chicago, 1970), 154, 165, quoted in Shapiro, "Concept 'Fact,'" 5.
[82] Barbara Shapiro, "Testimony," 251.
[83] Bacon, *Works*, 4:260.
[84] Rose-Mary Sargent, *The Diffident Naturalist: Robert Boyle and the Philosophy of Experiment* (Chicago: University of Chicago Press, 1995), 132. Elsewhere, Sargent states, "Facts are highly confirmed items of knowledge about the effects produced in nature." See Ibid., 145.

even though singular in appearance, were always compilations of evidentiary strata, and evidence was an inextricably socio-ecological production.

Facts of natural history and experimental philosophy were not just objects, but socially fabricated objects situated in pools of interpreted data and epistemological frames. Steven Shapin has vigorously stressed the hybridity of natural and social knowledges, or what he elaborates as "the ineradicable role of people-knowledge in the making of thing-knowledge" with the "stabilization of the latter pervasively . . . rendering the former invisible."[85] Shapin's early work with Simon Schaffer, *Leviathan and the Air-Pump*, parses the apparatus of seventeenth-century experimental philosophy (as exemplified by Robert Boyle and the Royal Society) into three epistemically productive "technologies": material, literary, and social.[86] "Material technology," or the machinic-instrumental extraction and structuration of knowledge, will be handled more searchingly later in this chapter. What requires emphasizing now is that Shapin and Schaffer sketch the production of "matters of fact" (natural knowledge) embedded in a human social and literary field circumscribed by conventions of gentility and gentlemanly norms drawn from civil society. The construction of natural histories in the spaces of experimental verification and fields of observation required protocols for witnessing and testimony that "imitated the act of unmediated seeing."[87] Boyle expressed that "one of the considerablest services, that they could do mankind, were to set themselves diligently and industriously to make experiments and collect observations, without being over-forward to establish principles and axioms;" but the compilation of such a history required a multiplicity of credible and "modest" witnesses.[88]

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[85] Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1994), xxvi.
[86] See Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life* (Princeton: Princeton University Press, 1985), 25.
[87] Ibid., 17.
[88] Boyle, *Works*, 1:302.

Shapin clarifies the "modest witness" in pursuit of truthful consensus as one acting on a moral plane of "free action" and "virtue" guaranteed by the observation of seven tacit prudential maxims in the evaluation of testimony: assent to testimony which is plausible, multiple, consistent, immediate, from knowledgeable sources, presented in a manner that inspires confidence, and from sources of integrity and disinterestedness.[89] In brief, the most credible witness was a *gentleman* liberated from prejudice. The act of natural historical and experimental witnessing functioned both to translate a masculine truth-teller from a feudal-renaissance culture of honor to the early modern domain of gentile modesty and to co-opt gentlemen pledged to other civil zones of discretionary action. Elizabeth Potter, focusing on the socio-sexual life of Robert Boyle, adds a "gender economy" to the construction of modest credibility: "a chaste, modest heterosexual man who desires yet eschews a sexually dangerous yet chaste and modest woman."[90] The important take-away from Shapin's, Schaffer's, and Potter's detailed configurations of credibility obtaining in convocations of scientific judgment is that a specific *form of sociability* (which included the natural factum) was indispensable to the manufacture of objectivity.

This "form of life" did not sit poised but rather roiled between ostensible public availability/accessibility and the tacit operational identities that bounded the experimental community and their disciplined spaces. It bears the marks of science-in-the-making that preceded "the institutionalization of experimental conventions" required for the consummate "naturalization of knowledge."[91] Shapin states that the Royal Society's "early program was to build a solid factual foundation for a reformed natural philosophy by soliciting more and more

[89] Shapin, *Social History of Truth*, 212.
[90] Elizabeth Potter, *Gender and Boyle's Law of Gases* (Bloomington: Indiana University Press, 2001), 4.
[91] Shapin and Schaffer, *Leviathan and the Air-Pump*, 79.

testimony and extending networks of justified trust further and further."[92] However, the lack of institutional foreclosure in the guise of formalized rules left implicit formulations of prudential maxims open to assault from counter-maxims and procedural disjunctions. The sociability of this inchoate science was, like the methodological form of experimental philosophy itself, subject to constant challenge and revision.

Royal Society praxis during the latter half of the seventeenth century retained a tension between the social parameters of modest credibility, tugged and pressed in manifold directions of inclusion and exclusion, and what Shapin identifies as empiricist individualism, "a rhetoric which insisted that no source of factual information possessed greater reliability or inspired greater confidence than the direct experience of an individual."[93] Vetted virtuosi, those gentlemen who had uttered the corporate oaths, could be relied upon to gather sundry phenomena because, unlike natural philosophy, as Paula Findlen states, "natural history [to which the Royal Society devoted its attention] was tactile and visual, and required no specialized knowledge in order to participate."[94] Even though knowledgeability and skill were desirable qualities for Fellows to possess, they were not absolutely requisite in the production of myriad matters of fact; the semblance of independence from theoretical and social biases, however, was. This normative conduct of gentlemanliness in modes of scientific acquisition might have been considered necessary, but it was never sufficient to construct the universal natural history to which the Society aspired. Laboring dependents, like Boyle's servants operating the air pump, were occluded from entering the category of "testimonial witness," yet it would be venturing too far for the Royal Society, at least in practice if not in principle, to deny admission to skilled (or

[92] Shapin, *Social History of Truth*, 205.
[93] Ibid., 202.
[94] Paula Findlen, "Courting Nature," *Cultures of Natural History*, eds. Nicholas Jardine, J.A. Secord, and Emma Sparky (Cambridge: Cambridge University History, 1996), 60.

sometimes unskilled/unvarnished) and reliable individuals from a cross-section of the social panorama. Thomas Sprat celebrated natural history as a brawny and populous collective pursuit:

> We find many Noble Rarities to be every day given in, not onely by the hands of Learned and profess'd Philosophers; but from the Shops of *Mechanicks*; from the Voyages of *Merchants*; from the Ploughs of *Husbandmen*; from the Sports, the Fishponds, the Parks, the Gardens of Gentlemen . . . it suffices, if many of them be plain, diligent, and laborious observers: such, who, though they bring not much knowledg, yet bring their hands, and their eyes uncorrupted.[95]

Rose-Mary Sargent details how Boyle's mission to gather thousands of observations "towards the *History of Nature*" fleshed out the gaunt corpus of polite witnesses with testimony from the shops of apothecaries, tradesmen, and the "work-houses of mechanicians."[96] In the "Preamble" to *Some Considerations Touching the Usefulness of Experimental Natural Philosophy*, Boyle declares, "It may enable gentlemen and scholars to converse with tradesmen, and benefit themselves (and perhaps the tradesmen too) by that conversation; or, at least, it will qualify them to ask questions of men that converse with things; and sometimes to exchange experiments with them."[97] Credibility of science-in-the-making had a material-political unconscious but it was not seamless or without repressed, contradictory events.[98] It was a socially layered and contingent mechanism for manufacturing assent that transgressed typically durable, platitudinous barriers surrounding status. Gentility in the accumulation of facts was never, in praxis, enough.

The undulations of credibility thus worked apprehensively but in tandem with a counterbalancing empiricist individualism that displayed sensible observations of "isolated"

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[95] Sprat, *History*, 72.
[96] Sargent, *Diffident Naturalist*, 140, 138.
[97] Boyle, *Works*, 3:401.
[98] Here I invoke Fredric Jameson's notion of the political unconscious as the allegorical act of reading a text or situational dynamic through "interpretive categories or codes" that establish hermeneutics within a political horizon of expectations. While unstated codes of gentility set limits to the political (actionable) capabilities of certain cross-strata interactions, the tabula rasa of experimental sociability and its predominating objectives ruptured and sutured together that code into more pragmatic collaborations. See Fredric Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (Ithaca: Cornell University Press, 1981), 9.

members in densely descriptive and rhetorically plain-style passages. The society's motto *Nullius in verba* (on no man's word) ingrained individualist observational dictums of forbears like William Harvey and Thomas Browne into Royal Society discursivity.[99] Edward Tyson criticized "Former Naturalists" for "relying on others, when Autopsie, and their own Experience can only inform them; and their Conscience and eyes may be as a thousand Witnesses."[100] John Ray, in his preface to Francis Willughby's *Ornithology* went to great lengths to associate Willughby's "sober and temperate" qualities as a "Gentleman of this nation" with the obligation to produce verbose accounts of direct observations: "we did not, as some before us have done, only transcribe other mens descriptions, but we ourselves [Ray and Willughby] did carefully describe each Bird from the view and inspection of it lying before us," rectifying "many mistakes in the Writings of Gesner and Aldrovandus."[101] The "literary technology" of defoliated, dense descriptions of primary observations, as Shapin and Schaffer identify the rhetorical strategy, mediated the disharmony between naturalist pulpits of authority. "Prolix and operose" passages also summoned to testify what Shapin and Schaffer call virtual witnesses, those distant witnesses inducted by "the production in a r*eader's* mind of such an image of an experimental scene as obviates the necessity for either direct witness or replication."[102] A discursive style multiplying the circumstantial particulars performed mimetically the rummaging of the reader's senses

[99] William Harvey's On the Generation of Animals encouraged inquirers "to strive after personal experience, not to rely on the experience of others." Thomas Browne in *Pseudoxia Epidemica* takes up the extreme anti-authoritarian position of self-authorizing empiricism: "Nor is only a resolved prostration unto Antiquity a powerfull enemy unto knowledge, but any confident adherence unto Authority, or resignation of our judgements upon the testimony of Age or Author whatsoever." See William Harvey, *Anatomical Exercises on the Generation of Animals*, in *The Works of William Harvey*, trans. Robert Willis (Philadelphia: University of Pennsylvania Press, 1989), 157; and Thomas Browne, *Pseudoxia Epidemica: or, Enquiries into Very Many Received Tenents and Commonly Presumed Truths* (London, 1658), 1:26.
[100] Edward Tyson, *Phocaena, or The Anatomy of a Porpess, Dissected at Gresham Colledge: with a Praeliminary Discourse concerning Anatomy, and a Natural History of Animals* (London, 1680), 6.
[101] John Ray and Francis Willughby, *The Ornithology of Francis Willughby* (London: 1679), Preface (A2r, B2v).
[102] Ray and Willughby, *Ornithology*, Preface; Shapin and Schaffer, *Leviathan and the Air-Pump*, 60.

through the objective encounter to generate plausibility and assuage distrust, and could therefore bolster the credibility of the author by effacing (or greatly reducing) his own personal presence.[103]

Precisely because of skepticism like that of Hobbes, who saw the Royal Society as a confederation of prejudicial subjects without an arbitrating authority (neither *a priori* doctrine like mathematical certainty nor sovereign judge), fabricating matters of fact along their own biases, did the foregrounding of inhuman materiality also serve a political function. Thick empiricist interactions and dense descriptions displaced the burden of agential proof onto the "minutely and exactly describe[d]" *naturalia* to actuate assent.[104] Ray and Willughby's birds (oftentimes unwillingly and unconsciously) collaborated with them to resolve epistemological disputes that had transmogrified into entrenched social divisions. Assimilating nonhuman life into the Society's nascent *epistemic ecology* did not involve sifting through its prior textual iterations/mediations, but rather incorporating the unmediated encounter of human subject and nonhuman *actant* into a socio-political fabric. Matters of fact were produced in an inexorably socio-ecological engine that enfranchised (to disparate degrees) nonhuman animals in the process. Socially and epistemologically relying on the persuasive force of *naturalia*, particularly in lieu of the vibrant presence of singular sovereign authority, necessarily demanded what Shapin calls the "ontological openness" of the modern to phenomenologically alternative worlds and forms of life.[105] In the intellectual-material network of the corporate Society, therefore, ontological vulnerability and the politicization of epistemic ecology were caught in an

[103] See Shapin and Schaffer, *Leviathan and the Air-Pump*, 62.
[104] Ray and Willughby, *Ornithology*, Preface.
[105] See Shapin, *Social History of Truth*, 199-200.

unremitting mutual embrace, all the while jostled between individualist research agendas and a peculiar (sometimes contradictory) ethic of civil sociability.

Collective-descriptive impulses of Baconian natural histories could run the spectrum from violent and invasive to the evocation of compassion and respect toward animal subjects, but they always involved decontextualizing nonhuman life from an emblematic tradition of classical-Renaissance naturalism while implicating the animal in the social fabric of science-in-the-making. Using Conrad Gesner's *Historia Animalium* as the epitome of pre-seventeenth-century Renaissance natural history, William B. Ashworth identifies its method as "emblematic," that is, a corrugated assemblage of textual authorities, *fabulae,* and folklore, "a discipline forged in the library with the bibliographic tools of the scholar, rather than an observational science built up by a direct personal encounter with nature."[106] According to Ashworth, Gesner cites over eighty authorities for his article on the fox alone, at the same time vitiating requirements for comparative anatomical or other personal observational research. Before the later sixteenth century, most (but not all) Renaissance natural history was anthropocentrically humanist, or what Foucault in *The Order of Things* defines as "The history of a living being . . . within the whole semantic network that connected it to the world."[107] Texts corseted and shackled animal representations in classical literary tropes and the regurgitated lore of bestiaries, itemizing them in alphabetical formats with very little relation to ecological reality or hints of genetic propinquity. A recent scholarly trend has anodized the epochs straddling Descartes in reductively binaristic terms: romanticizing inter-affective accommodations of what came preveniently while homogenizing post-Cartesianism in technoscientific callousness. Humanities scholars such as

[106] William B. Ashworth, Jr., "Emblematic Natural History of the Renaissance," in *Cultures of Natural History*, eds. Nicholas Jardine, J.A. Secord, and Emma Sparky (Cambridge: Cambridge University History, 1996), 19.
[107] Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1994), 129.

Jacques Derrida, Matthew Senior, and Laurie Shannon have remained within the vein of intellectual-literary history to argue that anthropic acceptance of interspecies communicative capacities and the cosmopolitical inclusion of nonhumans ceased when Descartes convinced the world of his mechanical hypothesis and the automatous corporeality of animal beings.[108]

Not only have these works failed to examine Cartesianism in historical action, diffusing its penetrative power too broadly, they have also tended to stabilize a dichotomous relation between discursive protocols of Renaissance literary genres (in which literariness was a transposed attribute) – poetry, theology, natural history – and rationalist philosophy (or its murkier equivocation/substitute "scientific ideology"),[109] only rarely taking into account the disparate "lived relations" and "embodied histories" of humans and animals who populate these

[108] Jacques Derrida has famously critiqued Western Philosophy's collapse of animals into a conceptual placeholder, "the animal," for determining what is proper to Enlightenment Man. Matthew Senior argues that Descartes ushered in The Age of Reason when he made language the "exclusive vehicle of conscious thought" and ended the debate about the possible existence of animal consciousness, thus silencing beasts by turning them into "the machines of the scientist and the fantasy of the poet." Laurie Shannon's work, *The Accommodated Animal*, is a deft and eloquent handling of idiomatic negotiations around the subjective political inclusion or the zootopian constitutionality of nonhuman creatures in the late Renaissance/early modern discourses of the Hexamoral tradition (Genesis/Biblical) and antique natural history (Pliny, etc.). My issue with Shannon's work is in its lack of localization and the capacious place made for the cataclysmic trope of Cartesian rupture. Shannon identifies differential exceptionalisms in discursive traditions on both sides Descartes's historical entrance – prior exceptionalism being primarily a theological dispensation along a continuum, the post-Cartesian enunciation submerged in the abyssal lack of animal mind/language – without thoroughly dissecting material negotiations that cannot attractively fit into these categorizations. The European acceptance and implementation of the Cartesian system goes unexamined and the "beast-machine" hypothesis, in my estimation, is crafted into a too substantial epistemic bookend. Additionally, Shannon deals with issues of experimentalism and species nomenclature, but she tends to rigidify "species" ahistorically, before its Linnean sexual theorization, and by not working through the contradictions nestled in sociological conditions of execution, conflates Vesalian and Boylean biological experimentation/vivisection. I do not think Shannon is incorrect in her identification of epistemological alterations in discursivity, and her insights on animal "thingification" in experimental performances are laudatory, but I do think the wide reticulation of Cartesian override is unfounded, particularly in the messy business of flesh and blood interspecies encounters. Return to chapter one for elaboration. See Jacques Derrida, "The Animal That Therefore I am (More to Follow)," trans. David Wills, *Critical Inquiry* 28 (2002): 369-418; and Matthew Senior, "'When the Beasts Spoke': Animal Speech in Classical Reason and La Fontaine" in *Animal Acts: Configuring the Human in Western History*, eds. Jennifer Ham and Matthew Senior (New York: Routledge, 1997), 62; and Laurie Shannon, *The Accommodated Animal: Cosmopolity in Shakespearean Locales* (Chicago: University of Chicago Press, 2013).

[109] See Denise Albanese, *New Science, New World* (Durham, NC: Duke University Press, 1996), 3, in which she argues that "the emergence of scientific ideology in the seventeenth-century resulted in the positing of fiction, of literary representation, as its binary (and prospectively devalued) opposite."

centuries, unconscious of a Cartesian rupture in temporality, as Erica Fudge has criticized.[110] Too much socio-political action has been afforded to the symbolical textualization of "pre-Cartesian" animals while omitting the potentially disabling constraints of Renaissance *imitatio*, with its axioms of stylized metaphor, mimesis, diegesis, rhetorical ornament, and generic legibility.[111] Sir Philip Sidney spoke of the poet as ordained idealizer of nature, "borrow[ing] nothing from what is, hath been, or shall be; but rang[ing], only reigned in with learned discretion, into the divine consideration of what may be and should be."[112] The poet "lifted up with the vigor of his own invention, doth grow in effect into another nature, in making things either better than nature bringeth forth, or quite anew, forms such as never were in nature."[113] The poet was a demiurgic creator of chimerical verisimilitude, "affirm[ing]" nothing but his own mastery of fanciful ekphrasis and the tangled intricacies of *sylva rhetoricae*.[114] The rhetorical therophilic tradition (the happy beast) was rife with criticism of human exceptionalism, valorizing the provisioned sufficiency and incorruptibility of nonhuman creatures over the nakedness and cupidity of man, but such censure of human perfidy was indexed against coy caricatures and conflations of

[110] See Erica Fudge, "The Animal Face of Early Modern England," *Theory, Culture & Society* 30, no. 7/8 (2013): 177–198.
[111] The subtle capacity of metaphorical constructions to influence knowledge production no doubt prompted Sprat to inveigh (somewhat disingenuously) against the use of rhetoric in Society discourse: "Who can behold, without indignation, hwo many mists and uncertainties, these specious *Tropes* and *Figures* have brought on our Knowledg? How many rewards, which are due to more profitable, and difficult *Arts*, have been still snatch'd away by the easie vanity of *fine speaking*? For now, I am warm'd with this just Anger, I cannot with-hold my self, from betraying the shallowness of all these seeming Mysteries; upon which, *we Writers*, and *Speakers*, look so bigg. And, in few words, I dare say; that of all the Studies of men, nothing may be sooner obtain'd, than this vicious abundance of *Phrase*, this trick of *Metaphors*,, this volubility of *Tongue*, which makes so great a noise in the World." Thomas Sprat, *History of the Royal Society, for the Improving of Natural Knowledge* (London, 1667), 112. See Andrew Black, "The Orator in the Laboratory: Rhetoric and Experimentation in Thomas Shadwell's 'The Virtuoso,'" *Studies in English Literary Culture, 1660-1700* 37, no 1. (2013): 3-17.
[112] Philip Sidney, "The Defense of Poesy (1583)," in *Theatre/Theory/Theatre: The Major Critical Texts from Aristotle and Zeami to Soyinka and Havel*, ed. Daniel Gerould (New York: Applause, 2000), 121.
[113] Ibid., 120.
[114] Ibid., 123.

species. Montaigne, Gelli, Davenant and others regurgitated the unverified felicity of Pliny's paradisiacal animality:

> The first place will rightly be assigned to man, for whose sake great Nature appears to have created all other things—though she asks a cruel price for all her generous gifts, making it hardly possible to judge whether she has been more a kind parent to man or more a harsh stepmother. . . . On man alone of living creatures is bestowed grief, on him alone luxury, and that in countless forms and reaching every separate part of his frame; he alone has ambition, avarice, immeasurable appetite for life, superstition, anxiety about burial and even about what will happen after he is no more. No creature's life is more precarious, none has a greater lust for all enjoyments, a more confused timidity, a fiercer rage. In fine, all other living creatures pass their time worthily among their own species: we see them herd together and stand firm against other kinds of animals—fierce lions do not fight among themselves, the serpent's bite attacks not serpents, even the monsters of the sea and the fishes are only cruel against different species; whereas to man, I vow, most of his evils come from his fellow-man.[115]

Pliny freights the proem to Book Seven with a slew of patently false assumptions about animal ethology to create a dazzling foil to his experientially certified knowledge of "Man." Indeed, for Pliny, man does take first place in self-pitiability. He neuters and sanitizes species behavior on his journey to manufacture solace, although the sincerity of his personal mollification is always under rhetorical suspicion. Denouncing his own "immeasurable appetites," the orator indulges in yet another act of literary violence by building up the central human subject from the forced conversion of individuated real-world subject-objects into "his" metaphoric bricolage.[116] If, as Shannon affirms, one agenda of early modern humanist poetics "set animals within the scope of justice and the span of political imagination," it was only through their semiotic entrapment in textual transmissions and the abrogation of animal materiality running against the discursive

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[115] Pliny, *Natural History*, trans. H. Rackham (Cambridge, MA: Harvard University Press, 1936), 2:507, 511-512.
[116] Elaine Freedgood offers and insightful contrast between metonymy that remains anchored to the material circumstances of the object and the symbolic labor of metaphor, which deracinates objects from social ecologies to center the human subject of narrative. She invites readers to fissure the internal mechanics of the novel and trace back the cavalcade of textualized objects to their manifold functions in nineteenth-century political economies of empire. See Elaine Freedgood, *The Ideas in Things: Fugitive Meaning in the Victorian Novel* (Chicago: University of Chicago Press, 2006).

grain in cohabitational histories.[117] Renaissance poiesis and rationalist philosophy cannot easily be framed in a paradigm of disjunctive tension. Conceits of both disciplines anthropocentrically promoted immaterial mind as the archaeologist of truth. The majority of pre-seventeenth-century natural history, as compiler of literary reckonings of nonhuman entities, bore the same humanist marks of the mentalité that produced mannerist visual art and lyrical poetry. Aesthetic and philosophical modes (always multiple) were not mutually exclusive but rather interleaved. In a similar manner, Dutch still life painting of the seventeenth century crowded social space with the same empiricist underbelly as Baconian natural histories of the Royal Society.[118] For these curriculums, in contradistinction to bibliographic/mythographical natural histories and rationalist philosophy, the proximity to and duration with the material *animalia* was the unequivocal metric of truth.

Other-than-human life had the stupefying capacity to impose equilibrium on Baconian facticity because its testimonial presence in experimental sociability was crucial to resolve cognitive divergences between individualist and collective levels. "Testimonial presence," here, does not solely refer to workable media substitutions of material phenomena, but also to the *naturalia*'s entrance into an interspecies sociality inseparable from the encompassing epistemic ecology. In a pamphlet dedicated to the Royal Society entitled *Phocaena, or The Anatomy of a Porpess* (1680), FRS Edward Tyson called for localized entanglements with abridged sections of Nature's Book, finding attempts at a universal "Natural History of Animals . . . more Pompous than Instructive."[119] Focused and repeated meditations on limited phenomena and cohabitational zoographies engaged through networks of correspondence would typify Royal Society natural

[117] Shannon, *Accommodated Animal*, 3.
[118] See Svetana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1984).
[119] Edward Tyson, *Phocaena*, 4.

histories. Henry Oldenburg's *Philosophical Transactions*, the published outcome of private editorial efforts in support of corporate visibility, was a primary means of coordinating such sustained collective inquiries. John Ray, who had received a letter from an "Ingenious Cantabrigian [a resident of Cambridge or Cambridgeshire]," transmitted the missive to Henry Oldenburg for publication in issue no. 50 (1669). The letter's original author proffered an in-depth analysis of snail mating habits and "the darting of spiders." The unnamed Catabrigian "had exactly mark'd all the ways of Weaving, used by any sorts of [spiders], and in those admirable works [he] had ever noted that they still let down the Thread, they made use of; and drew it after them. Happily at length in nearly attending on one, that wrought a net, I saw him suddainly in the mid-work to desist, and turning his taile into the wind to dart out a thred with the violence and streame, we see water spout out of a spring."[120] Enflamed by this initial discovery, the author became consumed with "like Observation[s] in almost all the sorts of Spiders . . . and [he] found the Air filled with young and old sailing on their threads, and undoubtedly seizing Gnats and other Insects in their passage; there being often as manifest signes of slaughter, as leggs, wings of Flyes &c. on these threads, as in their webbs below." The Cambridge scholar entered into spider temporality, observing the "the young ones of last Autumns hatch" across the seasons into "Winter and at Christmas."[121] Ultimately, the patient naturalist discovered behavior that he could, for lack of technical nomenclature, attribute to the presence of "mind": "In the end, by good attention I plainly found, what satisfied me abundantly, and that was this; That I observed

[120] Anonymous, "Concerning the odd Turn of some Shell-snailes, and the darting of Spiders; made by an Ingenious Cantabrigian and by way of Letter communicated to Mr. I. Wray, who transmitted them to the Publisher for the R.S.," *Philosophical Transactions* 4, no. 50 (1669): 1014.
[121] Ibid., 4:1015.

them to get to the top a stalk or bough . . . and if they had not a *mind* to saile, they either swiftly drew [their thread] up again . . . or break it off short, and let the air carry it away."[122]

John Ray did not leave his friend's testimony uncorroborated for long. In no. 65 of the *Philosophical Transactions*, Ray vindicated the Cantabrigian's fond memories of his seasons spent among spiders, avowing, "I have seen them shoot their webbs three yards long before they begin to sayl,"[123] and added his own precise observations of arachnid behavior that "They will often fasten their threads in several places . . . by beating their tayles against them as they creep along."[124] Immersion in the defamiliarizing habits of spiders became a prolonged transspecies sociability whose inauguration necessarily preceded its distension along lines of human correspondence between the Cambridge Scholar, Ray, Oldenburg, and finally the *Transactions*'s readership. In a material valence, this social form was not anthropocentric, but rather arachno-centric; spiders were at the core of an anthro-peripheral social network.

Other *Transactions* articles evince how the union of insect livelihood and nomadic curiosity could segue into cohabitational micro-histories. At the beginning of May 1670 (no. 65, *Philosophical Transactions*), Edmund King reported strange "cartrage" habitats of unknown insects burrowed into the side of willow trees. He examined the domestic architecture thoroughly and noted that "[t]hese round appearances of wrapt leaves, all regularly wrought" contained "something alive, or appearances of something that hath dyed there, . . . in some a great number of Mites, . . . in others, white Maggots."[125] After attempting to incubate several maggots into maturity and failing, King enclosed the rest of his brood "in a box till the eighth of July present:

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[122] Ibid. Italics are my emphasis.
[123] Henry Oldenburg, "A Confirmation of what was formerly printed in Numb. 50. of these Tracts, about the manner of Spiders projecting their Threds; communicated by Mr. John Wray, to the Publisher," *Philosophical Transactions* 5, no. 65 (1670): 2103.
[124] Ibid., 2104.
[125] Edmund King, "Observations on Insects, lodging themselves in Old Willows, Produced before the Royal Society by Dr. Edmund King, July 14, 1670," *Philosophical Transactions* 5, no. 65 (1670): 2098-99.

then [he] took one of the out of the wood, and open'd the leaves, and felt something stir, hearing also an humming noise like that of a Bee; and as soon [he] had open'd the Theca, a perfect Bee did fly out against [his] window."[126] Sadly, the other five insects lived but a short buzzing span, never to be liberated from their wooden enclosure. By September of that year, Francis Willughby had submitted to the journal his investigation into the identity of the Willow-burrowing insects. He was most confident the maggots "would produce Insects of the Bee-tribe." Willughby petitioned for a few of King's larval bees because, he admitted, "all mine being of a late hatch, and none of them yet turned into *Nympha's* . . . I fear, I shall not see their last *Metamorphosis* this year."[127] Willughby had found similar "cartrages" made of rose leaves, "out of which" he witnessed "a Bee bite such a piece, and fly away with it in her mouth." Among the "Rose-trees," Willughby found a plethora of "cartrages" and returned frequently to track the deposition of eggs and growth of apiary spawn. He illuminated the segment of the bee's life-cycle obscured inside King's box: the "bee-maggot" lies at the concave end of the "cartrage," feeding upon pap (royal jelly) "till it grows to its full bigness, and then makes, and encloseth her self in, a Theca or husk, of a dark red colour, and oval Figure; in which she is changed into a Bee."[128]

"Maggots," Naisargi Dave states, "are a limit case . . . in that they show us that ethics extinguish."[129] For Dave, picking and crushing maggots off the flesh of Indian street dogs exemplifies a choice in differentiating those nonhuman beings worthy of our care and those selected to suffer our condemnation. But King's and Willughby's respective conjoint action with larval bees around the puzzlement of generation inverts an ethics based on a sliding scale of

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[126] Ibid., 2099.
[127] Francis Willughby, "Extracts of Two Letters, Written by Francis Willoughby Esquire, to the Publisher, from Astrop, August 19th and from Midleton, Sept. 2d. 1670 Containing His Observations on the Insects and Cartrages, Described in the Precedent Accompt," *Philosophical Transactions* 5, no. 65 (1670): 2100.
[128] Ibid., 2101.
[129] Naisargi Dave, "Something, Everything, Nothing; Or, Cows, Dogs, and Maggots," *Social Text* 35, no. 1 (2017): 47.

morphological similitude (in which a dog trumps the maggot) to an ethics based on ontogenetic precariousness, regardless of insectoid structural incongruences with humans. The processual commonalities of nurture and maturation, if only because their precise events are unknown, invite King and Willughby to make an ethical decision to participate (however ineffectually) in the ontogenetic phases of apiary life.

An extract of a letter from M. de la Voye to M. Azout taken out of the *Journal des Sçavans* reveals its author hoarding worms from the stones of a Benedictine Abbey in Normandy. Noticing an abundance of worms in the Cavities of the south wall, de la Voye hypothesized that the worms had eaten away the stone, and therefore he rummaged through "their excrement, and . . . Stone-dust" to extract a few choice inmates for cohabitation. The worms were placed "into a Box with several bits of the Stone, leaving them there together for the space of eight dayes," after which "the Stone seem'd to [de la Voye] eaten so sensibly, that [he] could no longer doubt of it."[130] The box and the worms were then bequeathed to Azout with an appended microscopic description elaborating the ingestive and excremental orifices, the method of motility, and the arrangement of what de la Voye called ten eyes. Not going as far as Darwin, who would posit centuries later that worms displayed "the presence of a mind of some kind,"[131] de la Voye drew close enough to the umwelt of annelids (phylum of segmented worms) to imagine, in Nagelian fashion, what it would be like to thrive in the sensory world of the earthworm, with its ten eyes and linear digestive tract.[132] And de la Voye's conscious imaginings were based on more than just one encounter. The worms of the Benedictine Abbey launched him

[130] M. de la Voye, "A Relation of a Kind of Worms, That Eat Out Stones," *Philosophical Transactions* 1, no. 18 (1666): 321.
[131] Charles Darwin, *The Formation of Vegetable Mould, Through the Action of Worms, with Observations on Their Habits* (London: John Murray, 1892), 35.
[132] This is a reference to Thomas Nagel's essay "What Is It Like to Be a Bat?" in which Nagel posits the subjective nature of consciousness. See Thomas Nagel, "What Is It Like to Be a Bat?", *The Philosophical Review* 83, no. 4 (1974): 435-450.

on a quest through the subtle variations in annelid palates. Unlike "the infinit number of small Creatures" de la Voye had discovered eating mortar on Parisian facades – those described as elongated, blackish organisms with only two eyes – his monastic worms formerly cloistered in Normandy were much heartier and more vigorous.[133] De la Voye knew this because he had frequently absconded the "inferior" worms away from their chosen civic sites and offered them what hospitality he could muster over the span of weeks at his own quarters: refreshing banquets of dirt, water, mortar, and, of course, stones.

While there is a certain whimsical charm to the cohabitational histories mapped out in the above accounts, there is also an inordinate amount of originary violence registered in other biosocial matrices. In issue no. 9 of the *Transactions*, Francesco Redi related his experiments conducted on venomous snakes while at the court of the Grand Duke of Tuscany. Suspecting that the snakes' poison was the yellowish bile issuing from two Vesicles covering the fangs, Redi first had to rule out potential anatomical competitors. First he "rub'd the wounds of many Animals with the *Gall* of Vipers, and pricked them with their Teeth, and yet no considerable ill accident follow'd upon it, but that as often as he rubbed the wounds with the said yellow Liquor, not one of them escaped." Redi had determined that the yellowy secretion was the cause of intoxication, but as a good "Empirick," Redi was not satisfied until he dispelled rumors of corporal noxiousness by isolating the viper's hemotoxicity to its glandular production site. "After many reiterated Experiments" of observing "men eat, and . . . often ma[king] Bruit Animals swallow all that is esteem'd most poysonous in a Viper," Redi confirmed that "neither Humour, nor Excrement, nor any part, not the Gall it self, that being taken into the Body, kills."[134] Furthermore, a Dog, "which [Redi] caused to be bitten by a Viper at the nose," enlightened the

[133] Ibid., 322.
[134] Henry Oldenburg, *Philosophical Transactions* 1, no. 9 (1665/6): 160.

experimenter that "by licking his own wound" and sucking out the poison, a victim could reverse the poisoning process.[135] Fortified by Redi's discoveries, Nathaniel Fairfax surrendered findings from his own experiments with noisome arthropods to the *Philosophical Transactions*:

> That creatures, reputed Venomous, are indeed no Poysons, when swallow'd, though they may prove so when put into Wounds: [Nathaniel Fairfax], for confirmation thereof, alledges Examples of several Persons well known to him (himself also having been an Eye-witness to sum such Experiments) who have frequently swallow'd Spiders, even the rankest kind, without any more harm than happens to Hens, Robin-red-breasts, and other Birds, who make Spiders their daily Commons.[136]

Around Fairfax and Redi form gastronomic communities shackled together by the circulatory presence of the periodical. The above passages are permeated by the biopolitical definition and regulation of an interspecies population heedless of national borders. Italians, Englishmen, "Bruit Animals," dogs, "Hens, Robin-red-breasts, and other Birds," are united under an ethics that classifies those potentially harmed by toxicity against those that cause harm because toxicity is constitutive of their biology: vipers, spiders, and other venomous animals. Management of this population takes the form of an array of mechanisms that ultimately convert population precarity into security: parsing the victim, ceremonies of ingestion, ministration and care of wounds, etc. The process harmonizes with Chloë Taylor's riff on Foucault's concept of biopower "as a right to kill for the protection, management, and fostering of the population," but in this instance the population is not bounded by species identification.[137] An international band of human agents exercise sovereign power to delineate one *interspecies* population against another in a form of coalition building. The social-corporal act of feasting on the flesh of a common foe (made

[135] Ibid., 161.
[136] Henry Oldenburg, "Of a Letter, lately written by Mr. Nathaniel Fairfax to the Publisher, containing Observations about some Insects, and their Inoxiousness, &c.," *Philosophical Transactions* 1, no. 22 (1666/7): 391.
[137] Chloë Taylor, "Foucault and Critical Animal Studies: Genealogies of Agricultural Power," *Philosophy Compass* 8, no. 6 (2013): 542.

common by the very mechanisms of population regulation) concretizes the disparate populations subject to protective or destructive biopolitical controls.

A similar political logic is at work in Edmund King's account of his experience playing emperor among colonies of ants in no. 23 of the *Philosophical Transactions*. Noting that the unperturbed, natural relation of black and red colonies to be one of palpable distance, King surmised it might be worth observing "what enmity there is betwixt these little Creatures." He quickly detected the militancy of intercolonial violence, especially noting "with what violence the *Black* ones will seize on the *Red,* never leaving to pinch them on the head with their Forceps or Claws, till they have kill'd them upon the place, which done, they will carry them dead out of the Field, from their Bank."[138] By contrast, "if you put Black Ants into a Bank of the Red, the Black seem to be so sensible of the strangeness of the place they are in, that there they will not meddle with the Red, but as if they were frighted, and concerned for nothing but self-preservation, run away." But King did not just delight in marshalling antipathetic affect among the ants; he paternalistically followed their ontogeny with soporific interest. He closely attended the developmental stages of "a white substance," placing it under the lens of the Microscope to reveal its ovule structure, opening it with a needle, tracking how the ants "make it their business to carry it away in their mouths to secure it," and recording its transformation from little "Vermicle, as small as a Mite," into a "yellowish and hairy . . . Maggot" and growing in that form until they "get a *Film* over them . . . of an Oval shape" and metamorphose into familiar *formicadae*.[139] With repressed Freudian animosity, King once again mischievously exercised his imperator by "breaking up of their Banks" so he could observe how devotedly the ants

[138] Edmund King, "Observations Concerning Emmets or Ants, their Eggs, Production, Progress, coming to Maturity, Use, &c.," *Philosophical Transactions* 2, no. 23 (1666/7): 425-26.
[139] Ibid., 426.

"immediately carry their Young out of sight again, laying the several sorts of them in several places and heaps."[140] King's aggressive curiosity vacillates between baneful boyish pranks and a mature speculative interest in the ethological apparatus of ants. To what naturalized relations among humans his entomological inquiries might be extrapolated is unexplored, but the racial nomenclature of blacks and reds, the manipulation of colonial boundaries to ascertain biological "enmity," and a malignant intervention into reproductive cycles betoken possible applications to imperial discourse and practice. As Jake Kosek has examined specifically in human-bee relations, the social organization of insects has long been a technological resource in expanding ecologies of empire, with most recent applications to swarm and drone military techno-strategies.[141] Despite certain overtures to political theorization of the natural in the vein of Hobbes, Rousseau, Kropotkin, and even Konrad Lorenz, at this stage all that can be asserted is that King descended from a lofty anthropocentric vantage point to dwell rudely yet responsively among the world of ants, and that action gave rise to an inchoate awareness of *formicidae* biosociality.

King's account of ant interactivity shows that aggression was a marked territory of interest to *Transactions* contributors, but of more interest was the second term in the Freudian dyad of psycho-biological drives: libido. The same Cambridge naturalist who avidly delved into the arachnidan world of webcraft pruriently inserted himself into the sexual life of snails. Bearing witness to the trysts of amorous gastropods, he convalesced from Aristotle's specious thesis of spontaneous generation as if from a malady:

> I have no reason to subscribe to his authority, since I have seen so many of them pair'd, and in the very act of Venery. That they engender then, is most certain; but whether those, that are thus found coupled, be one of them male, and the other

[140] Ibid., 427.
[141] See Jake Kosek, "Ecologies of Empire: On the New Uses of the Honeybee," *Cultural Anthropology* 25, no. 4 (2010): 650–678.

> female, or rather, as you observed, and published to the World in the Catalogue of Plants growing Wild about Cambridge, that they are both male and female and do in the act of generation both receive into themselves, and immit a like penis (as it seems probable to any man that shall part them) I leave to further and more minute discovery to determine.[142]

Thinking through the coital habits of snails, hermaphroditism does not take on the aberrant and abject qualities it does in dimorphic idioms of human sexuality. Bisexual machinery and the copresence of active and passive copulatory behaviors are, to the naturalist, the most empirically sound. Time spent among these queer gastropodal erotics has the capacity to challenge not only gendered paradigms of anthronormativity, but other social models of one-party dominance. The embodied ambiguity of snails and the diversity of its sexual practices, if accepted on their empirical plane, destabilize what Myra Hird cites as the "overburden[ing]" of nonhumans "with the task of making sense of human social relations."[143] If nonhuman mating behaviors are selected to naturalize relations already considered heteronormatively legal and moral through a process of re-inscription, then, by that same logic, expanding the field of natural sex to encompass the abundance of non-dimorphic and transsexual phenomena among nonhumans both weakens nature/culture distinctions of sexuality and removes the spurious limits placed on anthro-biological eroticism.

Like his friend from Cambridge, John Ray sets up provisional forms of tactile interspecies intimacy in the *Ornithology* to test the reputed "salacious[ness]" of hens and other birds: "In the Spring time when they are full of lust, if they be gently stroked on the back, or their Genitals handled, sometimes lay Eggs without the Cock."[144] Ray's discomfiting experiment in

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[142] Anonymous, "Turn of Some Shell-snailes," *Philosophical Transactions* 4, no. 50 (August 1669): 1013.
[143] Myra J. Hird, "Animal Trans," in *Queering the Non/Human*, eds. Noreen Giffney and Myra J. Hird (Burlington, VT: Ashgate, 2008), 228. See also Marjorie Swann, "'Procreate Like Trees': Generation and Society in Thomas Browne's *Religio Medici*," in *Engaging with Nature: Essays on the Natural World in Medieval and Early Modern Europe*, eds. Barbara A. Hanawalt and Lisa J. Kiser (Notre Dame, IN: University of Notre Dame Press, 2008.)
[144] Ray and Willughby, *Ornithology*, 13.

heavy petting is a response to research provocations of William Harvey and his wife, whose zoophilic peregrinations with domesticated fowl Ray rearticulates at some length:

> They are (saith D. Harvey) sometimes so libidinous, that if you do but lightly touch their backs with your hand, they presently lie down, and denude the Orifice of the Womb, which if you gently stroke with your finger, by an incondite murmur, and the gesticulation of their wings, they express their grateful sense of the pleasure they take therein.[145]

The pleasure adduced by Ray and Harvey in these zoophilic arrangements is not solely possessed by the hen. The humans may not be experiencing genital stimulation (or may not be admitting it), but they are finding a level of enjoyment in the transspecies communicative act of giving pleasure. Brown and Rasmussen note that "bestiality requires a consideration of sexual activity along a continuum of activities involving bodies and pleasures, including the range of bodies and pleasures we encounter in our relationships with animals";[146] and Alfred Kinsey came to the conclusion that "[t]he elements that are involved in sexual contacts between the human and animals of other species are at no point basically different from those that are involved in erotic response to human situations."[147] I suggest that Harvey's discursive capture of the event betrays a significant level of *his* psycho-libidinal pleasure, especially considering that sexual pleasure does not begin or end at a subject's own body. The progressive stages of foreplay – from light caresses to genital stroking – and the anthropomorphic ascription of gratitude to the hen's behavioral repertoire of "murmurs" and wing "gesticulations" connote an inter-bodily communication of erotic delectation beyond disinterested observation, and certainly one that exceeds or does not even require the erogenous zone of the male genitals. Harvey characterizes

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[145] Ibid.
[146] Michael Brown and Claire Rasmussen, "Bestiality and the Queering of the Human Animal," *Environment and Planning D: Society and Space* 28 (2010): 160.
[147] Alfred Kinsey, *Sexual Behavior in the Human Male* (Philadelphia: W.B Saunders, 1948), 667, quoted in Marjorie Garber, "Heavy Petting," in *Human, All Too Human*, ed. Diana Fuss (New York: Routledge, 1996), 22.

the fowl as libidinous but the hen is not driving the sexual interaction, nor is the hen demanding the addition of an erotic psychological dimension of gratefulness to the exchange. By providing the hen an emotional context surpassing her visible behaviors, Harvey establishes a pattern of intersubjective recognition and a validation of his own agency in the interspecies fabrication of pleasure. This is not too surprising given that Harvey continually bore witness to his wife's long-term commitment to a same-sex, interspecies relationship founded on the reciprocal distribution of physical pleasure:

> My wife did for a long time keep a notable Parrot, that had learned to speak very prettily, wherein she took great delight . . . Many times it would sportingly and wantonly come up into her lap as she sate, and was much pleased to have its head rubb'd, and its back stroked; and by shaking its wings, and its flattering note, testified the great pleasure it took in those caresses and touches. I interpreted . . . it to be a Cock. Not long after . . . the Parrot (which for many years had lived healthfully) fell sick, and after many convulsions at last expired in the Lap of its Mistress, in which it had so often sported. Cutting up its Carcass (that I might search out the cause of its death) I found and Egg almost perfect in the womb, but for want of a Cock, corrupted, as it happens often to small birds shut up in Cages, which want the company of a Cock.[148]

The presence of female anatomy in the parrot disturbs Harvey's own heterosexual human-avian model that he presupposes as compulsory to experiencing inter-zoological gratification. For Harvey, the difficulty is not in conceiving of an interspecies eroticism – observations have proven its prevalence – but in imagining lesbian pleasure as a multi and transspecies phenomenon. John Ray, too, exhibits the same anxiety concerning heterosexual status of the naturalist. His *Ornithology* is full of interactive chestnuts that elevate the animal above objective status, but observations of sexual anatomy or behavior require an additional nomenclature of gender. For the nominative, genitive, dative or accusative cases, the vast majority of the text employs the third person neutral pronoun "it," species names, or a variation of "bird" in singular

[148] Ibid.

or plural forms. However, when Ray discusses areas near the genitalia, like the "rump" or anus of birds in general (not a particular specimen), he makes certain to place subtle psychosexual dynamics between naturalist and avian subject on a heteronormative grid:

> All birds that we have yet seen or examined . . . have a Rump. Upon the Rump grow to Glandules, designed for the preparation and secretion of a certain unctuous humour, and furnished with a hole or excretory Vessel. About this hole grows a tuft of small feathers or hairs, somewhat like to a Painters Pencil. When therefore the parts of the feathers are shattered, ruffled, or any way discomposed, the Bird, turning her head backward to her rump, with her Bill catches hold of the forenamed tuft, and pressing the Glandules, forces out the oyly pap, and therewithal anointing the disjoyned parts of the feathers, and drawing them out with her bill, recomposes and places them in due order, and causes them to stick together.[149]

The verbiage of the naturalist joins with the gendered rhetoric of humoralism, illustrating an essential quality of glandular incontinence intrinsic to *female* birds. Ray's investigations of the areas surrounding genitals and anus on multiple differently sexed birds are made more socially acceptable by the attribution of feminine pronouns, but he goes further in his establishment of the heterosexual encounter by creating a discursive homology with a pervasive early modern "iconology of women as leaky vessels," particularly resonant in humoral tablature that ensconced feminine bodies in the categories of cool and moist.[150] The primary point I wish to make is that Ray evinces recognition of enough subjective presence in the birds to cave into unconscious social pressures and delimit his discourse within culturally acceptable registers of gender. The "thereness" of bird sentience has the ability to ignite a measurable degree of anxiety around matters of sexual interplay and the possibility of queer displacement.

The Ornithology is rife with moments of subjective recognition that elicit interspecies intimacy, revise conceptions of solely anthropic qualities, or move the borderline between human

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[149] Ibid., 3.
[150] Gail Kern Paster, *The Body Embarrassed: Drama and the Disciplines of Shame in Early Modern England* (Ithaca: Cornell University Press, 1993), 44.

and beast. Ray and Willughby would lie next to the bellies of birds of prey to hear the slight noises that swallowed gravel would make as hawks and falcons digested their meals.[151] Having spent countless hours observing captive and wild fowl, they asserted a modicum of mental and somatic health requirements for improved quality of life, stating "there is no doubt but birds that *enjoy* their liberty . . . live much longer than those that are imprisoned in houses and Cages."[152] Ray and Willughby also confirm that "Some Birds live a Conjugal life, one Cock and one Hen pairing together, and both concurring and assisting each other in sitting and feeding their young," although, resuscitating Aldrovandi they confirm that some may "choose" to live a single life.[153] Even though the two naturalists deny mimetic operatives in nest building, they are emphatic that species of magpie can be instructed in speech by a more rational (i.e., human) pedagogue: "The Bird is easily taught to speak, and that very plainly. We our selves have known many, which had learned to imitate mans voice, and speak articulately with that exactness, that they would pronounce whole Sentences together so like to human Speech, that had you not seen the Birds you would have sworn it had been man that spoke."[154] And like Jason Hribal's *Fear of the Animal Planet*, although not in the same valorizing tone, Ray uncovers some of the hidden history of animal resistance as an unconscious revelation of agential assertion.[155] Ray quotes Thomas Browne's account of keeping several truculent manx shearwater: "I kept two of them five or six weeks in my house, and they refusing to feed, I caused them to be crammed with fish, till my Servant grew weary, and gave them over: And they lived fifteen days without food."[156] The perpendicular violence handed down from the master of the house became more acute as it

[151] Ibid., 8.
[152] Ibid., 15; my emphasis.
[153] Ibid., 15, 14.
[154] Ibid., 128.
[155] See Jason Hribal, *Fear of the Animal Planet: The Hidden History of Animal Resistance* (Petrolia, CA: CounterPunch, 2010).
[156] Ibid., 334.

moved toward the increasingly horizontal plane between vulnerable populations of servants and water fowl, which probably meant that the apprehension of subjective resistance occurred faster at the bottom of social hierarchy. Browne happened to be sensitive to the "weariness" of his servant, but, nevertheless, the bylaws of this particular interspecies constitution started and ended with Browne's imperator. With an emphasis on empirical individualism, naturalists like Ray and Willughby, as detailed in *The Ornithology*, rejected that lengthy chain of responsibility and instead created transspecies accords that may not have been wholly compassionate, but were decidedly more kinesthetic, immediate, and responsive.

Lacking sovereign finality of the *munus regem* or the constrictive lines of science as formalized discipline, the Royal Society, during its protracted negotiations of factuality, constellated nonhuman life into micro-points of correspondence that were potentially diametrically insoluble within a macro-corporate structure seeking international political salience. At one extreme, empirical individualism mandated the record of transitory interspecies encounters and extensive details of natural *emphemera* as indices of plausibly immobile facts; at the other extreme, institutional coherence required a relatively stable representational apparatus of mixed media and sempiternal imprints on what had quickly become international and inter-academic disputes over intellectual priority and the parameters of what counted as experimental science(-in-the-making). The case of porpoise anatomization helps to illuminate the multivalent performative operations animal subject-objects fulfilled in this stratified and columned Royal Society sociability.

The first anatomical description of a porpoise brought to the Society's attention was John Ray's "An Account of the Dissection of a Porpess," printed in no. 76 of the *Philosophical Transactions* (1671). The occasion of the article was the discovery by some fisherman of a

porpoise that had washed ashore at Westchester and was then brought within sight of Francis Willughby and John Ray who were visiting Society Fellow John Wilkins, Bishop of Chester. The stated purpose of the article was to provide a digestible analysis of the anatomical dissection performed by Willughby and Ray so as to supplement "some things omitted by Rondeletius [Guillaume Rondelet] in his Description of the *Dolphin*."[157] In the report Ray adds more precise measurements than Rondelet offered anywhere in his *Libri de piscibus marinis* (published in Lyon in 1554), but according to Gillian Lewis, "many passages (duly acknowledged as such) are Rondelet verbatim. Ray differed from Rondelet hardly at all, and had little to add."[158] Even noting several quintessential homologies with quadrupeds – such as the tail fin's correlation with hind legs, the presence of lungs and respiratory congruities, thermal and circulatory equivalence of blood, and viviparous reproductive symmetries (this porpoise was a male specimen) – Ray, like Rondelet, still placed cetaceans (*bellueae marinae*) within the typological classification of fish in his *Historia Piscium* (published by the Royal Society in 1686).[159] So if it did not augment or emend Rondeletius, what exactly did the appearance of Ray and Willughby's article in the *Philosophical Transactions* achieve? What labor was the cadaver of the porpoise summoned to perform? For one, the methodology of dense and quantified description panoptically exhausted (or appeared to exhaust) the material specimen into firm taxa that did not overturn but affirmed Rondelet's divisions. It must be recalled that the late seventeenth to the early eighteenth century were decades preceding the Linnean theoretical fixity of species in terms of sexual reproduction.

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[157] John Ray, "An Account of the Dissection of a Porpess, promised Numb. 74; made, and communicated in a Letter of Sept. 12, 1671, by the Learned Mr. John Ray, having therein observ'd some things omitted by Rondeletius," *Philosophical Transactions* 6, no. 76 (1671): 2274.

[158] Gillian Lewis, "The Debt of John Ray and Martin Lister to Guillaume Rondelet of the Montpellier," *Notes and Records of the Royal Society of London* 66, no. 4 (2012): 330.

[159] To quote Ray on several points: "Seminal vessels both *praeparantia & deferentia, Epididymides, Vespyramidale, corpus varicosum, & glandulae prostatae,* exactly like to those of Quadrupeds."; and "In a word, the whole structure and substance of the heart and lungs agreed exactly with that of Quadrupeds." Ray, "Dissection of a Porpess," 2276.

"Genus" and "species" were contested, elastic categories that could be shifted if the rationale proved cogent enough. Furthermore, Ray's analytical apparatus of measured precision was anti-conjectural; it immersed suggestions of personal hypothesis in congealed facts of scopophilic verifiability that could readily become corporate property. On this view, then, Ray and Willughby had devised an institutionally claimable document, an anatomical instructional manual of sorts, authenticated by the authority of a not-too-distant source in Rondelet and the accumulation of the porpoise's publicly accessible facticity.

There are other recondite, less totalizing transactions at work in the production and circulation of Ray's article. Transforming an animal subject into objective knowledge requires a subjective source of intervention. Ray, Willughby, and, to a lesser extent, Wilkins, occupy the bulk of that space, with Rondelet as the absent presence of a validating textual subject, but there are auxiliary radiating network vectors not fully enveloped by corporate identity that can be searched for other human agents involved in this transformation. The editorial selection process for publication in the *Philosophical Transactions* was the private domain of Henry Oldenburg whose official role as Society Secretary did not extend to his self-subsidized journal, although the *Philosophical Transactions* was by this time semantically inextricable from the Royal Society corporate persona. In the dedicatory epistle to the first volume, Oldenburg signaled the tendentious autonomy of the *Transactions* when he confided that "these Rude Collections are onely the Gleanings of my private diversions in broken hours."[160] Noah Moxham posits that the

[160] Henry Oldenburg, "Dedicatory Epistle" to *Philosophical Transactions* 1, no. 1 (London, 1666), unnumbered. In the early eighteenth-century Hans Sloane, as Secretary of the Royal Society, would draw on Oldenburg's precedent to defend his editorial agency against charges of cronyism. "MR
OLDENBURG, HIS DEDICATION OF THE 1ST VOL OF PH. TR. TO THE
ROYAL SOCIETY, INTIMATES THAT THEY ARE HIS OWN PRIVATE WORK'.
This is followed by three items: 'Mr Waller, in the Preface ^to^ Ph. Tr. N.196 clears the
Royal Society, which is no way concern'd therein, from all Miscarriages he may possible
commit [in publishing the Transactions]'; 'Dr Hook, of his own account, published Phil.
Collections, after the manner of the Ph. Transactions. He was not Secretary of the R.

independent nature of Oldenburg's journal had "an epistemic aspect: it implied that knowledge claims in *Transactions* had a different status from those to which the Society could credibly stand witness. Not only did these external knowledge claims not belong to the Society, the Society could have little role in assenting to them and thus help to create them as facts."[161] Ultimately, the approval to print was granted through a chain of private negotiations (independent of corporate decree or patronage) among Ray, Wilkins, Willughby, and Oldenburg, with the understanding that the article and its veracity were not Society property. This gave the form and content of the account a somewhat fugitive, peripatetic character that mirrored the construction of the anatomical event. Following that chain of negotiations further illuminates local relays between fishermen, market vendors, and the ecclesiastical office of Bishop Wilkins. The piscatorial knowledge of Westchester's tradesmen (locales, practices, species identification, etc.) and the lack of alternative profit avenues for porpoise flesh are additional constituent elements of the eventual dis-substantiation of cetacean materiality into journalistic print. Rather than an exposed platform of corporate positionality, the article was constructed from congeries of local agents and knowledges acting independently of Royal Society infrastructure, patronage, and authority.

Moreover, there is the agential action of the porpoise and its mutinous materiality. The labor that goes into desiccating ontological uniqueness into a heap of scaly facts is matched by organic matter's obstinate refusal to stay composed under human scrutiny. But something more endemic to the porpoise itself, beyond its carbon basis, advocates nonhuman suffrage in this

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Society'; 'In the Preface to the Ph. Tr. N.143 it is said that The Writing of the Transactions is not ^to be^ looked upon as the Business of the Royal Society." (Note that Robert Hooke had served as Secretary.) Hans Sloane, Brit. Libr., Sloane MS. 4026, fo. 300, quoted in Alice Marples, "Scientific Administration in the Early Eighteenth Century: Reinterpreting the Royal Society's Repository," *Historical Research* 92, no. 255 (2019): 193.

[161] Noah Moxham, "Fit for Print: Developing an Institutional Model of Scientific Periodical Publishing in England, 1665-Ca. 1714," *Notes and Records of the Royal Society* 69 (2015): 252.

interspecies sociality. Because empiricism obligates comprehensive individuated entanglements, Ray is compelled to dwell upon the porpoise's cerebrum and nervous system. The assemblage of facts before him wrings out a conjectural crusade for analogies that can only be recognized in mythographical world-making:

> The largeness of the brain, and the correspondence of it to that of a man, argue this Creature to be of more than ordinary wit, and capacity, and make to seem less fabulous and improbable those Ancient stories, related by *Herodotus* concerning *Arion*: By *Pliny* the Elder concerning a Dolphin enamoured of a Boy, whom he was wont to carry cross a bay of the Sea, from *Baiae* to *Puteoli*, to School, &c. By *Pliny* the Younger, of another enamoured of a boy at *Hippo* in *Africa*, whom he was wont to carry upon his back in like manner. The story is worth the noting: *Epist.*33.1.9.[162]

The comparative factuality of this porpoise's cerebral cortex is more than the sum of its organic parts. Its cumulative effects smack of the occult and gesture towards abstruse revelations of not merely the possibility of interspecies affect, but also prolonged emotional interpenetration between humans and cetaceans. Ray prescinds from the self-imposed constraints of his nude observational methodology and corporate objectives, and seeks approbation in the gossamer visions of fabulae (no longer "fabulous and improbable"). His conceit is one of humanist world-building, injecting the probability of sustainable transspecies relationships into the accumulated facts of history, but it is the empirical encounter between Ray, Willugbhy, and the porpoise that articulates a posthumanist modality. The generic directive to intertexual authority of prior natural history is supplanted by Ray's vulnerability and openness to ontological amendment. The author is petitioning for refuge at the edge of a new hermeneutic horizon and the memorable scraps of classical mythography (drawn from the quasi-histories of Herodotus and Pliny) supply him with temporary shelter. The apparently desultory aside of textual commentary is actually central to Ray's narrative encounter with the porpoise for it is the third operable phase of mimetic action in

[162] Ray, "Dissection of a Porpess," 2277-78.

which the life-world of spectator (Ray) is reconfigured by the agent of performance (the porpoise), and, as Paul Ricoeur asserts, situates participants to potentially radicalize or, at minimum, re-evaluate ethics and the politics of categorical inclusion.[163]

The article that Ray, Willughby and Oldenburg published remained a supple inducement to Royal Society members with the result that the case history of the porpoise could not be finalized with its appearance in the *Philosophical Transactions*. Edward Tyson's *Phocaena, or the Anatomy of a Porpess, Dissected at Gresham Colledge* (1680) was a rare quarto publication dedicated to the Royal Society, and its advent elucidates several unresolved, woolly matters concerning the material-discursive labor that cetacean corporality might consecrate as proprietarily corporate. The dissection and Tyson's quarto account of it came several years after Oldenburg's death, during a time when the *Philosophical Transactions* went into abeyance and a variety of alternative publication formats were tested as viable options of informational exchange.[164] It was also a time when Tyson, with assistance from Hooke, was petitioning the Society to become one of its esteemed Fellows, a title that Tyson was granted two weeks after the dissection and quarto's preparation began in the fall of 1679. Though not printed under the Society's imprimatur, *Phocaena* was Tyson's attempt at producing a corporate asset and presented a model of how individual contributions should be governed within a collective research and publication agenda. Tyson confesses his intervention into nature to be an empirical singularity:

> What is here performed in the Anatomy of a Porpess; since 'tis but from a single Observation, and the first of the kind I had opportunity of dissecting, I cannot think it so exact or full, but that another or myself upon a review, might meet with mistakes, or make additions thereto. Which is but what I have here done to those

[163] See Paul Ricoeur, *Time and Narrative*, trans. Kathleen McLaughlin and David Pellauer (Chicago: Univesity of Chicago Press, 1984), 70-71.
[164] See Noah Moxham, "Edward Tyson's *Phocaena*: A Case Study in the Institutional Context of Scientific Publishing," *Notes and Records of the Royal Society* 66 (2012): 239.

> Accounts given us already of the Anatomy of this Fish, by the famous Rondeletius, Bartholine, Jo. Dan. Major, and Mr. Ray.[165]

Like Ray, Tyson presents his work as one idiosyncratic piece of a larger rebus or as *his own* supplemental intellectual interest paid on a debt to other naturalists. However, the document in its entirety fervidly rubs against this epistemology of incremental maturation via individual contributions and instead postures as a summation of corporate intent. In contrast to Ray's "Account," pivots to corporate legitimation and synoptic expressions suffuse *Phocaena*. The refulgent praise of the dedicatory epistle immediately positions the Society to forfend any individualist impudence on Tyson's part. Tyson avows that the environment of corporate sociability has fabricated his identity from its collective industry: "But one whom the Royal Society hath so far honoured and obliged, as to make him of their Number; how much less possible is it for him to live a Drone, and not to act his part in so industrious and noble a Hive?" The experimental anatomist has been confiscated by their illustrious commune, yet prior to his confiscation, as Tyson seems to express, he did not warrant the status of experimenter nor anatomist. His work as a "Drone" is only legible in the context of the hive. And it is the hive that must validate and promote Tyson's following anatomical report: "As a Specimen of what I am willing more particularly to apply my self to, I here humbly offer the following Discourse to your acceptance." The Society does not erase Tyson's pre-corporate identity so much as evacuate its mercenary distinction and make it communicable within its institutional equipage. Moreover, the collective validation process for Tyson's monograph is buttressed by the referenced inclusion of one of the few subsidized employees of the Royal Society (and certainly the most perennial), Robert Hooke, and his luminous sketches.[166] The parallel and peripheral transactions mentioned

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[165] Tyson, *Phocaena*, 10.

[166] Ibid., 10. By the time of the dissection, Hooke had already written two books of the small batch published by the Royal Society – *Micrographia* (1665) and the recent *Lectures and Collections* (1678).

by Hooke in his *Diary*, like the acquisition of the porpoise at Ulbars and the dissection carried on in public at Garraway's coffee house, are expunged from the record and replaced by the synechdocic "Dissected at Gresham Colledge," which was the official home of the Society.[167] Additionally, one-fourth of the total forty-eight numbered pages are taken up with a prescriptive ur-statement on the methodology and mediation of comparative natural history, "A Preliminary Discourse Concerning Anatomy and a Natural History of Animals."[168] It would seem that Tyson's monograph, unlike Ray's article, was intended to be an official corporate proclamation on the subject of natural history and the appropriation of a certain epistemic space on cetacean anatomy.

Tyson's sponsored treatise was, overall, concerned with moving the lines of classification into an unprecedented arrangement. Lawrence Kruger opines that *Phocaena*'s major contribution to early modern science was placing the porpoise in a comparative frame and "recogniz[ing] the essentially mammalian features of this animal."[169] When correspondences between accounts are discovered, Tyson does not hesitate to cite Ray (which he does often), but he outstrips Ray's already ample references in his documentation of the porpoise's congruity with quadrupeds. Tyson enunciates comparability between "The hindermost pair of fins" and the rear legs of

[167] Noah Moxham relates that he could find no mention of the dissection in the official minutes of the Royal Society, and therefore the work of Tyson and Hooke appear to have been outside the jurisdiction of regular meetings. Tyson's silence on this matter and the inclusion of Gresham College in the quarto's title imply his willingness for the document to be interpreted as a sanctioned Royal Society product. See Moxham, "Edward Tyson's *Phocaena,"* 242.

[168] Noah Moxham argues that Tyson's rhetoric in the prefatory essay "constitutes a deliberate defence of a" humble, contributory, and open "model for the presentation of research that it represents as characteristically English," in contrast to the stern, centralized, even tyrannized version of natural history practiced at the Academie des Sciences in the production of *Mémoires pour Servir a` l'Histoire Naturelle des Animaux* (1671). Moxham, "Edward Tyson's *Phocaena*," 235.

[169] Lawrence Kruger, "Edward Tyson's 1680 Account of the 'Porpess' Brain and its Place in the History of Comparative Neurology," *Journal of the History of the Neurosciences* 12, no. 4 (2003): 41.

quadrupeds,[170] and cites the similitude of adipose tissue,[171] muscular flesh,[172] ovaries, (or what were then called female testes),[173] intestines,[174] livers (which Ray misidentifies as lobed),[175] kidneys,[176] urinary tracts,[177] reproductive organs,[178] circulatory systems,[179] respiratory systems,[180] eyelids,[181] cerebellum and neural systems,[182] and endoskeletons.[183] The conclusion of the opening treatise presents the reader with a cynosural maxim on how to read the logorrheic descriptions of the subsequent dissection: "If we view a Porpess on the outside, there is nothing more than a fish; if we look within, there is nothing less."[184] Which Tyson immediately reiterates, "This Fish . . . in English a *Porpess, quasi Porcus Piscis*, or Sea-hog, . . . Indeed in several particulars [the porpoise] so much resembles that terrestrial Animal, that this name seems not improper but much more justifiable than those of divers other Fishes taken from land Creatures."[185] Tyson's method of establishing these concurrences is a positivistic one of extreme and prosthetic panoptical exhaustion and quantification, offering comparative weights, measurements of minute organs, analyses of fine-grained textures, and several times exceeding Ray's ocular analysis with the assistance of the microscope. Hooke's part in the dissection is obvious when Tyson switches to active verbals and plural pronouns to convey what they found when blood and blubber were placed under the magnifying lens: "Examining a small part of this

[170] Tyson, *Phocaena*, 16.
[171] Ibid., 17.
[172] Ibid., 18.
[173] Ibid., 19.
[174] Ibid., 23.
[175] Ibid., 24.
[176] Ibid.
[177] Ibid., 25.
[178] Ibid., 26-28.
[179] Ibid., 29.
[180] Ibid., 31.
[181] Ibid., 38.
[182] Ibid., 40-41
[183] Ibid., 43.
[184] Ibid., 11.
[185] Ibid., 13.

Fat in a good Microscope, we observed it to consist of an admirable structure of numerous small cells or little bladders, in which was contained the Oyl; so that upon cutting any part the Oyl would readily run out. The Fat therefore or Blubber in this fish was nothing else but Oyl contained in those Cells or bladders."[186] The quotation above is indicative of how the moving parts of the monograph worked together to segregate and partition the animal subject into finer and finer classifiable organic substrates. Tyson's discourse of radically attentive, comprehensive observation and the skilled and costly technical apparatus of the single-lens microscope were "objectifying resources" that severed any semiotic residue of a once holistic animal into the basic elements (cells, blood viscosity, interior liver structure, etc.) of taxonomic equivalences. And although Tyson, like Ray, when confronted with the cetacean cerebral structures, could not help but begin to take flight on a trajectory of fanciful musing, the corporate sanctioned objective methodology kept him grounded:

> Mr. Ray saith that the largeness of the Brain in this fish, and the Correspondence of it to that of a Man's argues this Creature to be of a more than ordinary Wit and Capacity, and makes to seem less fabulous and improbable those antient stories related by *Herodotus* concerning *Arion*, by *Pliny* the Elder concerning a Dolphin enamoured of a Boy whom he was wont to carry cross a Bay of the Sea . . . But *A. Gellius* makes it to be an Imposture of *Herodotus*, as also does *Strabo*. And considering the Lubricity of the skin of this fish, the protuberancy of its back, and its undulating not horizontal motion in swimming, it does confirm their Censure.[187]

Tyson evades involving himself subjectively in ramifications of potential interspecies communication/affective exchanges by first, citing Ray, and second, returning to the materiality of the animal's parts. When corporate resources were brought to bear, it would be sensible facts from sensible objects (protuberancy, lubricity, undulatory motility), not conjectural ontologies, that would decide speculations on matters and ultimately be worthy of discursive inclusion.

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[186] Ibid., 17.
[187] Ibid., 40-41.

Tyson conducts his discourse in agreement with a series of coercive Societal pressures and obstacles to subjective interpolation – cellular examinations in single lens microscopes, densely layered descriptions, utilization of corporate infrastructure and personnel, impetus to comparatively classify, and a submission to the witnessing effects of collective corporate approval – in other words, a quorum of objectifying conventions. Objectivity for Royal Society Fellows was not a theoretical predetermination of what constituted truth, but a governing social methodology that made statements about reality decipherable as facts; or, as Catherine Wilson divulges, "Objectivity is less a matter of the selection of a fundamental ontology of a specially colorless, affectless sort than a matter of the observer's relation to the object studied, and of the precautions the observer surrounds himself or herself with to ensure that this relation is not disrupted and that the information obtained from it is maximal."[188] According to Tyson's treatise, acculturating observed particulars to an amplified taxonomy was one, if not the pre-eminent, elemental technology that maintained a type of de-subjectifying relation of observer to object that Wilson defines as objectivity.

The official business of the Royal Society, according to *Phocaena*, would be classification. Tyson does not explicitly assert mammalian identity for cetaceans (the language was not available to him, thus he relied on the term fish), but he does position the transfer of dolphins and porpoises to taxa that included viviparous quadrupeds. The anatomy in tandem with the "Preliminary Discourse" on natural history lays out a program for "taking to pieces this Automoton, and viewing it asunder the several Parts, Wheels and Springs that give it life and motion" to aid in constructing a taxonomy which "might commence from the lowest degree of Animation in . . . Nature's first Rudiments . . . then gradually ascending by her clew to run

[188] Catherine Wilson, *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: Princeton University Press, 1995), 101.

through all the various Tribes of Animals; carefully observing all along the Harmony she keeps, or the Liberty she takes in the different formation of them."[189] Tyson prescribes a thorough empirical classificatory schematic for governing the teeming morass of growing natural knowledge. It includes a comparative survey of general and external descriptions of animals, the characteristic marks of species and subdivisions, their habitats, seasonality, ethology, sustenance, sagacity, uses and benefits to man, possible environmental harm they cause, anatomical accounts from dissections, the constituent breakdown of corporal fluids, "Psychologia . . . Sensation and Motion, and what other functions there are of the soul," and lastly embryology and ontogeny.[190] Each comparative factor supplements the objectives of categorization into genera and types. Though perhaps informed by mechanical theory, Tyson's schema is empirically distant from Cartesian rationalism and it makes no attempt to abrogate or advocate for the presence of the rational soul. Metaphysics are not in its purview. The onus of classification is placed on observable comparative criteria, be they vestigial structures, coloring, mechanics, behaviors, etc., which might add up to indicate level of rationality, but there is no imperative for the naturalist to drift into such ontological theorization. Rather, correlating and taxonomizing the minutia of sensible objects is rife with dissuasions to hypotheses and ontological openness because it extricates agents from the totality of the immediate encounter and forces them to cognitively engage a grid of fixed descriptive coordinates, functioning in a similar manner as appeals to textual authorities once did in obviated modes of Renaissance natural history. *Phocaena* proposes labor consuming lifetimes, tamping down the acute degrees of "Nature's working, and

[189] Tyson, *Phocaena*, 2,5.
[190] Ibid., 5,7.

gradual formation of the different Species of Animals" into a rigid system; choreographing a perplexing number of slight variations into God's working categorical calculus.[191]

The corporate imperative to classify did not altogether obliterate the possibility of open-textured interspecies encounters, but it propped up a policing function internal to the institutional discourse in which those encounters were legitimized. Ontological openness persisted as aporias in the socio-discursive fabric of the Royal Society, always volatilely present in an array of interspecies constitutions between a diverse membership of private individuals and nonhumans, but actively regulated by the endowed political capacities of corporate sovereignty. Therefore, Tyson could rapturously effuse about the heterogeneous interior topography of animal life and the world-making potentiality of other-than-human encounters – "In every Animal there is a world of wonders; each is a Microcosme or a world in it self,"[192] – as long as that territory was expeditiously assimilated into a synthetic taxonomy of "Natural and Medical Science."[193] For the Royal Society in the later seventeenth century, institutional identity was not yet coterminous with a cultural manifestation of corporate political will. Rather, it was the exteriorized perspiration from muscular contests between transspecies kinesthetic couplings of empirical individualism and corporate motives to delimit orthodox embodiment via methodological and taxonomic strictures. The socio-epistemic potency of nonhuman life in this arrangement could thus effectively retrace the borders of what counted as actionable sovereignty.

[191] Ibid., 11.
[192] Ibid., 3.
[193] Ibid., 2.

Chapter Five

"Transspecies Forms of Embodiment in the Production of Royal Society Legitimacy"

The previous chapter examined the diverse, cross-purposed actions of nonhuman life in the production of institutionalized science through contrapuntal saturated praxes of experimentation and collection. Chapter Five extends that framing to several case studies to pluck the discordant notes present in the multi-faceted transspecies practices wending through the establishment of the Royal Society Repository with its attendant catalogue, the *Musaeum Regalis Societatis*, the pneumatic experiments of Robert Boyle and Robert Hooke, and the xenotransfusion dispute between England and France. What should become obvious is that the relatively public and non-sedimentous form of Royal Society science-in-the making resisted the (primarily Cartesian) theoretical foreclosure of nonhuman potentialities.

Discerned through the long shadows of its taxonomic and historical plasticity, the Royal Society repository at Gresham College was the ironizing site *par excellence* for the surveillance of transspecies encounters. Michael Hunter astutely characterizes the repository as a space "between cabinet of curiosities and research collection," while Alice Marples identifies social modulations in an incessantly "ambiguous relationship between its private and 'public' resources."[1] I would add that the pendulous swaying betwixt public museum and restricted research holdings entailed moving nonhuman life among deictic and syntagmatic arrangements of institutional sovereignty (in-the-making). Put another way, the repository was a public site of cognitive legitimation where institutionalization was *performed* through series of redactions on

[1] Alice Marples, "Scientific Administration in the Early Eighteenth Century: Reinterpreting the Royal Society's Repository," *Historical Research* 97, no. 255 (2019): 183.

nonhuman organisms, occasioning their supervised transfers between plenitude of presence and abstraction.

The period of lubricious transitions I want to incise is confined to the 1670s and 80s, but it will be beneficial to supply a concise survey of the lattice-like anxieties and aspirations that beset the early history of the repository. The exhibition of *animalia* (among other natural artifacts) was to be a precociously visible emanation of incorporation that bespoke sovereign association and authority. In that respect, the repository served a dual function of materially attesting to the vitality of corporate research initiatives and the Society's capacity to mobilize financial and human resources for its participation in the princely political economy of amassing exotica into cabinets of curiosities. Combined with preparations for the impending visit of the king, as early as 19 October 1663, the first official orders concerning the repository were issued for "Mr. Hooke [to] have the keeping of the repository of the Society, for which the west gallery of Gresham was appointed."[2] An accelerated cascade of decrees rolling over the intervening plague and fire of 1665-66 resulted in the purchase of Robert Hubert's celebrated cabinet of rarities in 1666 at the absurdly low cost of 100 pounds – the sum bequeathed to the Society by Treasurer Daniel Colwall for the express purpose of establishing a repository. The London Fire of 1666 forced Society meetings to convene at Arundel House in the Strand and prevented the collection's installment in the west gallery until 3 February 1676, but alternative arrangements were made for Hooke's curatorial duties to be conducted in spaces adjoining his chamber.[3] The impassioned rush to glut the repository with *naturalia* serving no immediate functions in experimental inquiries – the majority of items added from an existing and notable London

[2] Thomas Birch, *The History of the Royal Society* (London, 1756), 1:316.
[3] See Jennifer Thomas, "A 'Philosophical Storehouse': The life and afterlife of the Royal Society's repository," (PhD Dissertation, Queen Mary University of London, 2009), 19; and Michael Hunter, *Establishing the New Science: The Experience of the Early Royal Society* (Woodbridge, Suffolk: Boydell Press, 1989), 139-40.

virtuoso *wunderkammern* – evinced the broader, extrovert social operations the tumescent repository was expected to perform. It signified corporate commitment to encyclopedic ambitions of collecting, but equally if not more importantly, a conspicuous site satiated with rare novelties articulated power in the familiar idiom of regal, or at least opulent, acquisitive display. Hubert's cabinet of wonders, like that of his renowned competitor John Tradescant, were public sites that generated capital and influence. One could gawk at Tradescant's rarities of more "variety than any one place known in Europe" for a fee of sixpence,[4] while Hubert slickly and grandiosely advertised, "You may see every afternoon, that which hath been seen by those that are Admirours of Gods Works in Nature, with other things that hath been seen by Emperours, Empresses, Kings and Queens, and many other Soveraign Princes."[5] During their travels of 1664, John Ray and Philip Skippon visited the Duke of Modena's impressive cabinet and they both remarked upon the outrageous sums of capital involved in agglomerating the vertiginous array of natural artifacts – 300 pistoles/doppii given to Zennon the apothecary for his collection and 1000 pistoles/doppii settled upon for the purchase of Septala of Milan's cabinet before the former Duke of Modena's death.[6] As Paula Findlen asserts, "If having a collection was one means by which a prince or a merchant might proclaim his ability to command the world, creating a microcosm in which to receive visitors and to demonstrate his place in a world of

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[4] John Tradescant, "To the Ingenious Reader," in *Musaeum Tradescantianum, or, A Collection of Rarities Preserved at South-Lambeth neer London* (London, 1656), unnumbered, ra1. See also Arthur MacGregor, "The Cabinet of Curiosities in Seventeenth-Century Britain," in *The Origins of Museums: the Cabinet of Curiosities in Sixteenth and Seventeenth-Century Europe*, ed. by Oliver Impey and Arthur MacGregor (Oxford: Clarendon Press, 1985), 150; and Marjorie Swann, *Curiosities and Texts: The Culture of Collecting in Early Modern England* (Philadelphia: University of Pennsylvania Press, 2001), 4.

[5] R.H., alias Forges [Robert Hubert], *A Catalogue of Part of Those Rarities Collected in Thirty Years time with a Great Deal of Pains and Industry by One of His Majesties Sworn Servants*, (London?, 166?), 1.

[6] See John Ray, *Observations Topographical, Moral, & Physiological Made in a Journey Through Part of the Low-Coutnries, Germany, Italy, and France* (London, 1673), 237; and Phillip Skippon, *An Account of a Journey Made thro' part of the Low-Countries, Germany, Italy, and France* in *A Collection of Voyages and Travels*, vol. 6 (London, 1744), 6:578.

global commerce and conquest, then a collection was indeed worth something. . . . By the late seventeenth century, . . . The economic ability to *afford* a famous cabinet, in other words, had become a measure of one's status."[7]

Specifically, the accumulation of rare and exotic animal specimens – what Michael Hunter has called "the collection's basic stress on non-indigenous specimens" – could simultaneously vouch for Royal Society sovereign economic sanctity and its possession of experimental *techne* in taxidermic preservation.[8] These amounted to an institutionally idiosyncratic kind of cultural capital that nevertheless volubly communicated within the horizon of courtly semiotics. Thus, even before and after the obtainment of Hubert's collection, animal bodies became a valuable symbolic and material currency. On 9 March 1664 "It was ordered, that Dr. Merret and Dr. Charleton consider and make a catalogue of what is most desirable of all sorts of animals for the repository of the Society, both exotic and domestic; and withal, to give directions, how to prepare them as to their skins, when dead."[9] To which "Dr. Merret moved that in the first place notice should be taken, and a collection made, of all the rare productions of England, as to beasts, birds, fishes, vegetables, minerals, &c" and "Dr. Charleton suggested that Mr. May . . . might let the Society have all those fine exotic birds of the king, that should die" – royal gifts, as stated earlier, which never materialized.[10] Though frustrated by royal negligence and refusal, the Society landed upon other means to stockpile exotic corpses through mechanisms of gift exchange and barter. A somewhat blunt, graceless notice was issued in the *Philosophical Transactions* in October 1666 touting the "considerable Collection of Curiosities

[7] Paula Findlen, "Inventing Nature: Commerce, Art, and Science in the Early Modern Cabinet of Curiosities," in *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002), 300.
[8] Hunter, *Establishing the New Science*, 149.
[9] Birch, *History*, 1:392.
[10] Ibid., 1:393.

lately presented to the lately nam'd Society for their Repository," and notifying other potential donors that "whatsoever is presented as rare and curious, will be with great care, together with the *Donors names* and their *Benificence* recorded, and the things preserved for After-ages, (probably much better and safer, than in their own private Cabinets;) and in progress of Time will be employed for considerable Philosophical and Usefull purposes."[11] Regarding the early history of fleshing out the repository, Jennifer Thomas has charted two major ramifications of collection strategies which she respectively terms institutionally "proactive" and "spontaneous[ly]" donated or indirectly solicited. The first category contains direct written requests by the Council, like the August 1664 petition to Lord Berkeley to mediate with the East India Company and offer them financial assistance to procure "particulars of the productions and curiosities of nature . . . for the use of the said society,"[12] or the salaried position of £30 for one year's labor collecting England's "plants and other natural curiosities" offered to Thomas Willisel in 1669.[13] More substantively, Oldenburg's insistent epistolary entreaties for animal specimens and other natural objects precipitated a culture in which the specimen became *de facto* requisite for accounts to be given serious consideration and terminate in publication. Jennifer Thomas correctly assesses that material artifacts "authenticated . . . the observations and inferences of the author, without the need for assessing their credibility," but there was a secondary, parallel attribute of *naturalia* functioning, in effect, as a currency of access.[14]

Moving within the Royal Society ambit often tacitly, if not explicitly, relied on the exchange of material nature – all those "well-intentioned gifts of virtuoso Fellows and others."[15]

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[11] Henry Oldenburg, *Philosophical Transactions*, 1, no. 18 (1666): 321.
[12] Birch, *History*, 1:457.
[13] Birch, *History*, 2:359, 371.
[14] Thomas, "Compiling," 4.
[15] Hunter, *Establishing the New Science*, 149.

For example, John Templer's repository donation of a lamb's jawbone with brazen-colored teeth fortuitously coincided with the publication of his article on an unrelated topic, "Observations upon a Pleasant Way of Catching Carps," in *Philosophical Transactions* no. 95 (1673).[16] And John Van de Bemde's election into the society was promptly answered with his repository additions of sand "taken up in the Danube" and "a black stony substance . . . taken up on the mountain Vesuvius."[17] Left wanting by Charles II's indifference, the Royal Society eagerly accepted gifts of preserved animal materiality, which seemed to hold the greatest promise for positively affecting donor-company relations. As the Society debated with city officials over re-occupying its former galleries in Gresham, the current occupants, the East India Company, in a gesture infused with brinksmanship, undertook to placate Fellows with the donation of "the whole skin of a musk deer; for which . . . Sir Robert Moray, was desired to express, upon occasion, to the governor of that company, Sir John Banks, the great sense, which the Society had of their favour and kindness, in increasing the stock of their philosophical store-house with so rare a present."[18] Exotic or rare animal specimens filled in the deplorable gaps in royal benefaction that otherwise would have been embarrassingly evident in his chartered public repository and bestowed a prestige and corporate mobility upon the donor. Those perquisites must have been partly what encouraged Boyle during a 29 April 1669 meeting, when discussion skeptically turned to obtaining the deceased "beasts or birds of the King," to announce "that there was then in London such a deer as the gazelle brought from Bantam, [and], if it should die,

[16] See Birch, *History*, 3:97; and John Templer, "An Extract of a Letter Written by Mr. John Templer, June 16, 1673, Containing Some Observations upon a Pleasant Way of Catching Carps," *Philosophical Transactions* 8, no. 95 (1673): 6066-6067.
[17] Birch, *History*, 3:442, 449; also see Thomas, "Compiling," 5.
[18] Birch, *History*, 3:76. I have not ventured to track these debates but Michael Hunter has pieced together evidence showing that the Society did eventually resume residency in Gresham's west gallery (occupied by the East India Company post 1666 fire) by February of 1676, a sluggish three years after the move back to Gresham from Arundel House. See Hunter, *Establishing the New Science*, 140.

he would procure it for the society . . . if he could," and to present "for the repository . . . the skin of a calfe with two heads" at the following meeting of May 6.[19] As early as October 1663, Hooke was ordered to "always affix some note to the things in it [the repository], by which it might be known what they are, and by whom they were presented."[20] With the names of donors appended, specimens inevitably functioned to build up personal credit and prerogative within a collective repository system that was itself a vibrant sign of institutional authority.

Birch's History is riddled with repository contributions of marvelous *animalia* from Fellows with no calculated experimental purpose in mind. In 1663 John Wilkins gifted an ostrich's egg shell with other novelties and "it was ordered, that he be registered a Benefactor; together with prince Rupert, for his water-engine."[21] Boyle gave, in 1664, a linnet and a snake "preserved . . . in some spirit of wine made after a peculiar manner."[22] On 3 May 1665, "Mr. Palmer presented the society with several American curiosities for their repository, viz. a *cervus volans*, a humming bird, several rattles of rattle-snakes, and the pizzle of a raccoon."[23] "Dr. Wilkins produced the skin of a monstrous lamb sent him of Cambridgshire, having seven legs, two bodies, two tails, and only one head, which he left with the Society . . . for their repository."[24] Robert Hooke submitted "some curiosities [of] . . . certain tongues, and teeth, and eyes, called serpents-tongues . . . to be put into the repository."[25] In 1666, Povey and Oldenburg "offered some curiosities of silk-worms for the repository."[26] Whistler contributed an "odd insect, called Gryllotalpa."[27] The list of items from a herd of donors continues: three queen-

[19] Birch, *History*, 2:361, 362.
[20] Ibid., 1:322.
[21] Ibid., 1:324.
[22] Ibid., 1:374.
[23] Ibid., 2:45.
[24] Ibid., 2:56.
[25] Ibid., 2:58.
[26] Ibid., 2:76.
[27] Ibid., 2:90.

bees,[28] "the skin of an antelope, which died in St. James's Park,"[29] stag's tears,[30] a bird called Coccothraustes,[31] "the eggs of a ray-fish,"[32] one of the few avian gifts from the King's menagerie attendant, Mr. May: "a dead indian bird like a crane,"[33] "muscles grown in a stone at the bottom of the sea,"[34] a young tiger's skull, strange American flies, an ape's skull, fish scales,[35] a monstrous chick,[36] a sought after mummy from Henry Howard;[37] Dr Pope "informed the society, that he had agreed with a friend of his in Cornwall to preserve for their repository whatever fishes and birds were to be met with in these parts";[38] whale vertebrae,[39] petrified nautilus shell;[40] the skull of an executed criminal,[41] two tortoise eggs, "one of which was taken by the president to be hatched by a hen,"[42] petrified shark teeth;[43] fish blood,[44] the "hand" of a "sea-leopard,"[45] portions of a hippopotamus skeleton,[46] shell fish from New England,[47] a bee hive,[48] copper-colored teeth from oxen and cows,[49] odd leg of a human,[50] a locust, cricket, large spider, flying fish, various small fish,[51] the foot of a sea fowl,[52] a bee hive from Virginia,[53] a

[28] Ibid., 2:96.
[29] Ibid., 2:104.
[30] Ibid., 2:117.
[31] Ibid., 2:124.
[32] Ibid., 2:129.
[33] Ibid., 2:156.
[34] Ibid., 2:162.
[35] Ibid., 2:167.
[36] Ibid., 2:196.
[37] Ibid., 2:202.
[38] Ibid., 2:215.
[39] Ibid., 2:241.
[40] Ibid., 2:264.
[41] Ibid., 2:297.
[42] Ibid., 2:305.
[43] Ibid., 2:307.
[44] Ibid., 2:330.
[45] Ibid., 2:392.
[46] Ibid., 2:462.
[47] Ibid., 2:474.
[48] Ibid., 3:60.
[49] Ibid., 3:231.
[50] Ibid., 3:336.
[51] Ibid., 3:382.
[52] Ibid., 3:385.
[53] Ibid., 3:387.

Locusta Marina,[54] the claw of a West Indies spider,[55] "pizzle of a unicorn fish [narwhal],"[56] [from Whistler] the skin of an orbis-ritunatis, snout of a pristis or saw-fish, the core of a gazell's horn, a large turtle's head, a very large Molucca crab, two tropical birds, the head of a seal or sea-calf, the pizzle of a sea horse, the fin of a shark, a shark's jaw, the tail of a dolphin;[57] "a horn or a tooth from some strange animal";[58] a pelican bladder;[59] worms encrusted in stone;[60] the horns of a cervus Volans,[61] and a large scorpion from St. Cruz, Barbary preserved in spirit of wine given by Hans Sloane.[62] The skins and fragments of animal corpses were leveraged stocks in a scientific joint-stock company. Vagrant eclecticism of Royal Society collection strategies was not solely a manifestation of devotions to the universalist protocols of Baconianism, it was embossed into incentivized individualist ethics of the corporate structure. Theoretical justifications for encyclopedic modes of acquisition were reinforced by the ineluctably competitive aggregation of voluntary private persons of differential means, access, and status. Hence, as Hunter signals, the multiplication of the "principally odd or exotic objects which seemed to virtuosi to be worthy of a place in the collection."[63] If the robustness of the repository was a sign of institutional health and political mandate, then ample evidence of benefaction guaranteed a controlling and profitable personal interest in corporate activities.

By the eighteenth century, as Michael Hunter, Jennifer Thomas, and Alice Marples point out, the anxiously reciprocative urges to plenary and non-discriminating collecting procedures

[54] Ibid., 3:390.
[55] Ibid., 3:446.
[56] Ibid., 3:482.
[57] Ibid., 4:22.
[58] Ibid., 4:122.
[59] Ibid., 4:132.
[60] Ibid., 4:137.
[61] Ibid., 4:288.
[62] Ibid., 4:548.
[63] Hunter, *Establishing the New Science*, 150.

had fizzled out, at least regarding the repository as the locus for acting on those urges.[64] Lachrymose accounts from contemporary foreign visitors like Zacharias Conrad von Uffenbach and Luigi Ferdinando, Count Marsigli mourned the dispiriting state of the repository gallery. Uffenbach morosely kvetched that the artifacts "were not only in no sort of order or tidiness but covered with dust, filth and coal-smoke and many of them utterly broken and ruined."[65] In Marsigli's words the Stygian site was "a fairly dark gallery where they keep the natural history rarities which, truthfully speaking are unremarkable in quantity, quality or order . . . The specimens consist largely of skeletons and stuffed animals from the Indies, which having lost most of their fur and feathers present a sorry sight."[66] The desuetude of the once prized exotic *animalia* was undeniable, but Marples is quick to contradict the "declinist narrative" of the repository as unimaginatively limited by both a focus on the small sample of touristic reactions and the artificial spatial constraints foisted on the practical and conceptual pliability of the repository.[67] For Marples, the figure of Hans Sloane is exemplary of the shift from the repository as consummate site to a process of collection that "could only be conducted through the co-ordination, communication and preservation of private endeavours." Sloane's wealth, status, and personal network belonged to him as a "private individual," and though the Society benefitted from his secretarial and executive authority, "his refusal to confer his personal resources wholly on the society" meant that the prestigious repository of the Royal Society existed in a diffuse stock of public and private caches only partly in evidence at Gresham College and later at Crane Court.[68] This pragmatic arrangement of the early eighteenth century better equipped the Society

[64] See Hunter, *Establishing the New Science*, 149-155; and Marples, "Scientific administration," 184.
[65] W.H. Quarrell and Margaret Mare, trans. and eds., *London in 1710, from the Travels of Zacharias Conrad von Uffenbach* (London: Faber and Faber, 1934), 98.
[66] Anita McConnell, "L. F. Marsigli's Visit to London in 1721, and His Report on the Royal Society," *Notes and Records of the Royal Society of London* 47, no. 2 (July 1993): 190.
[67] See Marples, "Scientific Administration," 185-86.
[68] Ibid., 203.

for maximizing resources through instrumentalized and purposive scientific inquires, but it did not materialize with the arrival of Sloane to positions of official power. Elements of this shift can be tracked to the reformational period of the 1670s and 80s in which the repository went "public" and modes of engagement with repository holdings bifurcated into virtuosic and professional formations.

"Tactile Epistemology and the Skin of the Rhinoceros"

By 6 March 1676, the repository space was launched for public perusal, "the committee for managing the repository" reporting "that they had removed the particulars thereof out of the rooms where they had hitherto been, into the gallery at the west end of Gresham college, and there ranged them in order."[69] The date of this move coincided with a slew of reform measures to expurgate the more dilettantish aspects of corporate sociability, including those members in arrears on their membership dues.[70] During this imbroglio, the repository became a contentious site for policing behavior and actualizing visons of institutional identity. Almost instantaneously, the gallery space and its contents proved insufficient for realizing taxonomic universality, and the informed, investigative social interaction with nonhuman materiality so desperately needed to buttress experimental epistemology turned out to be equally impossible to enforce. For one, it militated against established virtuosic norms of using *naturalia* as a currency of access. As Marjorie Swan asserts, "Rather than establishing a new, 'scientific' approach to natural history, the Repository helped to perpetuate . . . a mode of genteel collecting developed by the seventeenth-century English virtuosos," a mode "wherein individuals could display their status as collector-donors."[71] Alternatively, Hooke, who was pushing for a more focused research

[69] Birch, *History*, 3:310.
[70] See Hunter, *Establishing the New Science*, 195-199.
[71] Swann, *Curiosities and Texts*, 89, 86.

agenda, stated that "Materials are to be carefully sought for and collected, and safely laid up in so convenient an Order . . . Care ought to be taken that they are sound and good, and cleans'd and freed from all those things which are superfluous and insignificant to the great Design; for those do nothing else but help to fill the Repository, and to incumber and perplex the User."[72] And he explicitly remonstrated against "the use of such a Collection . . . for Divertisement, and Wonder, and Gazing, as 'tis for the most part thought and esteemed, and like Pictures for Children to admire and be pleased with." The repository was, contrarily, "for the most serious and diligent study of the most able Proficient in Natural Philosophy."[73] But there was no denying the social prestige and potential emoluments that came from "entertaining" a frivolous curiosity, especially of the socially well placed. Therefore, in April 1682 "the whole time of the meeting was employed in entertaining the Morocco ambassador, by shewing him the repository and library" and in November, "Prince Borghese[,] making a visit to the Society, was entertained with seeing the curiosities of the repository and library."[74] Curiosity and bewilderment were inter-cultural capital legible to penurious and wealthy alike, thus affective wonder was allowed to predominate the repository's touristic interface that, unlike meetings, was open to the full body of the public.

The publication of Nehemiah Grew's Musaeum *Regalis Societatis, or A Catalogue & Description of the Natural and Artificial Rarities Belonging to the Royal Society* (1681) marked a turning point in mediating claims on the status of the repository. Comprehensive and explanatory, Grew's catalogue sought to cultivate viewing practices rather than merely titillate expectations through advertisement or serve as an index as previous catalogue lists, like that of

[72] Hooke, *Posthumous Works*, 18.
[73] Ibid., 338.
[74] Birch, *History*, 4:144, 167.

Robert Hubert's cabinet, had done.[75] In one respect, *Musaeum Regalis Societatis*, could be interpreted as the culmination of repeated efforts to produce a catalogue of repository artifacts beginning with Robert Hooke in 1666; but in another more salient respect, it can be apprehended as a provoked rupture in the skirmishes surrounding the repository's divergent uses during the ungainly sophomore phase of its public accessibility.[76] Since December 1673 Nehemiah Grew, who was trained in medicine and botany at Leiden, had been continuously employed in various Royal Society/Gresham College research commissions and lectureships, and in November 1677 (after Oldenburg's passing) he was appointed joint Secretary with Robert Hooke. On 18 July 1678 Grew was ordered by the Council, "at his leasure, to Make a Catalogue and Description of the Rarities belonging to this Society."[77] Several months later in December 1678, Grew was awarded "ten pounds as a gratuity for his service to the Society as secretary," and therefore it was within a span of corporate employment that Grew began compiling a catalogue "of the natural rarities in the repository" he was listed as frequently borrowing.[78] Regarding the cost of printing the *Musaeum Regalis Societatis*, Grew proposed, on 23 February 1680, "procuring subscriptions" to cover the significant financial outlay expected.[79] Daniel Colwall subsidized the sumptuous profusion of engravings but the lion's share of publication expenses were raised through preemptive appeals to a mass of subscribers. By April 1680, a notice in the *London Gazette* professed that the Society "hath already an account of above a thousand Subscriptions," and that those who desired to obtain a copy could still subscribe until the first of June.[80] The popular scope of the impending catalogue was thus far beyond the amplitude of a coterie

[75] See Hubert, *Those Rarities Collected*. London?, 166?.
[76] For details about initial failed attempts to compile a catalogue, see Hunter, *Establishing the New Science*, 140-141.
[77] Grew, *Musaeum Regalis*, unnumbered last page of prefatory material.
[78] Birch, *History*, 3:450.
[79] Birch, *History*, 4:16.
[80] *London Gazette*, no. 1508 (29 April – 03 May 1680), 2.

publication for the elite scholarly advance purchasers like Robert Boyle, Daniel Colwall, Abraham Hill, and Sir Christopher Wren. The company sponsored translation of the Repository to textuality, then, had to accomplish at least two things: (1) serve as vehicle for popular representation in order to attractively publicize institutional identity and generate much needed revenue; (2) substantiate the activity and holdings of the Society as serious complements to the growing corpus of natural knowledge and its own advertised utilitarian objectives.[81] Addressing the former, the catalogue enshrined the bizarre and exotic while underlining the canvassing social concatenation of aristocratic and moneyed donors; pursuant to the latter, Grew's text extended and nuanced Edward Tyson's technique of mediating animal materiality into a dyadic structure of professional methodological engagement and dematerialized taxonomic hieroglyphs.

To fulfill these ends, the *Musaeum Regalis Societatis* aimed at a substantial degree of material ossification, crystallizing the repository's holdings into catalogic syntax. According to Adrian Johns, the "status of the repository as an archive of presented objects was fixed in public by Grew's printed catalogue . . . as an aid to a languishing Society's 'Resurrection.'"[82] Although the friable material elements were (for many readers) concretized into formal semantics and superseded by their textualization, the catalogue itself was to be a fertile grammar "for any Man's Reason to work upon."[83] Superstructural physical components might be rearranged or expanded, but the relational logic of observer to object and objects to one another was to be consistent. The catalogue was doing its own labor unrepresentative of Gresham's west gallery as public site. At the same time the Royal Society advertised liberality of access to repository

[81] David Thorley agrees that "Grew's *Musæum* entertained both virtuosic and dispassionate scientific elements." David Thorley, "Nehemiah Grew's aims for the *Musæum Regalis Societatis* and how the text was used," *The Seventeenth Century* 33, no. 3 (2018): 354.
[82] Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998), 487.
[83] Grew, *Musaeum Regalis*, Preface.

artifacts, the catalogue publicized operational aphorisms that restricted the forms that access could take. The opening dedication to the repository's benefactor, Daniel Colwall, sets the tone by praising the "noble . . . Hecatombe" Colwall has offered. "Hecatombe," a word denoting the propitiating slaughter of a hundred oxen, the sacrifice of so many bovine animals closely linked to human agricultural sovereignty, metonymically attaches to the rare animal carcasses that fill the catalogue's pages.[84] These are things sublated, made dead to appease a disembodied horde of deified epistemic abstractions and their surrogate idols. Their death is monumentalized, the dedication continues, in "this Catalogue, as the Miniature of your [Colwall's] abundant Respects," and will be worn "near [the] Hearts" of the Royal Society assembly.[85] Death and remembrance, man and animal are entwined in the cherished object of the locket miniature portrait. The keepsake miniature is resonant with rich symbology. Its origins lay in a courtly gift economy of preciosity, lining the cabinets and adorning the breasts of royal patrons. Queen Elizabeth I "kept hers in the innermost sanctum of the Royal bedroom"; Charles I framed his to be viewed as sets of familial heirlooms.[86] Roy Strong alleges that "For the first fifty years or so miniatures remained almost exclusively a royal prerogative" of the Tudors.[87] Limners worked as

[84] Benjamin Schmidt and Odai Johnson have encouraged a more in-depth analysis of and focus on the material quality and afterlife of the text as animal and animal as text. Joshua Calhoun's *Nature of the Page* offers a fascinating archaeology of books as "sites of ecological negotiation," drawing the reader's attention to the "nonhuman presence" in the materiality and network of textual production. Joshua Calhoun, *The Nature of the Page: Poetry, Papermaking, and the Ecology of Texts in Renaissance England* (Philadelphia: University of Pennsylvania Press, 2020), 3, 7. For the circulation and afterlife of animal remains see Samuel J.M.M. Alberti, ed., *The Afterlives of Animals* (Charlottesville, VA: University of Virginia Press, 2011); Rachel Poliquin, *The Breathless Zoo: Taxidermy and the Cultures of Longing* (University Park, PA: Pennsylvania State University Press, 2012); and Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis: University of Minnesota Press, 2009). For absence and renewal as a performative structure, see Odai Johnson, *Absence and Memory in Colonial American Theatre: Fiorelli's Plaster* (New York: Palgrave Macmillan, 2006); Odai Johnson, *London in a Box: Englishness and Theatre in Revolutionary America* (Iowa City: University of Iowa Press, 2017); Odai Johnson, *Ruins: Classical Theater and Broken Memory* (Ann Arbor, MI: University of Michigan Press, 2018); and Rebecca Schneider, *Performing Remains: Art and War in Times of Theatrical Reenactment* (New York: Routledge, 2011).
[85] Grew, *Musaeum Regalis*, Dedicatory Epistle.
[86] Roy Strong, *Artists of the Tudor Court: The Portrait Miniature Rediscovered*, 1520-1620 (London: Victoria and Albert Museum, 1983), 9.
[87] Ibid., 11.

retainers of the regal family, and only with the opening of Nicholas Hilliard's workshop in Gutter Lane in the 1570s could miniatures be commissioned by anyone of sufficient financial means.[88] As Julian Yates notes, Hilliard's prescription for the best quality portraiture was that exclusively limner "gentlemen" memorialize sitters on the skin of "an aborted calf":[89] "Knowe that Parchment is the only good and best thinge to limne one, but it must be virgine Parchment, such as neuer bore haire, but younge things found in the dames bellye./ some calle it Vellym . . . it must be most finly drest, as smothe as any sattine . . . that it may be pure without speckes or staynes, very smoothe and white."[90] Limning was *sensu stricto* the negotiations of gentlefolk sealed by and inscribed into the epidermis of ungulate fetal dead – the anthropic face consuming the surface of the animal and confiscating its representative *potentia* by sublimating it into an "absent referent."[91] It was only through the inextricable union of human face and calf skin that the miniature memento was begotten – the limned revenants assuming objective status on the effaced animal object. When Grew's dedication invokes the catalogue as miniature, he is drawing on this tessellated history of animal flesh and the representation of gentle status.

Marjorie Swann postulates that one "function of the catalogue," like the miniature, was to "transform[~~ing~~] donors into collected objects possessed by the Royal Society."[92] A popularizing visage the *Musaeum Regalis Societatis* sought to promote, as did other cabinet catalogues, was the coupling of physiognomic traces in human cognomens with their respective donations. The catalogue takes advantage of every opportunity to underscore the Society's pivotal role in the

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[88] Ibid., 12.
[89] Julian Yates, *Error, Misuse, Failure: Object Lessons from the English Renaissance* (Minneapolis: University of Minnesota Press, 2003), 46, 52.
[90] Nicholas Hilliard, *A Treatise Concerning the Arte of Limning*, eds. R.K.R Thornton and T.G.S. Cain (Ashington, Northumberland: Mid Northumberland Arts Group, 1981), 94-96, quoted in Yates, *Error*, 52.
[91] See Carol J. Adams, *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory* (New York: Bloomsbury, 2015).
[92] Swann, *Curiosities and Texts*, 85.

high courtly politics of gift exchange by enmeshing aristocratic donor and exotic animal object into a literal artifact. The Prince Elector of Saxony is listed as once owning these "Hornes of a Hare" (conceivably a small deer);[93] Sir Robert Boyle is lauded for his gift of monstrous two-headed calf's skin,[94] the Duke of Holsteine is noted as formerly owning this horn of a rhinoceros,[95] Thomas Crispe, Esq., of the Royal African gave the spiral tusk of an elephant,[96] Sir Thomas Browne of Norwich donated the Leg-Bone of an Elephant,[97] Mr. John Short gifted the head of a sea-tortoise; Henry Whistler, Esq., gave a skull of a similar sea-tortoise,[98] Sir Robert Southwell generously bequeathed the skeleton of a crocodile,[99] and Prince Henry, Duke of Norfolk, after receiving numerous epistolary volleys, turned over his prized Egyptian mummy to the Society.[100] Elsewhere the catalogue offers itself as a labyrinth of recursive advancement. Projects and inquiries initiated in the *Philosophical Transactions* or Ray and Willughby's *Ornithologia* are extended through Grew's additive descriptions, providing a corpus of continuing labors that can amply and effectively engross a self-reflexive corporate identity.[101] Aggregating gentlemanly donors of exotic artifacts and recognizable company literary output into the catalogue pages strives to affix a politically salient institutional face onto the disaggregated animal bodies that make up the bulk of its content. Grew chooses an apposite

[93] Grew, *Musaeum Regalis*, 25.
[94] Ibid., 27.
[95] Ibid., 30.
[96] Ibid., 31.
[97] Ibid., 32.
[98] Ibid., 39.
[99] Ibid., 42.
[100] Ibid., 1.
[101] For examples, see Grew, *Musaeum Regalis*, 11, 16, 27, 39, 40, 49, 54, 57, 58, 61, 65 and 93. In part, this reflects the catalogue's workshop method of composition. The Council minutes record several occasions of Grew opening his textualization of the repository's animal specimens to a panoply of company input during May 1679. Due to corporate proprietary claims on the repository's stock, meetings were opportunities for Fellows to offer intertextual associations and emendations to that stock's transcription. See Birch, *History*, 3:481, 486.

metaphor in the miniature: like the portrait miniature, his catalogue uses a "purified" canvas of animal flesh on which to convey a sovereign Royal Society faciality.

There is another harmonious chord struck between miniature and *Musaeum*: neither offers a straightforward mimetic reproduction of the perceived object. It is impossible to abjure the materiality of the tiny souvenir and its affective charge of intimacy. Little ambulant portraits beseeched to be caressed by the tips of nimble fingers flaring out at the peak of erotic intensity or melancholy's apex. Concomitantly, the bejeweled container for which the image was destined increasingly over the course of the eighteenth-century, as Marcia Pointon notes, "reintroduce[d] a tactility and explicit preciousness" to the portrait's two-dimensionality. Pointon also addresses that miniaturization, in addition to its haptic invitations, was antipathetic to mimesis in other ways: "Diminution of dimension serve[d] to shift the signifying practice from the mimetic to the symbolic register."[102] Scalar disparity elicited a reflexive distantiation from the absent sitter and a fracture in the cognitive correspondence of the observer. The miniature held a secret, and that secret was the esoteric knowledge of its scalar reduction – the specialized, controlled brushwork of arcane pigments under the instrumental intervention of the magnifying lens. If the miniature portrait bore a resemblance to the relic, it was in the saintlike intercessory power that curtailed, conferred, and foreclosed the referent in its mobile metallic frame.[103] Analogously, the descriptive apparatus of the *Musaeum Regalis Societatis* does not mimetically deliver the animal object to the reader; it intercedes and applies a recondite methodology that valorizes the scientific limner's proximity and interpretive technologies. The animal body is never present as such, but rather, it is epistemologically presented.

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[102] Marcia Pointon, "'Surrounded with Brilliants': Miniature Portraits in Eighteenth-Century England," *The Art Bulletin* 83, no. 1 (2001): 59.
[103] See Yates, *Error*, 36.

David Thorley argues that, akin to the classificatory objectives Tyson held for his treatise *Phocaena*, "Grew was ambitious for a taxonomy of the collection as close to perfection as manageable (contributing by extension to the cataloguing of the natural world)."[104] Prefatory material to the *Musaeum* plots out the text's comparative morphological trajectory. Discarding Aldrovandi's classifications based on species benefits to humankind ("Quod praecipuam nobis utilitatem praebeat") and Gesner's alphabetic indexical typology, Grew believes that species representatives are "better placed according to the degrees of their Approximation, to human shape, and one to another."[105] Thus, Grew readily extrapolates form's relation to function from a comparative grid of species parts: the monkey enjoys easier labor because the distance from the os sacrum to the ischium is greater than in a human woman;[106] considering the sloth's "Body, the shape of his Legs, his having little or no Tail, the slowness of his gate, and his Climbing up of Trees, as little Bears are us'd to do, he seems to come near the Bear-kind";[107] the leopard "is every way, in shape, like a Cat . . . His actions also like a Cats";[108] the mosaic fish-like scales of the Beaver's tail connote an amphibious nature,[109] the porcupine erects quills "at his pleasure" as a peackock does his tail,[110] the pigheaded armadillo displays the same unprotected underbelly as the hedgehog which enables an equivalent defensive action of curling into a bolus, while its diminutive eyes, like that of moles, indicate nocturnality or subterranean dwelling, and its strong hind legs, like those of rabbits, suggest efficient burrowing,[111] etc. Grew likewise expresses no desire to liquidate commonly known names; those will be "reteind" where "all-ready given." But

[104] Thorley, "Nehemiah Grew's Aims," 340.
[105] Grew, *Musaeum Regalis*, Preface. All subsequent quotes in this paragraph, unless otherwise noted, are from Grew's Preface.
[106] Grew, *Musaeum*, 10-11.
[107] Ibid., 11.
[108] Ibid., 12.
[109] Ibid., 16.
[110] Ibid., 17.
[111] Ibid., 19.

his desire is somewhat disingenuous, for Grew implants a reformatory disavowal in his preface. Against "less convenient" and "improper" sobriquets derived from "Colour" or "Place," Grew admonishes that "Names of Things should be always taken from something more observably declarative of their Form, or Nature. The doing of which, would much facilitiate and Improve the Knowledge of them many ways. For so, every Name were a short Definition." The catalogue will serve to "rectifie the mistakes of such as are given us by other Hands" with "a cleer and full Description of Things." Constitutive of those descriptions is awareness of the encircling morphological congruencies and dissymmetries – "the cleer and evident distinction of the several Kinds and Species."[112]

Here, I want to pause and draw attention to the polyphonic texture Grew applies to rational and empirical faculties. Thorley justly makes much of Grew's summative assertion that, attending to the catalogue's morphological and taxonomic directives above, the contributions to natural history offered by the *Musaeum* will "yield a great aboundance of matter for any Man's Reason to work upon."[113] But Thorley reads the statement such that he can assert, "For Grew, knowledge of nature engendered by the rational faculty surpasses the value of visual observation."[114] This, in my opinion, distributes rational and empirical operations in a superficial demographics or a cursory privileging binarism without assessing their interpenetrative matrix-like contingency. Rationalistic capacity does not so much "surpass" the sensual faculties as it does betray itself to be more egalitarian and forthright, so it is possessed in common (any Man's Reason) and less prone to error than sensation when supplied with a trustworthy "aboundance of matter . . . to work upon." "Any Man's Reason" can work upon the matter furnished in the

[112] Grew, *Musaeum Regalis*, Preface.
[113] Ibid.
[114] Thorley, "Nehemiah Grew's Aims," 339.

Musaeum only because that matter has been carefully, unerringly, and "cleer[ly]" discerned and collected by a trained comparative anatomist. Rational thought is democratically distributive; accurate sensory embodiment is an oligarchic privilege, and one that sustains rationality's categorical freedoms. Grew purports a hieratic structure between experimental philosopher and rational reader. Sacerdotal possession of abstruse embodied knowledge is necessary to abstract an animal's biology, its "outward Parts" and more importantly, its "inner," as well as "his Generation, Breeding and the like" into solid signification of taxonomic textuality. The habiliments of Grew's metaphoric miniature experience a renaissance in the disproportion rendered between animal object referent and its textual transmutation. For reason to efficaciously "work on" the matter of natural history, an anatomist-limner-priest is required to distill nonhuman life into the paradoxically dispassionate elegiac stanzas of the catalogue. The success of this transaction depends upon the orthodox embodiment of the comparative anatomist in order to "rectifie the mistakes . . . given us by other *Hands*."

Grew's empiricism is an epistemology of the learned hand, a tactile empiricism precursory to rational speculation. Throughout the *Musaeum* it is the hand and eye sometimes conscripting the nose, palate, and ear, and working in subtle and sober coordination, that translates animal corporality into taxonomic hieroglyphs. Synesthetic knowledge derived from haptic-ocular (-gustatory-olfactory-auditory) involution is not indicative of sensory ambiguity; it is the manifestation of the experimental naturalist's optimal embodiment during proximal objective encounters. That form of glacial, exploratory, and informed embodiment exceeds the knowledge producing capacities of cavalier, pedestrian visuality and its specular limitations. Boyle affirmed an identical corporeality for the anatomist in phrases sodden with divinity:

> And as such person have such piercing eyes, that where a transient or unlearned glance scarce observes any thing, they can discern an adorable wisdom, being

> able (as I may so speak) to read the stenography of God's omniscient hand; so their skilful fingers know how to chuse and how to touch those strings, that may sound sweetest to praise of their Maker. And on the opened body of the same animal, a skilful anatomist will make reflections, as much more to the honour of its Creator, than an ordinary butcher can.[115]

Rational enlightenment is connate with corporal consciousness in the blessed body of the anatomist – "their skilful fingers *know* how to chuse and how to touch those strings" that decipher God's own physiological shorthand. Obeying his cognizant, sanctified senses, how else could Grew come closer to determining the reputed alexipharmic properties of "A Stags Tears" without first gauging their "colour and consistence almost like Mirrh; or Ear-wax that has been long harden'd in the Ear" and their "strong stinking smell, like that of the Animal's sweat"? Thorough sensory inspection must precede the experimental "trying" Grew ultimately suggests.[116] It also serves as way to inscribe the naturalist's specific and verified embodiment onto the litany of tedious "just Measures" of disaggregated animal parts.[117] The *Musaeum* recites Grew's commentaries on a suite of tactile-visual discoveries: the adamantine teeth of a hippopotamus that, contrary to popular wisdom, do not produce sparks when struck with steel because Grew "ha[s] try'd," the quill of a porcupine as "smooth, and thick as a Goose-quill";[118] very thin, but yet hard and solid" bones of a stag heart that enable its intense muscular contractions,[119] hair on musk deer is softer than most viewed under a microscope;[120] the "softer . . . and exceeding light and rare" hair from a musk deer "split, and view'd with a Glass" to reveal its interior cortege of "little Bladders,"[121] fur so sumptuously fleecy that Grew consolingly returns to its "softness and rarity . . . of a singular contrivance" after he "cuts open" the deer's

[115] Boyle, *Works*, 2:63,
[116] Grew, *Musaeum Regalis*, 21.
[117] Grew, *Musaeum Regalis*, Preface.
[118] Ibid., 15,16.
[119] Ibid., 21.
[120] Ibid., 22.
[121] Ibid.

musk bladder;[122] a "solid" bone of the antelope's horn,[123] "wrinkled and twisted" horns of a Spanish Ram;[124] "soft and fine" tail of an Indian cow,[125] the "hardness" of horned hogs two protuberances,[126] etc. And not to be overlooked is Grew's dizzying enumerations of dismemberment in a subjoined text, the *Comparative Anatomy of Stomach and Guts*, in which he cuts into and rifles through the interior spaces of weasels, polecats, dogs, foxes, moles, rats, squirrels, rabbits, horses, pigs, birds, and fish.

The *Musaeum*'s invasive, tactual repetitions into rare *animalia* outline a bewitching form of institutional sovereignty that follows the hermetic contours of discovery and possession – a full sensory, exhaustive possession that overshadows the semiology of virtuosic or aristocratic ownership. The Royal Society catalogue is not a list of owned items, but a reified record of interspecies encounters and epistemic productions made intelligible via Grew's consummate institutional-methodological embodiment. Nowhere is this more evident than in Grew's report on the skin of a young rhinoceros. The Indian rhinoceros had a fecund sixteenth-century semiotic history of peregrinations between courts of Asia and Europe. First sent as a gift from the Sultan of Gujarat to King Manuel of Portugal in 1514, the rhinoceros arrived in Lisbon on 20 May 1515 and was swiftly made a spectacle. To test antique assertions that the rhinoceros and elephant were locked in a state of mortal enmity, Manuel arranged a courtyard combat between the two pachyderms. The elephant, upon seeing the rhinoceros revealed behind a tapestry, scurried back to its holding pen and Manuel's new gift was "proclaimed victor by default, [and] was heralded as the vindicator of the ancient writers."[127] King Manuel then entrusted what had become one of

[122] Ibid., 23.
[123] Ibid., 24.
[124] Ibid., 25.
[125] Ibid., 26.
[126] Ibid., 28.
[127] Donald F. Lach, *Asia in the Making of Europe, Volume II: A Century of Wonder*, Book One (Chicago: University of Chicago Press, 1970), 162.

his most celebrated possessions to Pope Leo X in December 1515, but a storm struck the delivery ship off the coast of Genoa and the Indian rhinoceros drowned with the entire crew, its body washing ashore near Villefranche where it was stuffed before being transmitted to the Pope. Manuel's rhinoceros and its exoneration of the ancients propagated copious representational vagaries, but the most durable and pervasive proved to be Albrecht Dürer's 1515 woodcut. Even after Philip II acquired another Indian rhinoceros in 1582 and exhibited it publicly in 1584, Dürer's iconography remained in circulation, as did legends of the ancients, into the eighteenth century. Conrad Gesner reproduced it in his *Historiae Animalium* (1551-58). Valeriano included the woodcut in his *Hieroglyphica* (1556), as well as an image of the rhinoceros goring the belly of an elephant. Paulus Jovius relied on Dürer's woodcut to engrave a rhinoceros on the breast plate of Duke Alessandro de' Medici of Florence as a symbol of invincibility, and Duke Ercole II d'Este ordered a medal cast depicting his portrait on one side, and a rhinoceros on the obverse with the inscription "Urget Maiora" ("He Presses Harder").[128] Nobles like Alessandro and Ercole d'Este adopted Dürer's iconography of the rhinoceros not just for its animal referent's rarity, but also for the image's remarkable eccentricity that seemed to corroborate contemporary and ancient testimonies speaking to aristocratic values, particularly the woodcut's fixation on the skin as a canvas for the hyperbolic exaltation of bellicosity. No doubt alluding to Dürer's familiar depiction, Shakespeare's doomed Scottish regent, Macbeth, steels his waning intrepidity against the phosphorescent incursion of Banquo's ghost by imagining victory over the formidable pachyderm: "What man dare, I dare. / Approach thou like the rugged

[128] Ibid., 166-67.

Russian bear, / The arm'd rhinoceros, or th' Hyrcan tiger, / Take any shape but that, and my firm nerves / Shall never tremble."[129]

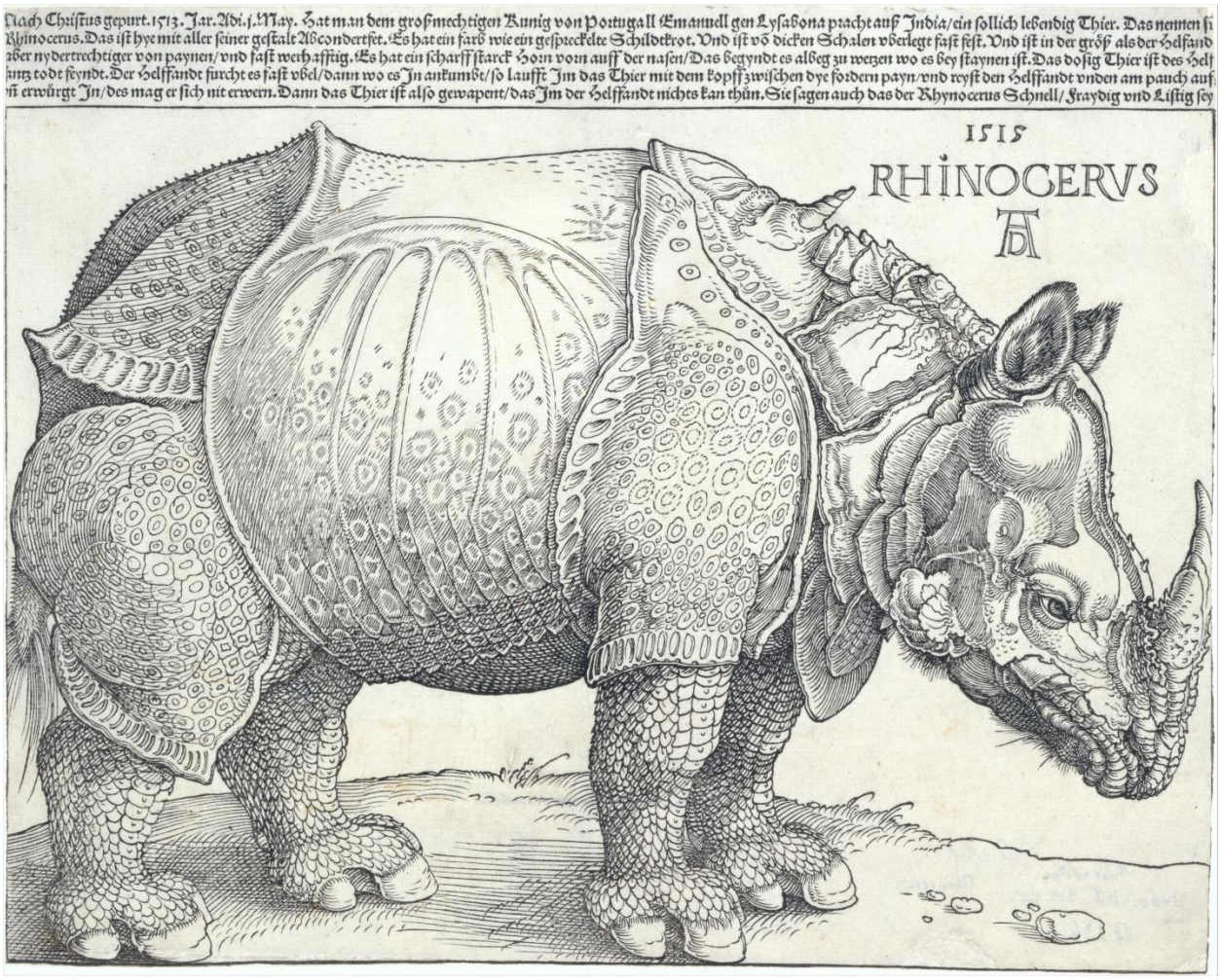

Figure 4. Albrecht Dürer's *Rhinocerus* Woodcut (1515)[130]

Although much nearer to a living representative of the species than past phantasmatic renderings, Dürer's rhinoceros still exaggerates the animal's epidermal layering and protuberate defenses. The *plicae*, or thick folds of skin, appear to mark the boundaries of additional armor set upon a scaly under-skin. Particularly at the legs, neck, shoulder joint, and thorax, can the

[129] William Shakespeare, *The Tragedy of Macbeth* in *The Riverside Shakespeare*, 2nd ed. (Boston: Houghton Mifflin, 1997), 3.4.98-102.
[130] Albrecht Dürer, *Rhinocerus*, Woodcut (1515), The Met Museum, Gift of Junius Spencer Morgan, 1919, Open Access, https://www.metmuseum.org/art/collection/search/356497.

observer detect interstices between plating and epidermis enhanced by contrasting "shell" patterns on the plates and the transference of the rhinoceros's rib structure onto the external design of the dorsal carapace. Most strikingly, Dürer adds a non-existent spiral dorsal horn above the shoulder at the base of the cervical vertebrae, which makes identifying replications of the 1515 woodcut fairly painless and unproblematic. In the seventeenth century, Edward Topsell reprinted Dürer's woodcut unaltered (and acknowledged), and like a Barnumesque peddler in the extraordinary, he grandiosely barked of the rhinoceros that it "differ[s] in every part from all other beasts, from the top of his nose to the tip of his taile, the ears and eies excepted, which are like Beares."[131] Perhaps as a pretext for his odd ursine comparison, Topsell confessed "the beast is strange and neuer seene in our countrey, so my eye-sight cannot adde any thing to the description: therefore harken vnto that wich I haue observed in other writers."[132] Whence follows such corporal facts from Strabo, that "hee hath also two girdles vpon his body like the wings of a Dragon, I from his backe downe to his belly," and from Oppian, Pliny, and Solinus, that "The skinne is so firme and hard, that no Dart is able to pierce it, and vppon it appeare many deuisions, like shelles of a Tortoise set ouver with skales, hauing no haire vppon the backe."[133] And Topsell, like his Antique forebears, could underline the "discord betwixt these beasts and Elephants . . . for it is confidently affirmed, that when the Rhinocerot which was at Lisborne [Lisbon], was brought into the presence of an Elephant, the Elephant ran away from him."[134] In a

[131] Edward Topsell, *The historie of foure-footed beastes Describing the true and liuely figure of euery beast, with a discourse of their seuerall names, conditions, kindes, vertues (both naturall and medicinall) countries of their breed, their loue and hate to mankinde, and the wonderfull worke of God in their creation, preseruation, and destruction. Necessary for all diuines and students, because the story of euery beast is amplified with narrations out of Scriptures, fathers, phylosophers, physitians, and poets: wherein are declared diuers hyerogliphicks, emblems, epigrams, and other good histories, collected out of all the volumes of Conradus Gesner, and all other writers to this present day* (London, 1607), 594.
[132] Ibid.
[133] Ibid., 596.
[134] Ibid., 597.

similar vein, John Jonston in his *Historiae Naturalis Quadrupedipus*, which Foucault holds aloft as signaling the turbulent beginnings of the Enlightenment (Classical) episteme, reproduced Dürer's image and then drew on Aelian to repeat Topsell's points about a rhinoceros hide so thick that it cannot be pierced ("pellem tantae firmitatis, ut aegre jaculo pentrari queat") and confirmed the imputations of constant war with its pachyderm rival the elephant ("de natura hoc duntaxat constat, cum Elephante inimicitias gerere").[135]

For the most part, Grew in the *Musaeum* eschews tropes of rhinoceros belligerence that parallel aristocratic stresses on martial valor and espouse a rightful possession of the animal by the second estate (based on "naturalized" similitudes of defensive/governing social functions). Except when directly pertaining to features of anatomy, like a distinction between horn structures of the African (double-horned) and Indian (single-horned) rhinoceros for which Martial is quoted,[136] Grew's focus lingers sensuously, even tenderly, on the epidermal artifact in front of him. To be fair, the Royal Society did not have a live rhinoceros roaming through its west gallery and so could not articulate pretense to that form of sovereign possession. Grew's intimate investigation and knowledge of the subtle play of unifying textures on this particular, proximal rhinoceros hide, however, elucidate a more imbricated and dynamic possessive pattern of the epistemological variety:

> The said Skin is every where thick, and very hard; excepting only his Ears which are softer and, extream thin. It hath about ten Plicae or Folds; two under the nether Jaw, one on the Breast, in the figure of the letter V, on the Neck one on each side, one between the Shoulders semicircular, on the Back two transversely extended to the bottom of the sides with two more strait ones, carry'd obliquely on the Buttocks [. . .] The lower part of the Forehead and Snout cover'd with a

[135] Johannes Jonstonus [John Jonston], *Historiae Naturalis de Quadrupedibus libri: cum aeneis figuris* (Amsterdam, 1657), 66, 67.

[136] Grew is actually unaware of the existence of the African Rhinoceros, but he quotes Martial's epigram regarding a *venatione* in which a rhinoceros tossed both a bear and a bull with his two horns ("gravem gemino Cornu sic extulis Ursum") to cast doubt on Martial's claim because all of the rhinoceroses he has seen (from India) have exhibited only a single horn.

> kind of hard Crust. His Ears naked and smooth. All the other parts rough with round scaly Crusts; on the Back, Sides, and Belly, lesser, near a ¼ of an inch over; on the nether Chap and Shoulders, bigger; on his Buttocks and Legs, the biggest, about 1/3 an inch over. His Hair is black, short, and fine. So few, that there are not many more than scales or shells; so that he is almost naked.[137]

Contrast Grew's sensual, almost amorous exploration with John Evelyn's ocular encounter with a rhinoceros "belong[ing] to Certaine E. *Indian Merchants*" on 22 October 1684:

> It more resembled a huge enormous Swine, than any other Beast amongst us; That which was most particular & extraordinary, was the placing of her small Eyes in the very center of her cheeks & head, her Eares in her neck, and very much pointed : her Leggs neere as big about as an ordinarie mans wast, the feete divided into claws, not cloven, but somewhat resembling the Elephants, & very round and flatt, her taile slender and hanging downe over her Sex, which had some long haires at the End of it like a Cowes, & was all the haire about the whole Creature . . . but in my opinion nothing was so extravagant as the Skin of the beast, which hung downe on her hanches, both behind and before to her knees, loose like so much Coach leather, & not adhering at all to the body, which had another skin, so as one might take up this , as one would do a Cloake or horse-Cloth to a greate depth, it adhering onley at the upper parts & and these lappets of stiff skin, began to be studdied with impenetrable Scales, like a Target of coate of maile, loricated like Armor, much after the manner this Animal is usualy depicted.[138]

Upon initial reading, both passages carry the onus of dense description with alacritous dignity, but Grew's research report comes off as dispassionately removed when juxtaposed with Evelyn's paroxysmal bewilderment. In Evelyn's oscillation between the object of his gaze and the comparative objects of memory, he crosses expansive distances in search of the apt simile: loose folds of skin "like so much Coach leather," hanging lappets ready to be "tak[en] up . . . as one would do a Cloake or horse-Cloth, and "impenetrable Scales . . . like a Target of like a Target of coate of maile, loricated like Armor, much after the manner this Animal is usualy depicted." Part of Evelyn's passional wonderment, I would argue, is fed by his unconsummated desire to touch the rhinoceros, to haptically verify the deluge of improvised and preconceived images he

[137] Grew, *Musaeum Regalis*, 29.
[138] John Evelyn, *The Diary of John Evelyn*, ed. E.S. de Beer (London: Oxford University Press, 1959), 778.

experiences, to satiate an otherwise incomplete hermeneutic encounter. All of his familiarizing comparisons are simulacra of objects he has caressed, held, or permissibly manipulated. The distance from the rhinoceros to her figurative similitude is the distance from one sense to the next – from the remoteness of vision to the incomparable intimacy of touch. Constance Classen, in her article *Museum Manners: The Sensory Life of the Early Museum*, has shown how touching artifacts was considered a regular yet privileged feature of early modern museological excursions. Handling objects was a supplement to and affirmation of vision; it was considered integral to the etiquette of gentlemanly virtuosos, and it heralded the bestowal of favor. Over the course of the eighteenth-century, touching artifacts became a transgressive act in the vulgar multitude and reserved only for approved professionals or technically certified individuals.[139] Evelyn's desire to touch the lines of the rhinoceros was a desire to validate both ocular input and his status within the social compass of naturalist collectors.

By comparison, Grew's frigid tonality layers over the delicate, methodical movement of his searching hands, contrasting the slight variations in texture along the naked Forehead, Snout, Back, Sides, Belly, Chap, Shoulders, Buttocks, and Legs indiscernible with the visual sense alone. Each loitering pause to measure and mark disparities brings Grew closer to assimilating the entirety of pachyderm materiality into an accessible tablature of comparative abstractions. As Katherine Rowe remarks, for many early modern philosophers and anatomists, "touch [was] the common sense, distributed throughout the body, the hand [was] its rational agent and controlling agent."[140] For Descartes, touch was the corporal sense most immediately contiguous to rational

[139] See Constance Classen, "Museum Manners: The Sensory Life of the Early Museum," *Journal of Social History* 40, no. 4 (2007): 895-914.
[140] Katherine Rowe, "'God's handy worke': Divine Complicity and the Anatomist's Touch" in *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*, eds. David Hillman and Carla Mazzio (New York: Routledge, 1997), 295.

thought because it did not mischaracterize the primary attribute of extension. Dalia Judovitz argues that one way that Descartes systematically undermined his assertions of sight's sensual dominance, was to show touch "to be more certain and less vulnerable to error than vision."[141] To explicate the action of reflected light upon the eye in his *Optics*, Descartes suggests the analogy of navigating a dark path with a stick:

> No doubt you have had the experience of walking at night over rough ground without light, and finding it necessary to use a stick in order to guide yourself. You may then have been able to notice that by means of the stick you could feel the various objects situated around you, and that you could even tell whether they were trees or stones or sand or water or grass or mud or any other such thing. It is true that this kind of sensation is somewhat confused and obscure in those who do not have long practice with it. But consider it in those born blind, who have made use of it all their lives: with them, you will find, it is so perfect and so exact that one might almost say that they see with their hands, or that their stick is the organ of some sixth sense given to them in place of sight.[142]

I propose that, according to the *Musaeum*, Grew's refined embodiment of tactile sensitivity, like that of the blind since birth, actually "sees" the rhinoceros while others are simply fumbling in the dark. He wields the instrumental and cognitive "stick" that verifies as substantially true what plebeian vision cannot perceive so that the disembodied schematism of "any Man's Reason" can administer deductions from his own corporally sifted abstractions. Touch was both diffusely encamped within the body (the common sense) and the most proximate physical distention of reason. It was considered both common to all animals and uniquely human. According to Helkiah Crooke in *Mikrokosmographia*,

> It was not the Hand that taught men Arts but Reason, yet the servant and minister of this reason and wisedome is the Hand, [. . .] judge and discerner of the Touch. For albiet this touching virtue or tactive quality be diffused through the whole body both within and without, as being the foundation of the Animall *Being*, which may be called *Animality*, yet we do more curiouslie and exquisitely feele

[141] Dalia Judovits, "Vision, Representation, and Technology in Descartes," in *Modernity and the Hegemony of Vision*, ed. David Michael Levin (Berkeley: University of California Press, 1993), 71.
[142] René Descartes, *The Philosophical Writings of Descartes*, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), 1:153, quoted in Judovits, "Vision," 70.

> and discerne both the first and second qualities which strike the Sense in the Hand then in other parts.[143]

To counterbalance the popularizing representational aims of the *Musaeum* (i.e., highlighting exotic artifacts, aristocratic donors, etc.), Grew, as corporate appendage, postulates institutional legitimation not merely as possession and preservation of nonhuman entities, but as transspecies/transobjective/inter-animal *entanglement*, with the animal/animate body of the proximal experimental philosopher synthesizing matter into pre-taxonomic abstractions. The *Musaeum Regalis Societatis* is a syncretic document. Its textuality was able to contain and mold the expressive output of two divergent aims that the physical space of the repository could not easily accommodate: adumbrate a corporate jurisprudence based on sustained, embodied inquiry, and appeal to a virtuosic periphery communicating in societal norms of early modern collection. In that sense, Grew's text did not so much permanently fix the repository's holdings, as it did substantially intervene in the debates surrounding the repository's public institutional identity.

"Experimentation and the Species Continuum"

Similar debates eddied around the controversial aspects of experimental programs. Experiments were "grand dramatic spectacles designed to impress upon their viewers the gravity of the Society's undertakings."[144] There was persistently a struggle over the precise forms that saturated experimentation should take: either undirected and complaisantly pursued exhibitions, which could produce entertaining bagatelles that were corpulent and surfeiting to untutored examiners, or trim but thorough programmes of articulated investigatory research. Joseph

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[143] Helkiah Crooke, *Mikrokosmographia: A Description of the Body of Man. Together with the Controversies thereto Belonging. Collected and Translated out of All the Best Authors of Anatomy, Especially out of Gasper Bauhinus and Andreas Laurentius* (London: William Jagard, 1615), 730.

[144] Juliet Cummins and David Burchell, "Introduction: Ways of Knowing: Conversations between Science, Literature, and Rhetoric," in *Science, Literature and Rhetoric in Early Modern England*, eds. Juliet Cummins and David Burchel (Burlington, VT: Ashgate, 2007), 3.

Glanvill, desiring to throw out pending distinctions, embraced the scintillating and sensational as impressive marks of natural Creation: "*Yea, whether they succeed to the answering the particular* aim *of the* Naturalist *or not*; *'tis however a* pleasant *spectacle to behold the* shifts, windings, *and* unexpected Caprichios of *distressed* Nature, *when pursued by a* close *and* well managed Experiment."[145] But debates of December 1666 were emblematic of the recurring crisis: "Sir Robert Moray proposed that the council would take into consideration how the experiments at the public meetings of the society might be best carried on; whether by a continued series of experiments, taking in collateral ones, as they were offered, or by going on in that promiscuous way, which hithero obtained."[146] Not to alienate feelings of consensus, the nebulousness of experimental conduct remained in the ascendant. Hegemonic pressures to surfeit the philosophical appetites of amateurs with marvelous experimental performances, and "considering the want of experiments at their public meetings," led to the Council's offer in 1668 of "a medal of at least the value of twenty shillings to be made to every fellow, not curator by office, for every experiment" presented.[147] Internally generated prestige and financial rewards for the opulent productions of experimental matters fit the fiduciary logic of patronage that cast its penumbral shade over the Society's corporate existence.

Amusement was not trivial, but rather vital to the conservation of the Royal Society's scant infrastructure and public autonomy. In Michael Hunter's estimation, "the kind of scientific activity likeliest to appeal to a public audience tended to predominate."[148] The word of choice to define that activity was "entertainment." During a 6 July 1663 meeting of the Council, "The

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[145] Joseph Glanvill, *Scepsis Scientifica, or, Confest "Ignorance," the Way to "Science"; in an "Essay" of the Vanity of Dogmatizing, and Confident Opinion, with a Reply to the Exceptions of the Learned Thomas Albius* (London, 1665), sig.b2v–b3r.
[146] Birch, *History*, 2:131-32.
[147] Ibid., 2:265.
[148] Hunter, *Science and Society*, 43.

king's entertainment being taken into consideration (for which the meeting of the council on this day was appointed) it was ordered, that Mr. Hooke and the operator take care so to prepare the compressing engine, that it might not fail in the trying of experiments therein."[149] Christopher Wren, writing to the Society from Oxford regarding the imminent amusement of his majesty, suggested "something of pomp . . . Half a dozen of experiments thus qualified . . . for an hour's entertainment" as a via media between the astounding "master experiment" of the Torricellian vacuum and "knacks only, and things to raise wonder such as Kircher, Schottus, and even jugglers abound with."[150] "Chemical experiments" Wren went on to assert, might "prove too dirty or tedious for an entertainment," while "experiments of anatomy, though the most value for their use, are sordid and noisome to all."[151] In June 1665, for the "entertainment" of two recently admitted foreign Fellows, Monsieurs Hugues Louys de Lyonne and Vital de Damas, President Brouncker commanded that "some of the experiments [concerning the combustibility of air] formerly made were repeated."[152] For the "entertainment" of the Duchess of Newcastle during her visit in 1667, "It was ordered . . . there be made ready the experiment of colours formerly mentioned by Mr. Boyle; the weighing of air in an exhausted receiver; the dissolving of flesh with a certain liquor of Mr. Boyle's suggesting, &c."[153] Before the meeting of 9 March 1671, "Mr. Hooke was appointed to prepare some experiments against that meeting for [the] entertainment" of two noble Florentines, the marquis Bartholomei and count Bardi.[154] During gatherings of 1673, William Petty opined that "mercurial experiments should be one head for the Society's entertainment, so experiments of the magnet, of optics, and especially motion, should

[149] Birch, *History*, 1:271.
[150] Ibid., 1:288.
[151] Ibid., 1:289.
[152] Ibid., 2:60.
[153] Ibid., 2:175.
[154] Ibid., 2:471.

make some of the other heads."[155] In June of 1674, Royal Society President Lord Brouncker, to bolster the dwindling attendance at meetings, ordered, "the council might sometimes meet, and consider a better way than hitherto had been used, to provide good entertainment for the said meetings, by establishing lectures grounded upon and tending to experiment."[156] To keep the interests of membership piqued during a period of adjournment for vacation in the late summer of 1679, "entertainment" was afforded them "at the repository or library on Thursdays in the afternoon," where, on one such occasion, Fellows could examine "the body of a child which had been twenty-six years in its mother's belly."[157] On 10 December 1679, Royal Society President Sir Joseph Williamson, directed "That some of the best and most entertaining experiments produced before the Society be set apart, and a list taken of them to be at hand, for the entertainment of any person of quality, &c. who shall visit the Society."[158] By 1700 the situation had not improved to any substantial degree, which prompted a piqued Hooke to grumble, "The R.S was begun and is continued at least alive by the Voluntary Contributions and as voluntary labours of the Members . . . If the members of the R.S. do nothing seldome come to Meetings and when they come tis only as to a play to amuse themselves for an hour or so . . . yet if they pay their Contributions . . . they take themselves to be . . . good Members."[159] Wistful reflections of early Society members (like Hooke) in the crepuscular light of the fading seventeenth century have exhorted Margaret Espinasse to remark that the Williamite era "was an uninspired period in English science . . . [with] a marked deterioration in the organ of science, the Royal Society

[155] Ibid., 3:102.
[156] Ibid., 3:235.
[157] Ibid., 3:503.
[158] Ibid., 3:516.
[159] Robert Hooke, "Proposals for the Advancement of the Royal Society," quoted in R. K. Bluhm, "Remarks on the Royal Society's Finances, 1660-1768," *Notes and Records of the Royal Society of London* 13, no. 2 (1958): 92.; For authorship attribution see Hunter, *Establishing the New Science*, 204 and 242-44.

itself."[160] R.K Bluhm's financial analysis for the years 1691-1705 corroborates Espinasse's assessment of a general Societal atrophy, reporting the lowest number of Fellows on record from 1691 to 95 and the nadir of corporate income between 1696 and 1705, despite increasing membership.[161] Because, as Marie Boas Hall relates, during the latter decades of the seventeenth century, on-site experiments at Gresham had declined and migrated elsewhere, organizational decrepitude could not be blamed on a surfeit of vapid entertainment. Rather, it seems that during the early decades of cumulative interest, successful enticements to fervent activity were contingent upon the socializing function of experiment that struck a delicate balance between entertainment and programmatic inquiry.[162]

Before the framework of institutionalization had been soldered together, the dialectic tension of experimental forms (accessible entertainment – rigorous research) forcefully filled out the crevices of anoretic infrastructure. These diametric poles did not produce an either/or scenario of taking up stable sides; they exhorted movement through sociable circuits of negotiation, keeping in clear sight the sensible object of inquiry as mediating substance. It was a sometimes gleeful, other times irksome forced march through science-in-the-making's physical and epistemic zones of sociability that goaded reevaluations of polyhedral nature. Experiments were saturated not only because their descriptive and replicative apparatuses were rigorous, but also because the form of life experiments constituted – following the natural object through circuits of interpersonal exchange – exceeded disciplinary and social boundaries. A lexicology of institutional standards or calculable metrics had not yet trumpeted the foreclosure of scientific methodology. Experimental forms were multiple and transitory, immersed in a fluctuating

[160] Margaert 'Espinasse, "The Decline and Fall of Restoration Science," *Past & Present* 14 (1958), 74-75.
[161] Bluhm, "Remarks," 83.
[162] See Boas Hall, *Promoting Experimental Learning*, 66-97.

ecosystem of legitimating witnesses still feeling out the *terra firma* of institutionalization. All Society and para-Society experimental operations were united by a non-speculative empiricism that valorized the testimonial capacity of sensual encounters with *naturalia* over theoretical explanation. Allegiances to mechanistic or microcosmic philosophical systems whose cogency lay beyond the purview of observation were largely irrelevant. In the "evidentiary economy" of the *factum*, as Julian Yates points out, "nonhuman entities [were drafted] to bear witness in trials among human subjects, trials in which only hard, nonhuman witnesses communicate truth."[163] Because experiments navigated through socially heterogeneous, non-paradigmatic zones of verification, sentient nonhuman subjects of inquiry had the uncanny ability to impress upon spectators in disparate and oppositional ways. Experimental performance protocols of the Society's structural voluntarism demanded reducing a diverse array of spectatorial, theoretical, sympathetic, and spatial positionalities – running the gamut from those occupying themselves with "mere entertainment" in Gresham's sanctioned laboratory spaces to natural philosophers pursuing aggressive research agendas at informal gatherings in coffeehouses – to a commonality of inclusive empirical observation, and thus allowed for discrepancies in affective connection to and cognitive conclusions about sentient nonhumans. For many attendees, normative dictates of objectivity to establish an abstract canvas of mobile facts did not always supersede relational anxieties over forms of shared embodiment operating across species, especially considering that transspecies similitudes of mechanistic function were under constant scrutiny and appraisal. As Laurie Shannon states, "the conceptual line drawn against animal subjectivity [could not] withstand the evidence that their own eye-witnessing provide[d]."[164] It was an irony of early Royal Society experiments that encouragements to replicate dispassionately invasive procedures

[163] Yates, *Error,* 35.
[164] Shannon, *Accommodated Animal,* 265.

on nonhuman animals could clarify "counterproductive" forms of interspecies kinesthetic empathy and trans-subjective physiological identification.

Although a number of animal studies scholars have interpreted the rapacious consumption of animal bodies in late seventeenth-century "experimental laboratories" as underwritten by the Cartesian *bête-machine* hypothesis – that animals were nothing but automatons incapable of cognitively experiencing pain – for all but the most rationalistic Cartesian extremists, that justification could not hold together.[165] Anita Guerrini, Erica Fudge, and Karen Raber (among others) emphatically stress this point.[166] Undeniably, many Fellows of the Royal Society accepted some part of mechanism's expository potential, but it was rare to find consummately inflexible devotees to the Cartesian program or those who were willing to retrace his abyssal dividing lines between soul and body, human and animal. In the preface to his *New Essays on Human Understanding*, Leibniz philosophically sides with a mass rejection of the Cartesian mitigation of animal cognition:

> On this topic [that sense and thought are imbued in matter only by God] I am therefore entirely in agreement with the Cartesians, except that I include the beasts and believe that they too have sense, and souls which are properly described as immaterial and are as imperishable as atoms are according to Democritus and Gassendi; whereas the Cartesians have been needlessly perplexed over the souls of beasts. Not knowing what to do about them . . . they have been driven to deny – contrary to all appearances and to the general opinion of mankind – that beasts have sense.[167]

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[165] For an examination of empirical and apriori theological arguments made by automatists such as Poisson, Martin, Malebranche, Dilly, Darmanson, Norris, Jacquelot, and others, see Lloyd Strickland, "God'creatures? Divine nature and the status of animals in the early modern beast-machine controversy," *International Journal of Philosophy and Theology* 74, no. 4 (2013): 291-309.

[166] See Anita Guerrini, "Natural History, Natural Philosophy, and Animals, 1600-1800," *A Cultural History of Animals in the Age of Enlightenment*, ed. Matthew Senior (Oxford: Berg, 2007), 121-144; Erica Fudge, *Brutal Reasoning: Animals, Rationality, and Humanity in Early Modern England* (Ithaca: Cornell University Press, 2006); and Karen Raber, *Animal Bodies, Renaissance Culture* (Philadelphia: University of Pennsylvania Press, 2010), 2013.

[167] G.W. Leibniz, *New Essays on Human Understanding*, trans. and eds. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1981), 67.

Erica Fudge draws our attention to a number of reasons for this resistance.[168] For one, the mechanistic logic was specious. Descartes's evidence for the absence of "an interior principle" in animals was linked to his conclusions about their lack of rational signification (i.e., language).[169] In making abstractive language the universal boundary between animal and human, Descartes ignored population specific communicative idioms and committed a *reductio ad absurdum* of collapsing the species continuum of cognitive complexity into more simplistic representatives of "oysters and sponges."[170] In Descartes's estimation, all animals were a unified class absolutely distinct from humanity. For another reason, the Cartesian denial of interior life to nonhuman animals defied everyday experience.[171] For a *disputatio* that took place at Cambridge University in 1615, James I raised the issue of whether dogs could engage in syllogistic logic. Dissatisfied with the debate's devolution into blithe academic exercise, James intervened with crucial empirical evidence extrapolated from his numerous excursions partnered with hunting hounds, stating that he "did believe a hound had more in him than was imagined."[172] The Cambridge Neoplatonist Henry More stated his empirical reservations to Descartes in a December 1648 missive:

> For the rest, my spirit, through sensitivity and tenderness, turns not with abhorrence from any of your opinions so much as from that deadly and murderous sentiment which you professed in your *Method* whereby you snatch away, or rather withhold [sic], life and sense from all animals, for you would never concede that they really live. [. . .] [W]hy do you prefer to make of them inanimate machines rather than bodies activated by immortal souls? Especially since such a position, hardly harmonious with the phenomena of nature, plainly is unheard of until now.[173]

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[168] See Fudge, *Brutal Reasoning*, 147-174.
[169] Descartes to Reneri for Pollot, April or May 1638, in *Philosophical Writings* 3:99; and "Descartes to the Marquess of Newcastle, 23 November 1646," in *Philosophical Writings* 3:302 and 303.
[170] Descartes to the Marquess of Newcastle, in *Philosophical Writings*, 3:304.
[171] Fudge, *Brutal Reasoning*, 145.
[172] Thomas Ball, *The Life of the Renowned Doctor Preston, writ by His Pupil, Master Thomas Ball, D.D. Minister of Northampton, in the Year 1628*, ed. E.W. Harcourt (Oxford and London: Parker & Co., 1885), 25, quoted in Fudge, *Brutal Reasoning*, 102.
[173] Leonora D. Cohen, "Descartes and Henry More on the Beast-Machine—A Translation of Their Correspondence

Karen Raber notes how seventeenth-century household manuals cited bestial cognizance of kinship networks and "affiliation to those of their own kind" as one method for trapping vermin such as rats, mice, and moles.[174] For example, *A Necessary Family Book* (1688) proposed luring rats and mice with the cries of their trapped and tortured brethren.[175] In *Brutal Reasoning*, Erica Fudge explores how authors of horse-training manuals regularly wrote in terms that recognized and lauded, if not equine sapience, at least equine prudence.[176] Trainer Nicholas Morgan interchanged horse and human scholars based on their mutual capacity to learn and claimed that "euery Horse is created as man is of soule and bodie, and is compounded of the same four elements as man."[177] Gervase Markham in *Covntrey Contentments* frequently refers to the "knowledge" of horses. Vocal encouragement "giues the *horse* both a cheerfullnesse of spirit, and a knowledge that he hath done wel" just as discouragement "deliuered sharply and roughly . . . reformeth many vices."[178] Through "great cherishing" the horse "gaineth knowledge of his masters wil, and is desirous to performe it."[179] And it is a "rash indiscretion of ignorant horse-men which will compel a *horse* to doe before he knowe what or how to doe."[180] The Duke of Newcastle, William Cavendish, against the beast-machine thesis asserted,

> A horse must be wrought upon more by proper and frequent lessons, than by the heels, that he may know, and even think upon what he ought to do. If he does not think (as the famous philosopher DES CARTES affirms of all beasts) it would be impossible to teach him what he should do. But by the hope of reward, and fear of punishment; when he has been rewarded or punished, he thinks of it, and retains it

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Pertaining to Animal Automatism," *Annals of Science* 1, no. 1 (1936): 50, 51.
[174] Raber, *Animal Bodies*, 121.
[175] Ibid., 121-22.
[176] See Fudge, *Brutal Reasoning*, 133-140.
[177] Nicholas Morgan, *The Perfection of Horse-manship, drawne from Nature; Arte, and Practise* (London, 1609), 58.
[178] Gervase Markham, *Covntrey Contentments, in Two Books, The first Containing the whole art of riding great horses in very short time, with the breeding , breaking, dyeting and ordering of them, and of running, hunting and ambling Horses, with the manner how to use them in their trauell* (London, 1615), 41.
[179] Ibid., 42.
[180] Ibid., 56.

> in his memory (for memory is thought) and forms a judgment by what is past of what is to come (which again is thought); insomuch that he obeys his rider not only for fear of correction, but also in hopes of being cherish'd.[181]

Cartesian animal reductivism could in no way supplant the experience of constant communication necessary to work with and manage equine sentience. The proof elicited from embodied interaction was a more certainly "felt" form of knowledge than Descartes's theorem derived from a hyperbolic skepticism toward the sensory world. Gabriel Daniel's satirical *Voyage to the World of Cartesius* expressed the widely-held experiential illogicality and egregious moral iniquity of the beast-machine hypothesis:

> Before my Conversion to *Cartesianism*, I was so pitiful and Tender-hearted, that I could not so much as see a Chicken kill'd: But since I was once persuaded that Beasts were destitute both of Knowledg and Sense, scarce a Dog in all the Town, wherein I was, could escape me, for the making *Anatomical* Dissections, wherein I myself was *Operator*, without the least inkling of Compassion or Remorse.[182]

To most, affective, bodily, and experiential knowledge mattered.

A range of theories and anecdotal sagacity concerning embodiment were represented at Royal Society experimental exhibitions, and all of them alluded to more than purely physico-mechanical commonalities among species.[183] Gail Kern Paster has shown how Galenic humoralism linked together all species members "possessing a heart and blood" in a

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[181] William Cavendish, *A General System of Horsemanship in all it's [sic] Branches*, (London, 1743), 12.
[182] Gabriel Daniel, *A Voyage to the World of Cartesius*, trans. T. Taylor (London, 1694), 241.
[183] There is a rich array of literature on early modern embodiment. See Gail Kern Paster, *The Body Embarrased: Drama and the Disciplines of Shame in Early Modern England* (Ithaca, NY: Cornell University Press, 1993); Katherine Eisaman Maus, *Inwardness and Theater in the English Renaissance* (Chicago: University of Chicago Press, 1995); Jonathan Sawday, *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture* (London and New York: Routledge, 1995); David Hillman, "Visceral Knowledge: Shakespeare, Skepticism and the Interior of the Early Modern Body," *The Body in Parts: Fantaises of Corporeality in Early Modern Europe*, eds. David Hillman and Carla Mazzio (New York: Routledge, 1997), 80-105; Michael C. Schoenfeldt, *Bodies and Selves in Early Modern England: Physiology and Inwardness in Spenser, Shakespeare, Herbert and Milton* (Cambridge: Cambridge University Press, 1999); Mary Floyd-Wilson and Garrett A. Sullivan, Jr., eds., *Environment and Embodiment in Early Modern England* (New York: Palgrave, 2007); Jean E. Feerick and Vin Nardizzi, eds., *The Indistinct Human in Renaissance Literature* (New York: Palgrave, 2012); and Charis Charalampous, *Rethinking the Mind-Body Relationship in Early Modern Literature, Philosophy and Medicine* (New York and London: Routledge, 2016).

psychological material matrix in which cognitive experience was contingent upon the corporal balance of yellow bile, black bile, phlegm, and blood.[184] Paster asserts that the manifold "self-comparisons to animals suggest [that] identification across the species barrier was compelling for the early moderns because it seemed both to reinforce affective self-experience and to offer an escape from it into the imagined self-sameness of animal passion."[185] A significant number of Society Fellows, like Thomas Willis, rejected "the Opinion of the Ancients, That the Mass of Blood consists of the four Humours . . . and that according the Eminency of this or that Humour, the divers Temperaments are form'd."[186] But for countless others, acceptance of William Harvey's empirical proofs of circulation was not tantamount to a repudiation of Galenic medicine and humoralism *in toto*.[187] That was true for Harvey and many who followed.[188] Louise Hill Curth has tracked the theory's resilience in the popular wisdom of more than a thousand seventeenth-century English almanacs,[189] and at a coffeehouse on 3 November 1663, Samuel Pepys recorded hearing "a long and most passionate discourse between two doctors of physique . . . and a couple of apothecarys; these [the doctors] maintaining chymistry against their [the

[184] Gail Kern Paster, *Humoring the Emotions: The Body on the Shakespearean Stage* (Chicago: University of Chicago Press, 2004), 135.
[185] Ibid., 150.
[186] Thomas Willis, *The London Practice of Physick: Or the whole Practical Part of Physick Contained in the Works of Dr. Willis* (London, 1685), 520.
[187] Even Willis, who asserted the division between rational and corporeal soul, could not deny the bodily and physiological consanguinity between brutes and humans, and the understanding of neurological conditions that could be derived from looking into nonhumans: "Therefore, however the thing may be performed, I shall attempt to Philosophise concerning that Soul at least, which is Common to Brute Animals with Man, and which seems to depend altogether on the Body, to be born and dye with it, to actuate all its Parts, to be extended thorow them, and to be plainly Corporeal; and that chiefly, because, by the Nature, Subsistence, Parts, and Affections of this Corporeal Soul rightly unfolded, the Ingenuity, Temperament, and Manners of every Man may be thence the better known; as also the Causes, and formal Reasons of many Diseases, as of the Phrensie, Lethargy, Vertigo, Madness, Melancholy, and others, belonging rather to the Soul than to the Body, as yet hidden, may in some part be discovered." For Willis, the brain was the site of the rational soul, and because of that embodiment, the the border between nonhuman sensation/cognition and higher order anthropic operations was porous. Thomas Willis, *Two Discourses Concerning the Soul of Brutes, Which is that of the Vital and Sensitive of Man* (London, 1683), 1.
[188] See Thomas Wright, *William Harvey: A Life in Circulation* (Oxford: Oxford University Press, 2013), 86, 151.
[189] See Louise Hill Curth, "The Medical Content of English Almanacs, 1640-1700," *Journal of the History of Medicine and Allied Sciences* 60, no. 3 (2005): 255-282.

apothecaries] Galenicall physique; and the truth is, one of the apothecarys whom they charge most, did speak very prettily, that is, his language and sense good."[190]

Popular psychological materialism and the more elitist, enigmatic Cartesian dualism were not the only forms that theories of embodiment took. Alternative conceptions of dualistic embodiment, as Charis Charalampous avers, preceded and thrived contemporaneously with Descartes. Theories of the "intelligent body" borrowed from the Aristotelian tripartite schema of the soul (vegetative, sensible, and rational) and split sensation into loci of external and internal senses, corresponding to sensible and rational modes of bodily action. "According to" accounts of men like Alexander Ross, Richard Baxter, and Matthew Hale, "the body performs cogitations that resemble reason, it has its own imagination and memory, and its estimative power resembles the function of the will."[191] Bodily continuity between humans and animals meant that reason-like corporeal "cogitation" was evident in both, a parallelism that Descartes would have found theologically appalling. And many who advanced some form of mechanistic theory turned away from the causal speculations attending hardline dualism and Descartes's distillation of animal phenomenology into rudimentary clockwork. Robert Boyle said of brute creation, "Yet euident it is, that a Feeling they haue of Paine; which causelesly to make them endure, is a thing manifestly contrary to humanity: & alwayes detested by those whom all men confesse the best Natures: as being indeed but a Delight to make those Creatures Miserable, whom God takes Pleasure to see happy."[192] Boyle did not, as the beast-machine hypothesis would have it, let humankind off the hook for its painful anatomical investigations by denying sensible experience to nonhumans. To

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[190] Quoted in Marjorie Hope Nicholson, *Pepys' Diary and the New Science* (Charlottesville, VA: University of Virginia Press, 1965), 58-59.
[191] Charalampous, *Rethinking the Mind-Body Relationship*, 10.
[192] Robert Boyle, *The Boyle Papers*, Royal Society, London, vol. 37, fols. 186-93, reproduced in Malcolm R. Oster, "The 'Beame of Diuinity': Animal Suffering in the Early Thought of Robert Boyle," *British Journal for the History of Science* 22, no. 2 (1989): 173.

lend "cause" to his bestial sacrifices, he did not appeal to the cosmic separation of human and animal sense experience of dualistic mechanism. For Boyle and many others of the Royal Society, commitment to "Descartes's notorious denial of sentience to nonhuman animals. . . proved to be largely irrelevant to the ideology that informed the practice of live dissection."[193] Instead, as J.J. Macintosh argues, it was Boyle's curiosity and "scientific enthusiasm" that "led him to kill, and indeed to torture" more animals than his younger appraisals of animal life would have countenanced.[194] In Boylean inquiries, it was because nonhuman animals were mechanically and sensibly analogous to humans, because they shared in humanity's sentient operations, and because they bore the imprint of the same divine creator that they became ideal experimental and sacrificial subjects.

Given the heterogeneous conceptual strains of embodiment, recognizable physiological and sensory interspecies sameness resonated in phenomenologically diverse ways within patterns of early Royal Society sociability. This is where expectations of "performance" and "entertainment" were integral in fostering a democratic pushback to science-in-the-making's attempts at objective epistemic closure. Without an imposed sovereign finality like that of James I or Louis XIV, one man's justifiable expenditure of nonhuman animate life could easily become, in the view of others, a subornation. Over the course of the later seventeenth century, responsive possibilities became desiccated and foreshortened as institutional controls became standardized and tightened. But in the initial decades of academic association, multispecies bodies had a historicity that a loose, voluntary corporate structure could not isolate and banish from its meetings. Robert Boyle's *New Experiments Physico-Mechanical Touching the Spring of*

[193] Peter Harrison, "Reading Vital Signs: Animals and the Experimental Philosophy," in *Renaissance Beasts: Of Animals, Humans, and Other Wonderful Creatures*, ed. Erica Fudge (Champaign: University of Illinois Press, 2004), 196.
[194] J.J. Macintosh, "Animals, Morality and Robert Boyle," *Dialogue* 35, no. 3 (1996): 462.

the Air (1660) attempts to pronounce objective verdicts on experimental findings in the Royal Society precursory milieu of the late 1650s but inadvertently reveals the bristly skein of experimentation's social life. Boyle recounts the snarls that accompanied one performance of vacuum experiments (created with the air-pump) in front of an invited audience of witnesses:

> I say, for a few moments, because, that having divers times tried the experiment of killing birds in a small receiver, we commonly found, that within half a minute of an hour, or thereabout, the bird would be surprised by mortal convulsions, and within about a minute more would be stark dead, beyond the recovery of the air, though never so hastily let in. Which sort of experiments seem so strange, that we were obliged to make it several times, which gained it the advantage of having persons of differing qualities, professions and sexes (as not only ladies and lords, but doctors and mathematicians) to witness it. And to satisfy your lordship, that it was not the narrowness of the vessel, but the sudden exsuction of the air that dispatched these creatures so soon; we will add, that we once inclosed one of these birds in one of these small receivers, where, for a while, he was so little sensible of his imprisonment, that he eat very cheerfully certain seeds that were conveyed in with him, and not only lived ten minutes, but had probably lived much longer, had not a great person, that was spectator of some of these experiments, rescued him from the prosecution of the trial. Another bird being within about half a minute cast into violent convulsions, and reduced into a sprawling condition, upon the exsuction of the air, by the pity of some fair ladies, related to your Lordship, who made me hastily let in some air at the stop-cock, the gasping animal was presently recovered, and in a condition to enjoy the benefit of the ladies compassion.[195]

Repetitive trials to gauge the effects of low air pressure on respiration necessitated the accumulation of a variety of witnesses, but it is essential to note that the territory properly constituting an experimental witness was still being mapped out. Boyle recalls the presence of "persons of differing qualities" with substantially divergent ideas concerning the valuation of animal subjectivity in relation to the perceived benefits of vacuum trials. At first glance, as Elizabeth Potter remarks, the brace of witnesses appears to be a populist assembly, but on further inspection those "witnesses" who can and did agentially intervene in the preconceived test

[195] Boyle, *Works*, 1:106-07.

protocols are united by elevated social status or professional qualifications.[196] The paid labor, the assistants and servants on whom Boyle depends, are not even mentioned, let alone provided with enough participatory power to consciously refract outcomes. The doctors and mathematicians who can testify to the elaboration of facts, like good dispassionate observers, remained resolutely silent during the trial. But a sympathetic "great person" spectating the scene "rescued" the bird (probably a lark or hen-sparrow) from asphyxiation. Additionally, "some fair ladies" related to Boyle's nephew, Lord of Dungarvan, (to whom the tract is dedicated) "pit[ied]" one avian victim and prevailed upon Boyle to resuscitate her. To Boyle, these irrepressibly compassionate "witnesses" of stature must have seemed far from ideal because their interference actuated him to withdraw from more public displays of experimental entertainment:

> And another time also, being resolved not to be interrupted in our experiment, we did at night shut up a bird in one of our small receivers, and observed that for a good while he so little felt the alteration of the air, that he fell asleep with his head under his wing; and though he afterwards awaked sick, yet he continued upon his legs between forty minutes and three quarters of an hour: after which, seeming ready to expire, we took him out, and soon found him able to make use of the liberty we gave him for a compensation of his sufferings.[197]

There is a sense that despite a retreat from a broader circle of sociability, the wistful gaze of gentility lingered in Boyle's more reflective moments, perhaps persuading him to manumit another feathered test subject from imminent decease as "compensation [for] his sufferings."

"Interruptions" of experiments could not simply be resolved by a negative movement away from the interpersonal tension. Unconditionally sequestering early modes of experimentation from the social form of life they fed upon translated into hollow facticity. Within the circumference of voluntary incorporation, membership controls could be established, and thus the Royal Society notoriously excluded women, but orders for experimental

[196] Potter, *Gender and Boyle's Law*, 18.
[197] Boyle, *Works*, 1:107

entertainment of socially and professionally sundry Fellows provided space for intersubjective dissent in transspecies constitutions. This did not always benefit the experiment or the individual animal, as Boyle recalls one instance in which a visiting "Virtuoso of quality," curious to see the air-pump in action, circumvented Boyle's procedure and cut short the life of a captive mouse.[198] However, Boyle, even in the pre-Society phase of his pneumatic investigations, recognized the inexorable concomitant nature of inquiry, sociality, and performance. Experiments were simultaneously data excursions and "traged[ies]" in which animal suffering raised the stakes of dramaturgical interest. Boyle was not immune to an animal's misery and included its grisly, pathetic details in his masculine prose: "the bird [a lark] threw herself over and over two or three times, and died with her breast upward, her head downwards, and her neck awry. And though upon the appearing of these convulsions, we turned the stop-cock, and let in the air upon her, yet it came too late . . . we found the whole tragedy had been concluded within ten minutes of an hour."[199] In Boyle's prose of Sophoclean dimensions, one imagines the abject body of the lark rolled out upon the ekkekleyma while a Boylean kēryx reports the fatal offstage violence. Perceiving dramatic architectonics of pathos and catharsis across species reinforced conclusions that could be drawn from interspecies corporeal continuity. Observing repeated respiratory sufferings of multiple species, Boyle was able to trace an existential line of shared precarity from worms, flies, bees, hen-sparrows, larks, mice, eels and dogs to humans:

> But when we had again drawn out the air, their motions presently ceased, and they fell down seemingly dead as before, continuing moveless, as long as, by continuing to pump, the vessel was kept exhausted. This invited us thankfully to reflect upon the wise goodness of the creator, who, by giving the air a spring [pressure], hath made it so very difficult, as men find it, to exclude a thing so necessary to animals: and it gave us also occasion to suspect, that if insects have no lungs, nor any part analogous thereunto, the ambient air affects them, and

[198] Ibid., 1:99.
[199] Ibid., 1:97.

> relieves them at the pores of their skin; it being not irrational to extend to these creatures . . . that a living body is throughout perspirable.[200]

Where only a slender species agglomeration existed previously, Boyle now recognizes a vast ecosystem dependent on some unidentified element in the air. Insects are more like us than what was dreamt of in prior philosophy. At the same time, Boyle begins to subtly and probably unconsciously fractionate humanity into those who might legitimately, even if inconveniently, witness experiments, and those who must mutely bear the physical brunt of experimental trials as non-dissenting, non-contributing, invisible advocates – that is, those who are more like analyzable subjects of harm, more like insects, than others. Included in this category are laboring men – miners and divers – who might make fit subjects for a vacuum receiver "capacious enough to hold a man . . . who, in case of fainting, may, by giving a sign of his weakness, be immediately relieved," or a servant ordered to watch and record the last slow hours of cardiac pulsations exhibited by a fetal puppy ripped from his mother's womb and vivisected from sternum to pelvis.[201] The combination of gentility and virtuous masculinity proved a stout barrier to categories of objectification and abjection that slid more easily between the human working-class and nonhuman bodies conscripted into empirical trials. Christopher Wren's tests of the curative potential of "sympathy-powder" on the lesion of a maid-servant translated quickly into Boyle's applications of the same substance to a lacerated canine;[202] while anatomist Edward Tyson's experiment of the "serpentine-stone" on the snake-bitten hand of another "maid-servant" immediately resurfaced in the form of trials in which the powdered stone was administered to several intentionally poisoned dogs.[203] Unlike the "great person" or "Virtuoso of quality" or

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[200] Ibid., 1:112.
[201] Ibid., 111, 109.
[202] Birch, *History*, 1:349.
[203] Ibid., 4:39-40.

Boyle's kinswomen, the servant, even if she desired to, could not intercede or object except at the expense of her livelihood. Thus, for Boyle and other experimental philosophers, the inherent tragic dramaturgy of experiment was not disavowed (a mutual material constitution by God depended on it), but rather was apodictically negotiated through orbits of sociability in which legitimate witnesses could be tailored to arising epistemic exigencies.

These restrictive corporate ligatures can be felt when reading the official record of a respiration experiment "upon a dog cut open alive" in tandem with Robert Hooke's private thoughts on the event.[204] Hooke's account of the experiment, ordered presumably to resolve questions surrounding pulmonary-cardiac interactivity, as related in the Society minutes goes as follows:

> In prosecution of some inquiries into the nature of respiration in several animals, a dog was dissected, and by means of a pair of bellows, and a certain pipe thrust into the wind-pipe of the dog, the heart continued beating for a very long while after all the thorax and belly had been opened; nay, after the diaphragm had been in great part cut away and the pericardium removed from the heart. And . . . we found, that upon removing the bellows, the lungs would presently grow flaccid, and the heart begin to have convulsive motions: but upon renewing the motion of the bellows, the heart recovered its former motion, and the convulsions ceased.[205]

Included in the published description is an unruffled, multi-layered mechanical manipulation of organs by a rational intelligence; excluded is the affective surplus generated between Hooke and the tormented dog, for when Hooke privately divulged his afflictive misgivings to Boyle, he complained,

> The . . . experiment (which I shall hardly, I confess, make again, because it was cruel) was with a dog . . . yet I could not make the least discovery in this of what I longed for, which was, to see, if I could by any means discover a passage of the

[204] Ibid., 1:485.
[205] Ibid., 1:186.

> air of the lungs into either vessels of the heart; and I shall hardly be induced to make any further trials of this kind, because of the torture of this creature.[206]

But induced Hooke was. After much temporizing and dodging of executive orders, Hooke acquiesced in October 1667 and again performed the open thorax bellows experiment, this time with George Ent.[207] In his *Diary*, John Evelyn responded to the vivisection in harmony with Hooke's initial lugubrious regrets, "To Lond: . . . where was a dissection of a dog, the poore curr, kept long alive after the *Thorax* was open, by blowing with bellows into his lungs, & that long after his heart was out, & the lungs both gashed & pierced, his eyes quick all the while: This was an experiment of more cruelty than pleased me."[208] The "tortur[ous]" and "cruel" nature of the trials no doubt motivated Hooke to bolster his ability to recuse himself from noxious experiments, which he did by way of encouraging the Society council in 1668 to hire a "servant" to conduct his specifically "anatomical" trials for the sum of "twenty pounds a year."[209]

Experimental meetings of the Royal Society were woven together on an empirical warp and weft of interspecies corporeal fungibility, not Cartesian speculations into indemonstrable theoretical absences (of animal sentience and pain), and within the loose structure of corporate autonomy, this allowed for dissonant valuations of other-than-human subjectivity. Distance between the callous event records in the official minutes and Hooke's or Evelyn's personal reflections was never as vast in the milieu of the meeting's interpersonal encounters as it was in the derived textual narratives. It must have disheartened Hooke to see that his expostulations

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[206] Robert Hooke, Letter from Robert Hooke to Robert Boyle, 10 November 1664, in *The Correspondence of Robert Boyle*, eds. Michael Hunter, Antonio Clericuzio and Lawerence Principe (London: Pickering and Chatto, 2001), 2:399. Also quoted in Shannon, *Accommodated Animal*, 260.

[207] Between May and 10 October 1667, Hooke, who was ordered on several occasions to repeat his original open thorax artificial respiration experiment, landed upon several excuses to defer the procedure. See Birch, *History*, 2:173, 181, 186, 187, 197, and 198. See also Lisa Jardine, *Ingenious Pursuits: Building the Scientific Revolution* (New York: Nan A. Talese, 1999), 118.

[208] Evelyn, *Diary*, 516.

[209] Birch, *History*, 2:289.

against canine thoracic vivisection merely compelled Edmund King to bring in a litany of torturous animal trials performed offsite: "Of bleeding a dog into a sheep. 2. Of a lamb into a fox . . . 4. Of a cat, dissected alive, to shew how long sense will remain after the head cut off. 5. Of a dog strangled, to be recovered by blowing in the aspera arteria with bellows; which experiment did not succeed. 6. Of a bitch dissected, which had been newly coupled with a dog. 7. Some observations in the late experiment of opening the thorax of a dog, which did not succeed."[210] Laurie Shannon recapitulates the public performative acts of animal experiment as a process of "'disanimation,' a techno-euphemism for death that evokes the surgical-removal of soul."[211] Shannon argues that specifically "By means of theatricality and repetition . . . the performative enterprise of disanimation staged scenes that . . . constrained animals to look like things."[212] While accepting Shannon's basic premise that *disanimation* was a feature of experimental operations, I would like to press against her argument that it was predicated on the enabling circumstances of performance and theatricality. Experimental performative exhibitions may have convinced some attendees of their nonhuman consumptive logic, but as demurrals from Hooke, Evelyn, and the general decline of public biological experimentation during the 1670s and 80s evince,[213] these staged entertainments did not convince all. That is because "performance" is always phenomenologically saturated and variegated, producing countless intersubjective outcomes and relational consciousness(es) of the object-event.[214]

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[210] Ibid., 2:189-90.
[211] Shannon, *Accommodated Animal*, 225.
[212] Ibid., 226.
[213] See Boas Hall, *Promoting Experimental Learning*, 45-49.
[214] For canonical in-depth analysis of theatre phenomenology see Susan Bennett, *Theatre Audiences: A Theory of Production and Reception*, 2nd ed. (New York: Routledge, 1997); and Bert O. States, "The Phenomenological Attitude," in *Critical Theory and Performance*, eds. Janelle G. Reinelt and Joseph R. Roach (Ann Arbor, MI: University of Michigan Press, 2007), 26-36.

Performances of nonhuman animal trials were riddled with subjective cross-currents and hence proved problematic as often as they were able to successfully concretize corporate consensus around the crucible of empirical experimentation. In part, this was due to an experimental emphasis on corporeal continuity and the emergent property of what Kenneth Shapiro calls kinesthetic empathy arising from the embodied encounter. According to Shapiro, kinesthetic empathy, "consisting of the meaningful actual or virtual imitation or enactment of bodily moves is possible . . . because we [humans and nonhuman animals] both have living, mobile, intending bodies. [. . .] In these terms, empathy is a second-order application of the notion of intentionality. Empathic experience involves appropriating a second body that then becomes [one's] auxiliary focus."[215] Using the live body of the animal to ratify consensus on facets of human corporality inevitably forced many Society spectators into not only considerations of similar psycho-sensual experience, but also into pre-cognitive kinesthetic responsiveness to transspecies "like me-ness" of bodily inhabitance. Shapiro's idea of the auxiliary body, which in many ways striated the known surface justifications of the experimental event, on a deeper level translated into a kinesthetic extension of human conscious experience into the intentional frame of animal subjectivity. Amid the contrary public "performance" of struggling, writhing, convulsing, yelping, and crying from nonhumans trapped within the vacuum chamber or splayed out upon the vivisection table, a phenomenological empathetic protraction from some human virtuosos to suffering others seemed inevitable. Rather than a teleology of performance eventuating in "disanimation," the example of Edmund King's record of experiments brought in from external laboratories gestures toward the presence of this countervailing phenomenological slippage and his rebuttal with a more pandemic mechanism of

[215] Kenneth J. Shapiro, "Understanding Dogs through Kinesthetic Empathy, Social Construction, and History," in *Social Creatures: A Human and Animal Studies Reader*, ed. Clifton P. Flynn (New York: Lantern, 2008), 42, 44.

what I have elsewhere called "dis-substantiation" – a process not contingent on theatrical conventions but on the efficacy of transmuting animal subject into mediatized object-facticity (in King's case, the written account) and thus erasing its essential corporal materiality. For King, the external, private site for his experiments facilitated the imposition of whatever sovereign justifications were required for the bleeding of lambs, the decapitation of live cats, or the vivisection of dogs. Boyle vindicated nonhuman mutilations along the lines of natural theology – delving into animal anatomy and physiology revealed the Divine Creator's blueprint for organic life[216] – while King installed his animal tortures in the institutional and chauvinistic frames of science-in-the-making's competitive internationalism.

Much of King and Lower's xenotransfusion work for the Royal Society occurred on an axis of scientific priority and budding nationalism. A corporate mission to establish successful interspecies transfers of blood congealed around timely international rivalries with French anatomists, and intensifying beside the disputatious claims were the formal elements of spectacle. The quarrel played out in the pages of the *Philosophical Transactions* during the year 1667. Between June of that year and January 1668, Jean Denis, a physician of the Faculty of Medicine at Montepellier (attached to Louis XIV), transfused blood from the carotid arteries of various lambs, calves, and goats into the veins of five human recipients suffering from a spectrum of psycho-physical maladies.[217] Denis admits, in a spurious July 1667 edition of the

[216] For example, in *New Experiments Physico-Mechanical Touching the Spring of the Air* (1660), Boyle's observations on the deprivation of air and its impact on various insects leads him to reflect upon God as divine architect: "And to ſatisfy the ſpectators, that it was the abſence of the air that cauſed this great and ſudden change; we had no ſooner re-admitted the air at the ſtop-cock, than all the three inſe&ts began to ſhew ſigns of life, and by little and little to recover. But when we had again drawn out the air, their motions preſently ceaſed, and they fell down ſeemingly dead as before, continuing moveleſs, as ſong as, by continuing to pump, the veſſel was kept exhauſted. This invited us thankfully to refleĉt upon the wiſe goodneſs of the creator, who, by giving the air a ſpring, hath made it ſo very difficult, as men find it, to exclude a thing ſo neceſſary to animals." Boyle, *Works*, 1:111.
[217] See Peter Sahlins, "The Beast Within: Animals in the First Xenotransfusion Experiments in France, ca. 1667-68," *Representations* 129 (2015): 25-55; and Nicholson, *Pepys' Diary*, 83-99.

Philosophical Transactions (published while Oldenburg was jailed in the Tower of London), that the vanguard of transfusion investigations among quadrupeds was "first spoken of in your *Academy* [the Royal Society], & that the Publick is beholding to you for this as well as for many other discoveries," but Denis also postulates that he is the first to advance into the unchartered territory of "making this Experiment [animal to human blood transfers] upon man."[218] In the same letter, Denis regales readers with the details of his initial human trial "upon a Youth aged between 15 and 16 years, who had for above two moneths bin tormented with a contumacious and violent fever . . . his wit seem'd wholly sunk, his memory perfectly lost, and his body so heavy and drowsie that he was not fit for any thing."[219] There is no evidence that Denis had any desire to turn the transfusion event into a public spectacle. At the early hour of five o'clock in the morning, three ounces of blood were extracted from the youth and replaced with approximately nine ounces of blood drawn from a healthy lamb. After experiencing some temporary burning in his arm, the young man spent "the rest of the day . . . with much more liveliness than ordinary."[220] Denis monitored his recovery in the weeks following and then commenced a second positive cross-species transfusion between another lamb and a robust 45-year-old porter. Denis cast neither of these events, as retold in the July letter, in frames of public showmanship or verification mandates of numerous witnesses. Instead, the exact details of the experiments were kept hidden so that Denis could use that information to ingratiate himself into what he perceived would be a receptive, collegial institution of global individuals: "I have not described the manner of our making this Experiment upon man . . . the particular relation would be but tedious and

[218] Jean Denis, "A Letter Concerning a new way of curing sundry diseases by Transfusion of Blood, Written to Monsieur de Montmor, Counsellor to the French King, and Master of Requests," *Philosophical Transactions* 2, no. 27 (July 1667): 489, 504. Note that Lower was performing transfusion experiments on animals prior to leaving Oxford for London in 1666.
[219] Ibid., 501.
[220] Ibid., 502.

useless to you, since you will behold it more plainly in an example when ever you shall find a convenience to command us to make the same before you." Flying in the face of a tacit constitution to secure international collaboration, Denis audaciously closed the letter with an intractable statement of proprietary procedural rights that must have raised the hackles of Oldenburg and the Royal Society.

Patriotic rebuttals to Denis's polite assertions of priority came swiftly, riding on the backs of ethical considerations. In September 1667 Oldenburg issued a clarification on Denis's article, reinforcing that transfusion "had its *birth* first of all in *England*; some Ingenious persons of the *Royal Society* having first started it there several years ago, (as appears in their *Journal*) and that dexterous Anatomist, D. *Lower*, reduced it into practice";[221] and the next month, Oldenburg followed his attack with a published response complimenting Denis's successful xenotransfusions into the melancholic teenager and porter, but also recounting Denis's subsequent failure in curing Baron Bond, son to Sweden's First Minister of State, of his gangrenous intestinal condition while most probably draining his body of its last reservoirs of viable blood.[222] For that reason, and the fact that Denis's French associate, Monsieur Gayen, fumbled a transfusion experiment between two canines, Oldenburg interpolates the following apologetic admonition into his letter:

> We readily grant, *They* were the first, we know of, that actually thus *improved* the Experiment; but then they must give us leave to inform them of this Truth, that the Philosophers in England had practised it long ago upon *Man*, if they had not been so tender in hazarding the Life of Man (which they take so much pain, to preserve and relieve) nor so scrupulous to incur the Penalties of the Law, which in *England*, is more strict and nice in cases of this concernment, than those of many other Nations are.

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[221] Henry Oldenburg, "An Advertisement concerning the Invention of the Transfusion of Bloud," *Philosophical Transactions* 2.27 (September 1667): 490.
[222] Henry Oldenburg, "An Account of More Tryals of Transfusion, Accompanied with Some Considerations Thereon, Chiefly in Reference to Its Cautious Practise on Man; Together with a Farther Vindication of This Invention from Usurpers," *Philosophical Transactions* (October 1667): 519-21

> The *Publisher* can assert *bonâ fide*, that several Moneths agoe he saw himself the *Instruments* ready, and heard the *Method* agreed on, thought proper to execute this Operation upon Man. And, for further proof thereof, he shall here insert the whole way, peculiarly contrived here for this purpose, by the Ingenious Dr. *Edmund King*, and by him communicated in a Letter; Monsier *Denys* not having thought fit to describe the manner they used in *France* for *Men*; nor any body else come to our knowledge.[223]

Oldenburg elevates what had previously been a courteous disagreement over proprietary claims into an international agon pitting rectitudinous "Philosophers of England" against the derelict French, whose unscrupulous legal system neglects the safety and care of its own citizens. Of course, the glaring contradiction in the above passage is that Oldenburg desperately wants to profit from the knowledge made possible by the same ignominious practices he lambastes. It was not ethics or legal impediments that stood in his way, but the personal barriers placed around intellectual property – "Monsieur Denys not having thought fit to describe the manner they used in France for Men." Once these were removed, human trials in England could commence.

And they did, for despite Oldenburg's disingenuous legal and ethical reservations, on 23 November 1667 Richard Lower and Edmund King (representing the Royal Society) successfully performed an "Experiment of *Transfusion*" from a lamb into "one Mr. Arthur Coga, at Arundel-house, in the presence of many considerable and intelligent persons."[224] The public quality of the event – the coordinated assembly of a cross-section of spectators and witnesses – was integral to imprinting the Royal Society mark upon the transfusion debate. In a letter to Boyle dated 25 November 1667, Oldenburg stresses that the first successful human transfusion experiment in England was performed by order of the Society "in the presence of many spectators, among whom were Mr. Henry Howard and both his sons, the bishop of Salisbury, four or five

[223] Ibid., 522.
[224] Henry Oldenburg, "An Account of the Experiment of Transfusion, practised upon a Man in London," *Philosophical Transactions* 2, no. 30 (December 1667): 557.

physicians, some parliament-men, &c."[225] This mass of credible and esteemed witnesses contrasted with Denis's clandestinely dubious initial trials. Published in the 9 December 1667 issue of *Philosophical Transactions*, Oldenburg's acknowledgment of the Royal Society's public exhibition was tactically and directly followed by an account of Denis's futile efforts to recover Baron Bond of Sweden. Although the article concludes by mentioning Denis's open autopsy of Baron Bond, confirming the patient's pre-existing irrevocable internal decay, "attested both by a dozen persons of great veracity . . . and confirmed by the *Certificates* given by the *Physicians* themselves," Oldenburg's intentional juxtaposition of Denis's failure with Lower and King's triumphant operation attenuates the credibility of that witnessing which ultimately does not redound positively onto Denis.[226] This slight and the role that spectatorship played in its formulation did not go unanswered. In the 10 February 1668 issue of *Philosophical Transactions,* Denis offered a riposte vindicating himself of slanderous "rumour[s]" encircling the "Mad-man, that hath been lately cured and restored to his Wits by the means of the Transfusion."[227] The patient was 34 year-old Anthony du Mauroy Saint Amant, a *valet du chambre* who for the past seven or eight years had suffered from periodic "phrensy," occasionally lasting as long as ten months. Saint Amant had been bled eighteen times and taken over forty baths but to no avail. During his last episode he escaped confinement and ran naked through the streets of Paris committing arson whenever his fancy dictated. Moved to pity, Monsieur De Montmor petitioned Denis to apply his widely touted transfusion therapy. On 19 December, Denis and Emmerez, before "Many persons of Quality . . . together with several

[225] Birch, *History*, 2:216.
[226] Henry Oldenburg, "A Relation of Some Trials of the Same Operation, lately made in France," *Philosophical Transactions* 2, no. 30 (December 1667): 564.
[227] Jean Denis, "An Extract of a Letter, Written by J. DENIS, Doctor of Physick, and Professor of Philosophy and the Mathematicks at Paris, Touching a Late Cure of an Inveterate Phrensy by the Transfusion of Blood," *Philosophical Transactions* 2, no. 32 (February 1668): 618.

Physicians and Chirurgeons," transferred five or six ounces of blood from a calf to Saint Amant, who appeared "less exorbitant" the next morning. This publicly confirmed success prompted another trial in front of gathered physicians the following Wednesday.[228] Upon completion of the transfusion, Saint Amant vomited and fell into a deep slumber until the next day "when he awakened, [and] he shewed a surprising calmness, and a great presence of mind.[229] He continued in this "restored state" of "calm spirit" until the time of the letter's composition and submission to the *Philosophical Transactions* (10 Feb 1668). Saint Amant would die about a month later after a third but incomplete attempt at transfusion. Talk of Denis and Emmerez's malpractice as the cause of Saint Amant's death erupted in Paris, but at the ensuing trials it came to light that Saint Amant's widow had poisoned her husband with arsenic. In spite of the fact that Denis and Emmerez were exonerated, the final judgment handed down from the court included the addendum "that for the future no Transfusion should be made upon any Human Body but by the Approbation of the Physitians of the Parisian Faculty," an august body of staunch conservatives set against most innovations in medical procedures.[230]

Conspicuous in the international transfusion debate was a correlation between the spectacular nature of the experimental event and the intensity of accounts reiterated in circulating media. At the heightened level of extra-national competition, the replication of dis-substantiated evidence in the *Journal des Scavans* and the *Philosophical Transactions* did not replace the necessity of experiment but rather required an aggrandizement of performance aesthetics, protocols, and audiences. The transfusion of blood from lambs and calves into humans was the climactic act in a three-act structure beginning with intraspecies transfers (usually between

[228] Ibid., 620.
[229] Ibid., 621.
[230] Quoted in Nicholson, *Pepys' Diary*, 94.

canines), progressing next through nonhuman interspecies transfers, and culminating in animal-human trials. That interspecies-public arc is essential to understanding why a subtle taxonomic logic or set of corporal-social divisions among humans began to work its way into the spectacular dramaturgy. Paralleling discursive shifts present in Boyle's *New Experiments Physico-Mechanical Touching the Spring of the Air*, frames of transspecies (human-nonhuman) bodily mechanics mapped onto discourses of consummate humanness and orthodox embodiment, with the result that particular classes of humans were deemed more potentially susceptible to the ameliorative effects of animal blood transfusions. Segregation into experimental administrators and recipients followed a distinct psycho-physical typology based on transspecies propinquity and the possibility of mutational benefits – in short, some humans were thought to be closer to nonhuman animals and thus more receptive to benefit from the infusion of fresh, unsullied blood from nonhuman juveniles. The originary source of this dramatic structuration, or, rather, what underwrote its international narrative persistence, can be identified in a set of provocations frequently promulgated by Robert Boyle. The most complete version was printed as "Tryals proposed by Mr. Boyle to Dr. Lower, to be made by him, for the improvement of Transfusing Blood out of one live animal into another" in issue no. 22 of the *Philosophical Transactions* (11 February 1666/7), although Boyle emphasizes they had been "written long since and read about a Moneth ago in the R Society."[231] The first query concentrates on intraspecies blood exchanges and seeks to discover "Whether by this way of Transfusing Blood, the disposition of Individual Animals of the same kind, may not be much altered."[232] The third proposal addresses questions of whether or not traits attached to particular

[231] Robert Boyle, "Tryals proposed by Mr. Boyle to Dr. Lower, to be made by him, for the improvement of Transfusing Blood out of one live animal into another," *Philosophical Transactions* 1, no. 22 (February 1666/7): 385.
[232] Ibid., 386

breeds may be transmitted in blood; the eighth, if a sickly dog could be cured with the blood of "a *sound* Dog' and vice versa; the thirteenth, if blood transfusions might be successful between species; the fourteenth, "Whether the *Colour* of the Hair or Feathers of the *Recipient* Animal . . . will be changed into that of the *Emittent*";[233] and the penultimate proposition wrangles with species transformation: "Whether by frequently transfusing into the same Dog, the blood of some Animal of another *Species*, something further and more tending to some degrees of a change of Species, may be effected, at least in Animals near of Kin."[234] This last query concerning interspecies alteration is indeed a climactic cap placed upon Boyle's ascending order of increasing biological and phenomenological dissimilarity between test subjects, and it uses a type of ill-defined transspecies kinship as a basis for gauging the transmutational capacity of foreign blood. As I hope to show, this cross-species kinship was integral in the determination of human experimental recipients.

By December 1666, Richard Lower reported in the *Philosophical Transactions* that he had already begun testing the elasticity of interspecies transfusions. In prior months at Oxford, Lower imparts, "those who were imployed to make the Experiment, ha[d] hithero been attended with good success; and that not only upon Animals of the same Species (as two dogs first, and then two Sheep) but also upon some of very differing Species (as a Sheep and a Dog; the former Emitting, the other Receiving)."[235] Such achievements offered encouragement to press the boundaries of test subject disparities: "'Tis intended, that these tryals shall be prosecuted to the utmost variety the subject will beare: As by exchanging the bloud of Old and Young, Sick and Healthy, Hot and Cold, Fierce and Fearful, Lame and Wild Animals, &c. and that not only of the

[233] Ibid., 387.
[234] Ibid., 387-88.
[235] Richard Lower, "The Method Observed in Transfusing the Bloud out of One Animal into Another," *Philosophical Transactions* 1, no. 20 (December 1666): 356.

same, but also of differing kinds."[236] In a subsequent experiment, Thomas Coxe did just as Lower suggested and transfused the blood of a mangy street dog into a healthy spaniel, noting "no alteration at all" in the hearty spaniel and relating the "Maingy Dog . . . in about 10 dayes or a fortnights space perfectly cured."[237] Most of the "emittent"/donor animals were bled to death during these experiments, but Lower's alchemical fervor varnished over these losses to also incite a great disparity in subject size and number. He suggests either "bleed[ing] a great dog into a little one" or using "three or four several Dogs" to bleed into "one Dog [who] will receive all their bloud."[238] Pertaining to the former, Lower once transfused blood from a mastiff into a cur who "bled out at least double the quantity of his own bloud, and left the *Mastive* dead upon the Table, and after was untyed, he ran away shak'd himself, as if he had been only thrown into water."[239] Before the Boyle-Lower spectrum of species diversity was elongated to include humans, there was already a structural pattern of sanguinary incongruity in species and number. Any number and type of "emittents" could be sacrificed if change could be measured in the recipient. The appetite for and belief in the transfiguring properties of exogenous blood meant that both those individuals directing experiments and those subjects suspected of alterative potential were exonerated of a vagrant vampirism in correlation with the amount of transformation elicited. But what form of logic complemented the existent donor-recipient disparities when trials extended to humans? Which persons were similar enough to animals in kind and could simultaneously register blood-borne alterations?

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[236] Ibid., 357.
[237] Thomas Coxe, "An Account of Another Experiment of Transfusion, viz. of Bleeding a Mangy into a Sound Dog," *Philosophical Transactions* 2, no. 25 (May 1667): 452.
[238] Lower, "Method Observed," 356.
[239] Ibid.

Determinations for subjects of xenotransfusion experiments were decided according to criteria that defied any mechanical dualistic systemization. Jean Denis based subject candidacy on a therophilic/Biblical tradition of Galenic humoralism, believing that animals were more suitable blood donors than other humans because

> the blood of animals is less full of impurities, than that of men . . . Sadness, Envy, Anger, Melancholy, Disquiet, and generally all the Passions, are as so many causes which trouble the life of man, and corrupt the whole substance of the blood: Whereas the life of Brutes is much more regular and less subject to all those miseries, which we ought to consider as sad consequences of the prevarication of our first Parents. And indeed Experience sufficiently shews us That if 'tis a rare chance to find ill blood in the Veins of Beasts; 'tis almost impossible not to find some corruption in that of Men, how healthful soever they seem to be.[240]

The most fascinating aspect of this passage is not Denis's oblique recitation of mankind's fall in Genesis, which was a common enough trope to separate disobedient humans from a certain irrational bestial purity, but his narrative's fusion with post-micrographic empiricism. Close inspection corroborates the sanguinary corruption of man's fall and the moral-physiological wall established between humans and other animals. And yet the evidence for human corruption is psychologically material – that is, the passions – sadness, envy, anger, melancholy, and disquiet. Our blood-borne original deviance is identified through affective imbalances whose prolongation manages only to further deteriorate the fluid composition of blood. According to Denis's logic it makes sense that his first human subject of xenotransfusions was a teenager of "lumpish dull spirit . . . cheerful and nimble enough in body; but . . . his wit seem[ing] wholly sunk,"[241] while his final patient, Saint Amant, suffered from psychopathic "Extravagancy" and intransigent fits.[242] Likewise, George Ent, at a meeting of the Royal Society on 24 October 1667, proposed

[240] Denis, "A Letter . . . Sundry Diseases," 499-500.
[241] Ibid., 501.
[242] Denis, "Extract of a Letter . . . Transfusion of Blood," 619.

that it was "most adviseable to try it [blood transfusion] upon some mad person in the hospital of Bethlem," and many in attendance seconded the motion.[243] Ultimately, the Society hired test subject Arthur Coga for the cost of a guinea. According to Edmund King, Coga "[spoke] Latin well [but] his brain [was] sometimes a little too warm,"[244] and Oldenburg went further in describing Coga's mental instability, relating that he had been "looked upon as a very freakish and extravagant man" whose mental illness pushed him into indigence.[245]

It needs to be stressed that the selection of xenotransfusion test subjects was, in large part, based on a hybridization of avant-garde empiricism with older theological models and a tacit Galenic humoralism. Belief in a mechanical bodily continuum operating across species was necessary for directing the processual pragmatics of blood transfer, but that belief recedes into the background in the available discourse surrounding transfusion events. Peter Sahlins states that the first blood transfusions "mark a rupturing moment in thinking about animals (and about humanity) that naturalized and devalorized animals while turning men into beasts."[246] In my opinion, Sahlin's summative statement is difficult to prove *in toto*. Rummaging through hospitals and convict wards for mentally deficient test subjects who had, in essence, lost the legal standing granted by a socially certifiable presence of rationality *did* reduce them to the economic level of bestial chattel. The dedication of these men whom reason had abandoned to experimental trials had the ability to circumvent criticism like that of Pierre-Martin de la Martinière who cautioned that "The transfusion of an animal's blood into the veins of a man will change his reason into brutality.''[247] *But* the framework for committing the insane to xenotransfusions was a quasi-

[243] Birch, *History*, 2:202.
[244] Robert Boyle, *The Works of the Honourable Robert Boyle*, ed. Thomas Birch (London, 1744), 5.638.
[245] Ibid., 5.372.
[246] Sahilins, "Beast Within," 28.
[247] Pierre-Martin de La Martinière, "Le Chymique ingénue (Paris, n.d.)," 13 in La Martinière, *Les Sentiments*, 3, quoted in Sahlins, "Beast Within," 42.

theological or psychological material one that elevated particular species of quadrupeds above mechanistic considerations. When Arthur Coga was asked why he did not have some other creature's blood transfused into his veins he replied, "Sanguis ovis symbolicam quamdam facultatem habet cum sanguine Christi, quia Christus est agnus Dei."[248] Denis shared Coga's religiously salutary paradigm of species selection, interpreting the blood of animals as a purer substrate suited to filter out the humoral excesses of humanity. Within this theologically inflected psycho-physiological model it was specifically and paradoxically the blood of irrational brutes that could potentially (and did) restore human rationality, as if the animal were a bloody, recalcitrant archive of humanness. However, the wrinkles of paradox were flattened out when the ameliorative effects of interspecies blood transfers were understood in the theological context of Christ's sovereign oversight and historical intervention. The swellings of spectacle and spectators for xenotransfusions, in true synoptic gospel fashion, authenticated the miraculous corporal linearity and salubrious entanglements of species as instituted by God. Rather than "devalorizing" animals, initial transfusions empirically substantiated what had hitherto been a theoretical domain of religious thinking about the sinless integrity of particular animal species and revealed new, uncultivated terrains of transspecies conjugation. Of course, this empirical assurance and affirmation of symbolic grandeur meant little to the individual animals sacrificed in these first transfusion experiments.

What one can take away from a look at early Royal Society acquisitive and experimental behaviors is that the establishment of socio-political legitimacy (of science-in-the-making) depended on forms of embodiment that could either be plucked from a species continuum or persist as hybridized constructions of man and beast. Among the virtuosic accumulation of bric-

[248] "The blood of sheep has a symbolic capacity/power with the blood of Christ, for Christ is the lamb of God." Boyle, *Works* (1744), 5:638.

a-brac *naturalia*, the gentleman of science(-in-the-making) could separate mere objects from objects of study and effectively charter the rationalistic, epistemic parameters of taxonomy and universal laws because of his unique sensory entanglement with non-human animate life. Among the intersubjective warp and weft of demonstrative entertainment and saturated experimentation, the successful experimenter, in opposition to Cartesian ontological segregation, remained sensitive and vulnerable to the species continuities of shared embodiment. Within the domains of repository and experimental laboratory, it was never just bodies as passive revelations of form, but bodies in "performance" under manipulated conditions that opened up spectacular interspecies ontological possibilities. Mandates toward "entertainment" did not dissolve abstruse "science" into tawdry gimcrack, but were essential in pressuring participants into public and epistemic departures from Cartesianism and reductive interspecies paradigms toward hybrid-bodied transspecies accords and kinesthetic empathy. However, some, in the world of the theatre, saw Society entertainments as potentially rival events.

Chapter Six

"The Threat of Interspecies and Interscalar Epistemological Sovereignty in Shadwell's *The Virtuoso* (1675)"

The previous chapter explored how, within the corporate sociality of the Royal Society, motivations toward entertainment involving empirical contemplations of nonhuman life did not simply provide dissolute spectacle but opened paths to epistemic departures from reductive theoretical paradigms or impositions of external political will. In a corporate voluntary mode of assemblage, in which institutional integrity was widely distributed among a socially and intellectually diverse membership, nonhuman sensible objects functioned on the levels of individuals and factions to create sometimes diametric forms of epistemological sovereignties. This chapter traces that interspecies mode of epistemological sovereignty through the imbricated cultural domain of Restoration theatre, which was itself a laboratory space building upon the same empiricist praxes, incorporating identical personnel, and operating within the same social spaces as the Royal Society. William Davenant and John Dryden's efforts that evolved out of Davenant's utopic aesthetic-moral treatise *A proposition for advancement of moralitie, by a new way of entertainment of the people* (1653), for many years working in tandem with the novel ventures and ontological flirtations of experimental science, came to an unforeseen and climactic clash with Societal empiricism in Thomas Shadwell's satire comedy *The Virtuoso* (1675). It is my argument that Shadwell's negative reaction betrayed an unconscious conservatism set against the political and corporeal implications of interspecies epistemological sovereignties issuing out of the Royal Society and what those implications meant for a stratified social structure pinned to the sustainability of landed gentry and bodily visions of social place. Shadwell's aesthetic fusillade chimed a moment of rupture for the perceived outcomes of experimental philosophical

practice and Restoration theatre, whose ultimate socio-political products were interpreted by Shadwell as irrevocably divergent because of the autonomous, sovereign dimensions associated with transspecies (and transobjective) constitutionality. Prior to that "break," Restoration theatre and proto-institutional experimental philosophy participated in the same corporate sociality, used similar instrumental mechanical interventions, and benefitted from analogous legal framings imbued with an oxymoronic combination of royal oversight and negligence.

Reiterating Robert Hume, it is safe to state that the developmental pattern of late seventeenth-century drama was entangled with moments of "political upheaval."[1] The establishment of patent monopolies meant that, although not always slavishly encomiastic of Charles II's reign, theatrical representation in Restoration London ineluctably followed the contours of central politics. Hume's key determinations of what constitutes Carolean theatre – "the introduction of actresses; new designs for playhouses; a rapid increase in the use of scenery and machines; and a growing emphasis on music and dance" – were all bound in some way to corporate legal structures maintained by the permission and pleasure of the crown.[2] William Davenant was arguably the most responsible for manufacturing these aesthetic outcomes by manipulating the reduction of an unwieldy and variegated pre-civil war theatrical topography to its post-1660, royally licensed dimensions of dual patent ownership.

Swiftly following a 9 July 1660 grant to Thomas Killigrew "to erect one Company of players," Davenant initiated the process for establishing political control over the proposed moral and epistemological aesthetics of his interregnum treatise.[3] In a 19 July 1660 draft petition to the attorney general, Davenant defined the regulatory and monopolistic parameters necessary for

[1] Robert D. Hume, *The Development of English Drama in the Late Seventeenth Century* (Oxford: Oxford University Press, 1976), 10.
[2] Ibid., 7.
[3] Leslie Hotson, *The Commonwealth and Restoration Stage* (New York: Russell and Russell, 1962), 400.

elaborating sensible objects of the theatre within an abridged cultural format of only two corporate bodies:

> Our will and pleasure is that you prepare a Bill for our signature to passe our Great Seale of England, containing a Grant unto our trusty and well beloved Thomas Killegrew Esquire, one of the Groomes of our Bed chamber and Sir William Davenant Knight, to give them full power and authoritie to erect Two Companys of Players consisting respectively of such persons as they shall chuse and appoint; and to purchase or build and erect at their charge as they shall thinke fit Two Houses or Theaters with all convenient Roomes and other necessaries therto appertaining for the representations of Tragedys, Comedys, Playes, Operas, and all other entertainments of that nature in such convenient places as shall be thought fit by the Surveyor of our Workes; and likewise to setle and establish such payments to be payed by those that shall resort to see the sayed Representations performed as either have bin accustomarily given and taken in the like kinde or as shall now be thought reasonable by them *in regard of the great expences of scenes, musick and new decorations as have not bin formerly used* [my emphasis]. With further power to make such allowances out of that which they shall so receive to the Actors and other person imployed in the said Representations in both Houses respectively as they shall thinke fit. The sayd Companys to be under the jurisdiction, government and authoritie of them the sayed Thomas Killegrew and Sir William D'avenant. And in regard of the extraordinary lisence that hath bin latly used in things of this Nature our pleasure is that there shall be no more places of Representations or Companys of Actors or Representers of Sceanes in the Cittys of London or Westminster or in the liberties of them then the Two to be now erected by virtue of this authoritie, but that all others shall be absolutely suppressed. And by our further pleasure is that for the better inabling of the sayed Thomas Killegrew and Sir William D'avenant to performe what Wee intend hereby that you add to the sayed Grant such other ~~and further beneficial~~ [sic] Clauses ~~and Grants~~ as you shall thinke fit.[4]

The document's overt appeal to censorship and political control has often been emphasized by historians, but what remains underexposed is the centrality of novel aesthetic production in dictating the ultimate forms of that control.[5] Davenant requests the governmental grant of

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[4] "Charles II - volume 8: July 19-31, 1660," in *Calendar of State Papers Domestic: Charles II, 1660-1*, ed. Mary Anne Everett Green (London: Her Majesty's Stationery Office, 1860), 124-150, quoted in Leslie Hotson, *The Commonwealth and Restoration Stage* (New York: Russell and Russell, 1962), 199-200.

[5] Bringing court aesthetics and changeable scenery into the public domain had been a goal of Davenant's since his application for a permanent theatre patent on 26 March 1639. "Davenant's patent of March 26, 1639, therefore authorized a theater of unprecedented size, 'forty yards square at the most,' where 'Action, musical Presentments, Scenes, Dancing, and the like" might be presented "at the same, or other hours or times, or after Plays are ended." John Freehafer, "Brome, Suckling, and Davenant's Theater Project of 1639," *Texas Studies in Literature and Language* 10.3 (1968): 372-73.

monopoly to sustain finances and machinery necessary for the fabrication of expensive "scenes, musick and new decorations as have not been formerly used." The corporate body and its prerogative is organized around the maintenance of unfamiliar aesthetic experience – a new empiricism – that, as Davenant vouched in his 1653 *Proposition*, would be gentle sensory violations capable of politically pacifying and morally instructing the populace: "Since there hath not been found a perfect meanes to retaine the people in quiet . . . and that Perswasion must be joyn'd to Force, it can be compass'd no other way then by surprisall of their Eyes and Ears."[6] One aspect that must have lured men like Cowley and Dryden to both the Royal Society and Davenant's theatrical operations was a mutual Commonwealth-Protectorate era impetus to find utopic architectures for politically sustainable empirical praxis, in large part sustainable because such praxis was grounded in sensation and not theoretical commitments. Both empirical projects are Baconian interventions into the objects of vision and audition – "nature wrought" – and made factually edificatory through spatial oversight and refined laboratory mechanisms. Both required a level of royal protection and benefaction to secure that architecture.

Davenant's Duke's Company, situated at Lisle's Tennis Court in Lincon's Inn Fields, adopted an analogous but not identical corporate structure to the Royal Society. Perpetuity was guaranteed by royal grant and an inter-generationally transmissible distribution of obligations and economic shares between management and actors.[7] Of fifteen shares, five went to Henry Harris and the actors, Thomas Betterton, Thomas Sheppey, Robert Noke, James Noke, Thomas Lovell, John Mosely, Cave Underhill, Robert Turner, and Thomas Lillistone; ten went to Davenant "for the maintenance of women providing of habits and scaenes and paying the rent of

[6] William Davenant, *A proposition for advancement of moralitie, by a new way of entertainment of the people* (London, 1653), 11.
[7] For Charles II's grant to Killigrew and Davenant, see Henry Herbert, *The Dramatic Records of Sir Henry Herbert, Master of the Revels, 1623-1673*, ed. Joseph Quincy Adams (New Haven: Yale University Press, 1917), 87-88.

the said theatre and in recompence of his great paynes."[8] In Davenant's indenture to his lender Sir William Russell, the stipulation recurs that the contractual arrangement among Davenant as manager, Russell as guarantor, and the actors, is contingent on Davenant's provision of sartorial materials, machinery, scenography, and the sustainment of a residential-commercial site of labor – "the fitting and furnishing of the said Theatre . . . [for] the said persons their successours and certaine women and other men publiquely to act comedyes, tragedyes, playes and representations."[9] What makes Davenant's company covenant unique is not that he agrees to provide certain material things, but that those things he does provide are purposed for an identified but unfamiliar species of sensible aesthetic practice. The distribution of control and investment forms a field of social relations inextricable from and defined by the continuous discovery of hitherto unexamined objects of sensation. Exploring the periphery of the sensuous becomes the unifying and defining labor of a disparate support staff of actors, writers, designers, machinists (like John Guipponi), scene-keepers (e.g., Thomas Phelps), tailors (Thomas Slade), barbers (Henry Connell), wardrobe-keepers (such as Henry Bower), and most startlingly, the homosocial residence of four women (Hester Davenport, Mary Davies, Mary Saunderson, and Jane Long) in the experimental laboratory space of theatrical production.[10] Davenant's cavalcade of baroque sensible objects emitted strong political force in bringing together these human constituents around the praxis of an empirically transgressive mode of *public* production.

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[8] "Indenture between Sir Wm. Davenant and Sir Wm. Russell of Strensham in Worcester, Bart., 7 March, 1660/1" in Hotson, *Commonwealth and Restoration Stage*, 401.
[9] Ibid.
[10] For an incomplete list of Duke's Company personnel see Judith Milhous and Robert D. Hume, eds., *A Register of English Theatrical Documents, 1660-1737* (Carbondale, IL: Southern Illinois University Press, 1991), 38-40. John Downes in *Roscius Anglicanus* states that Davenant "Boarded" the four "Principle Actresses" at his own his, which was situated in the theatre complex. Langhans also notes that Davenant housed four of his eight actresses at the theatre in Lincoln's Inn Fields. See John Downes, *Roscius Angli*canus, *or, An Historical Review of the Stage*, eds. Judith Milhous and Robert D. Hume (London: Society for Theatre Research, 1987), 49; and Edward A. Langhans, "The Theatre," in *The Cambridge Companion to English Restoration Theatre* (Cambridge: Cambridge University Press, 2000), 3.

Such a locative force exerted itself upon a young John Dryden who found simpatico with Davenant's experimental aims of empiricist production. Dryden had been a Royal Society fellow between 1662 and 1666, and once elected to a committee "with several persons of the society, whose genius was very proper and inclined to improve the English tongue."[11] Notable among the committee members listed in Birch's *History of the Royal Society* is Thomas Sprat, the chief apologist for the Society and future Bishop of Rochester. According to John Evelyn, Sprat, Dryden, and Abraham Cowley, among others, wrested from the rough outline of the committee plans to form a language "Academie" along French lines, but amid "the Death of [Incomparable] Mr. Cowley" and the plague, "it crumbled away and came to nothing."[12] The three formed a close-knit coterie engaging in deep philosophical dialogues ranging over manifold topics in science and dramatic poiesis at Will's Coffee House, with Sprat and Dryden attending The Duke of York's Company production of Cowley's *The Cutter of Coleman Street* in December 1661.[13] Similar to Davenant's moral science of aesthetics, all three posited a felicitous union between empirical philosophy and language arts in the form anti-dogmatic colleges or academies as viable responses to the internecine destruction and rudderless authorities of the English Civil Wars, Commonwealth, and Protectorate periods. Cowley's *A Proposition for the Advancement of Experimental Philosophy* explicitly forbade his experimental college to "check or enterfere with any parties in State or Religion, but [rather was] indifferently to be embraced by all Differences in opinion."[14] The College would instead concern itself with "Natural Philosophy, . . . the Contemplation of the immediate or mediate Creatures of God" and all experimental

[11] Thomas Birch, *The History of the Royal Society* (London, 1756), 1:499.
[12] Cited in Katsuhiro Engetsu, "Dryden and the Modes of Restoration Sociability," *The Cambridge Companion to John Dryden* (Cambridge: Cambridge University Press, 2004), 185.
[13] See Birch, *History,* 1:499-500; and Engetsu,"Restoration Sociability," 186.
[14] Abraham Cowley, "Conclusion" to *A Proposition for the Advancement of Experimental Philosophy* (London, 1661), 32-33.

investigations would be conducted within an academic sanctuary rivalling Bacon's Solomon's House of *The New Atlantis.*[15] As you may recall from an earlier chapter, Cowley's scheme called for twenty philosophers, sixteen scholars, assistants, chemists, servants, and others sedulously scurrying about a lecture hall, public school house, library, gallery, repository, dining hall, chapel, and botanical garden funded by the state annually at four thousand pounds and through public donations. Similarly, Society Fellow Sprat espoused an architectural, associational, and empirical solution to the problems lingering from the previous wars. Sprat's propagandistic *History of the Royal Society* cites the proliferation of so "many different Sects, and opinions of the Christian Faith" as an undeniable "hinderance of the growth of Experimentall Philosophy."[16] Sprat was hopeful, however, that the Royal Society diagramed as a "Publick Council wherin the various dispositions of all" nations, professions, and religions "may be blended together," an "Assembly at one time, whose privileges shall be the same; whose gains shall be in common; whose members were not brought up at the feet of each other,"[17] by the empirical, non-hypothetical "moderation it prescribes to our thoughts about *Natural Things,* will also take away all the sharpness and violence about *Civil*."[18]John Dryden echoed Cowley and Sprat's meliorative benefits of science in his *Essay of Dramatick Poesy* (1668), avowing that even "through the fury of a civil war, and . . . twenty years abandoned to a barbarous race of men, enemies of all good learning,"[19] natural philosophy has revealed "almost a new nature to us." Yet he went further than his two Society fellows by making explicit the cross-pollination between experimental philosophy and theatre, remarking that if science has made "natural causes be more

[15] Ibid., Preface.
[16] Thomas Sprat, *History of the Royal Society, for the Improving of Natural Knowledge* (London, 1667), 25.
[17] Ibid., 64, 70.
[18] Ibid., 429.
[19] John Dryden, *Essay of Dramatick Poesy* (London, 1668), 77.

known to us,"[20] then applying the same methodologies to "poesy and other arts" may result in analogous corrections of inherited textual and performance errors.[21] For Dryden, an epistemic ecology born of the scientific laboratory should translate into a redacted and improved aesthetics of production. This was, if not the primary motivation for collaborating with Davenant, a major factor in guiding young Dryden toward the site of aesthetic innovation under the senior impresario's tutelage and direction.

William Davenant, in a manner consonant with Robert Hooke at Gresham College, took up residence above his theatrical laboratory where he could continuously curate the collaborative experiments in staging musical, mechanical, and scenographic spectacle. Davenant refined the moral aesthetic project charted out in his interregnum *Proposition for Advancement of Moralitie* through the mechanization of painted scenography and incorporation of recitative and stage effects into adaptations of pre-commonwealth (particularly Shakespearean) plays. In his Protectorate operas, James Jacob and Timothy Raylor, assert that "Davenant deployed the media, structures and stage mechanics of the masque in a radically new direction. The arcane elitism and 'removed mysteries' of the masque were to be replaced by images of virtue designed to be immediately accessible to a broad popular audience."[22] That same methodology found renewed vigor in the climate of princely Restoration. According to Edward Langhans, Davenant valorized the public entrance of courtly scenography enough to premiere his Duke's Company at Lincoln's Inn Fields a full six months (28 June 1661) after his competitor Thomas Killigrew opened at Vere Street, thus allowing ample time to paint and fabricate the wing and backdrop shutter system he would use in his expanded interregnum opera, *The Siege of Rhodes.* Impressed by the

[20] Ibid., 18.
[21] Ibid., 26.
[22] James R. Jacob and Timothy Raylor, "Opera and Obedience: Thomas Hobbes and A Proposition for the Advancement of Moralitie by Sir William Davenant," *Seventeenth Century* 6, no. 2 (1991): 214.

novelty of what the company's prompter John Downes referred to as the opera's "new Scenes and Decorations, being the first that e're were Introduc'd in *England*,"[23] Samuel Pepys recorded in his diary that they were "very fine and magnificent."[24] Yet Davenant's adaptation of Shakespeare's *Tempest, or, The Enchanted Island* with John Dryden in 1667 was perhaps the company's most robust exercise in the empirical philosophy of social aesthetics. Focusing on the adaptation's preoccupations with language and political states of nature, John Shanahan argues that Dryden's "experimental dramaturgy he wrote with Davenant in revising *The Tempest* for all intents and purposes *was* natural philosophy like that done by fellows of the Royal Society."[25] Though I agree with Shanahan's interpretation of the play's textual structuration, I, like Cary DiPietro, am much more interested in the Baroque excess of the play's formal elements.[26]

Davenant's adaptation of *The Tempest* underlined the elasticity of Shakespeare's uncultivated island refuge when stretched through the rigorous artifice of his spectacular, sensory theatre – a corporate artifice outliving Davenant to be stretched even further in Thomas Shadwell's operatic treatments of the play in 1674, replete with full orchestra, "Scenes, [and] Machines"[27] to fly sprites through the air and produce "a shower of Fire" in the darkened auditorium.[28] It was not solely or even primarily the play's literal content that seduced Pepys into remarking "the most innocent play that I ever saw," but his sensory dislocation into the placid wonder of the play's images and "curious . . . musique in an echo of half sentences . . . mighty

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[23] John Downes, *Roscius Angli*canus*, or, An Historical Review of the Stage*, eds. Judith Milhous and Robert D. Hume (London: Society for Theatre Research, 1987), 51.
[24] Samuel Pepys, *The Diary of Samuel Pepys*, eds. Robert Latham and William Matthews (Berkeley: University of California Press, 1995), 2:130.
[25] John Shanahan, "The Dryden-Davenant *Tempest*, Wonder Production, and the State of Natural Philosophy in 1667," *The Eighteenth Century* 54, no. 1 (2013): 92.
[26] See Cary DiPietro, "Seeing Places: *The Tempest* and the Baroque Spectacle of the Restoration Theatre," *Shakespeare* 9, no. 2 (2013): 182.
[27] Downes, *Roscius Anglicanus*, 74.
[28] William Davenant, John Dryden, and Thomas Shadwell, *The Tempest, or, The Enchanted Island* (London, 1674), 1.

pretty."[29] The locutionary force and voluptuousness of Shakespearean representation ("The play no great wit," Pepys remarked) lay prostrate before Pepys entanglement with the sensible and lingering epistemological queries about the possible forms of sensory experience.[30] Rose Zimbardo argues for "a rapid and radical change" in the conception of 'imitation of nature' between 1660 and 1732, citing the drama's move from a pole of Neoplatonic aestheticization of the Idea in nature to a point in which nature is drawn to imitate art while the novel displaces the theatre as the verbal forum for articulating the natural.[31] In the first phase of the 1660s and 70s, it was Davenant's intercessory form of translating the natural that dominated Restoration dramaturgy, as encapsulated by the postscript to the 1673 edition of his heroic poem *Gondibert*: "I intended in this *POEM* to strip Nature naked and clothe her again in the perfect shape of Vertue."[32] As was Davenant's Baconian wont, the verbiage conveys a sense of truth through violation, of excising false preconceptions of the sensible object and augmenting it through a technological apparatus designed to reveal what bare sensation cannot. The truth of the sensuous is a technically engineered and artistically orchestrated truth.

Shadwell's operatic treatment of *The Enchanted Island* at the Dorset Garden Theatre was an intensification of Davenant's position. Judith Milhous argues that the production was one of several under the management of Thomas Betterton (who had recently returned from France where he studied Continental staging practices) that extended Davenant's experimental reveries. She classifies the 1674 *Tempest* as an "early opera experiment" and a "multimedia spectacular," a Dorset Garden theatrical entertainment differentiated by the "extent of the use of music, the

[29] Pepys, *Diary*, 8:522.
[30] Ibid.
[31] Rose A. Zimbardo, *A Mirror to Nature: Transformations in Drama and Aesthetics, 1660-1732* (Lexington, KY: University Press of Kentucky, 1986), 4.
[32] William Davenant, "Postscript" to *Gondibert* in *The Works of Sr William D'avenant Kt* (London, 1673), 196.

size of the cast, and the elaborateness of the staging – in particular the use of fancy machines and flyings."[33] Within the play's action were "more visually heightened moments than before," including a closing nautical masque in which a recently liberated Ariel soars through the air," and musical accompaniment by twenty-four violins and singers on loan from Charles II's Chapel Royal.[34] Jocelyn Powell catalogues the network of personnel and effects necessary to actualize the post-Shakespearean romance: John Bannister's songs remained from Davenant's earlier instantiation, but incidental music was added by Matthew Locke, dances were choreographed by Giovanni Battista Draghi (master of the queen's music), and new, embellished masques were orchestrated by Pelham Humfrey, with additional musical numbers by Pietro Reggio and James Hart.[35] Additionally, there were the unnamed artists, assistants, and stage machinists hired to execute the "New . . . Scenes [and] Machines; particularly, one Scene Painted with *Myriads* of *Ariel* Spirits; and another flying away, with a Table Furnisht out with Fruits, Sweet meats, and all sorts of Viands."[36] To realize those stage effects, according to Powell's speculations, stage hands had to operate four fly-tracks for figures "moving vertically, laterally and diagonally in carefully co-ordinated manoeuvres," a tiered thunder run, manual light dimmers/shields, six sets of shuttered scenes, a wave-machine, and traps.[37] Shadwell and Betterton's opera faithfully fulfilled Davenant's visions born from a Restoration techno-experimental matrix of the sensible. The truth of "Nature" at Dorset Garden was the laboratory product of an extensive social network and technological apparatus, crosscut with the personalities, protocols, and

[33] Judith Milhous, "The Multimedia Spectacular on the Restoration Stage," *British Theatre and the Other Arts, 1660-1800*, ed. Shirley Strum Kenny (Washington, D.C.: Folger, 1984), 42.
[34] Ibid., 46.
[35] See Jocelyn Powell, *Restoration Theatre Production* (London: Routledge and Kegan Paul, 1984), 62-63.
[36] Downes, *Roscius Anglicanus*, 73-74. Allan Jackson imparts that scenic artists and their assistants were hired on a contractual basis and not considered "part of the theatre's operating staff." See Allan S. Jackson, "Restoration Scenery, 1656-1680," *Restoration and 18th Century Theatre Research* 3, no. 2 (1964): 26-27.
[37] Powell, *Restoration Theatre*, 65.

epistemology of experimental science-in-the-making, which is why manifold questions eddy around Shadwell's satiric vitriol vented at the Royal Society and natural philosophy two years later in his play *The Virtuoso*. For Shadwell, the line of faith in and tolerance of the new science's epistemic ecology appeared to be drawn at the ontological boundary of species.

Margaret Cavendish in her *Observations upon Experimental Philosophy* castigates Society members for their ineffectual dilettantism and lack of devotion to "beneficial arts," but it is Thomas Shadwell's dramatic satire *The Virtuoso* that offers the most thoroughly trenchant critique of Royal Society praxis and rhetoric.[38] First presented to pandemic acclaim at Dorset Garden on 25 May 1676, Society members instantly recognized the target of the play's barbed witticisms and outlandish representations. Robert Hooke, though not alone, was the most obvious figure held up to ridicule, with the play drawing directly upon material from his celebrated book *Micrographia* (1665), reports of his gory respiratory experiments on canines, and accounts of his feckless blood transfusion trials with Richard Lower as detailed in the Society's periodical, *Philosophical Transactions.* His diary entry upon visiting the theatre betrays an ego reeling from undiluted abuse, "Damned Doggs. *Vindica me Deus.* People almost pointed."[39] *The Virtuoso* transmits the usual sexual intrigues and farcical failures taking up residence in the Restoration manor house, but it makes a unique mark upon the genre by setting these romantic couplings amidst the trials and tribulations of esteemed virtuoso of science and Royal Society/Gresham College reject, Sir Nicholas Gimcrack. In the plot, two young gentlemen rakes, Bruce and Longvil, seek to gain access to Gimcrack's pulchritudinous yet clever nieces, Miranda and Clarinda, by feigning interest in Sir Nicholas's experimental dabbling. Through

[38] Margaret Cavendish, *Observations upon Experimental Philosophy*, ed. Eileen O'Neill (Cambridge: Cambridge University Press, 2001), 51.
[39] Robert Hooke, "2 June 1676," *The Diary of Robert Hooke, M.A. M.D., F.R.S., 1672-1680*, eds. Henry W. Robinson and Walter Adams (London: Taylor & Francis, 1935), 235.

cunning manipulations of coital arrangements, Miranda and Clarinda lead unwitting rivals astray into public humiliations and swap gentlemen suitors, Bruce and Longvil, to fulfill their desired conjugal ends. Almost as background action that fills the purview of foreground, Gimcrack's unfolding temporal and economic investments in mechanical schemes and scientific inquiry leave him isolated in sexual and financial destitution. Tita Chico asserts that the satire imparts a moral that "experimentalism ushers in the simultaneous depletion of sexual opportunities and personal wealth,"[40] while John Shanahan's spatial preoccupations prompt him to claim that "Shadwell's exercise in strategic literalism was an assault directly upon the Restoration experimental community's attempt to differentiate the laboratory from the private kitchen and the public theater."[41] Most recently Al Coppola has taken the play to task politically, avowing that "*The Virtuoso* is informed by a country-Whig political agenda that attacks . . . the figure of the virtuoso [as] an exemplar of what looked to [Shadwell] like society's wholesale abandonment of the traditionalist and aristocratic values of his country-Whig faction."[42] I add to these arguments that *The Virtuoso* attempts to contain in the language of libertine sex romp an androcentric terror over political and counter-public ramifications of the new science's interspecies epistemological constitutions, or, its world-making carried on through a prosthetic transmogrification of and affiliation with inhuman material substrate. The play's action continually oscillates between an indulgence in lascivious negotiations toward conjugality and the growing encroachment of uneven interspecies affiliations on anthropocentric politics and the social distribution of landed wealth, with no possibility of finding rapprochement.

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[40] Tita Chico, "Gimcrack's Legacy: Sex, Wealth, and the Theater of Experimental Philosophy," *Comparative Drama*, 42, no. 1 (2008): 32.
[41] John Shanahan, "Theatrical Space and Scientific Space in Thomas Shadwell's *Virtuoso," SEL Studies in English Literature, 1500-1900* 49, no. 3 (2009): 555.
[42] Al Coppola, *The Theater of Experiment: Staging Natural Philosophy in Eighteenth-Century Britain* (Oxford: Oxford University Press, 2016), 42.

Taking aim at the Royal Society's co-optation of epistemic space, Shadwell pathologizes Gimcrack's transspecies flirtations by rigidifying boundaries of species and magnitude into an ethics of interpersonal care. World-making at scales beneath or beyond eye-level humanism sacrifices one's commensurability with human systems of empathy, affect, and communication, in effect, exchanging a rich social vulnerability for a misanthropic, miserly retention of dominion over the inconsequential, abject, and diminutive. Gimcrack's conservative uncle Snarl, a curmudgeonly old gentleman nostalgic for the pre-civil war mores of the Caroline court, complains that his "nephew is such a coxcomb he has studied these twenty years about the nature of lice, spiders, and insects and has long been compiling a book of geography for the world in the moon."[43] Contrarily, Gimcrack's sycophantic fellow virtuoso and prince of purple passages, the orator Sir Formal Trifle, rates his friend's intimacy with the subterranean and marginal world of the miniscule as a virtue: "Trust me, he is the finest speculative gentleman in the whole world and in his cogitations the most serene animal alive. Not a creature so little but affords him great curiosities. . . . Not a creature so inanimate to which he does not give a tongue, he makes the whole world vocal; he makes flowers, nay, weeds speak most eloquently and by a noble kind of prosopopeia instruct mankind."[44] Sir Formal transforms Gimcrack's pathetic fallacy into the magnum opus of a necromantic mage, making what was ostensibly dead to anthropic ears speak intelligibly and instructively. In the orator's grandiloquent view, what Gimcrack produces is a world expanding enrichment of ontological multiplicity. However, the play's dramaturgy does not endorse Sir Formal's opinion. Snarl and Formal are exaggeratedly flat characters defined by a single attribute or humor, and characters who ultimately succumb to the temptations of sexual

[43] Thomas Shadwell, *The Virtuoso*, eds. Marjorie Hope Nicholson and David Stuart Rodes (Lincoln, NB: University of Nebraska Press, 1966), 2.1.240-43.
[44] Ibid., 1.1.267-275.

vice, BDSM and buggery, respectively. The more emotionally complex and chaste ingénues, Miranda and Clarinda, in galloping stichomythia, present a different, unflattering diagnosis of their uncle Sir Nicholas Gimcrack's microscopic world dabbling:

> MIRANDA: A sot that [sic] has spent two thousand pounds in microscopes to Find out the nature of eels in vinegar, mites in cheese, and the blue of plums which he has subtly found out to be living creatures.
> CLARINDA: One who has broken his brains about the nature of maggots, who Has studied these twenty years to find out the several sorts of spiders, and never cares for understanding mankind.[45]

Gimcrack's two nieces quantify their uncle's macro-level antisociality in the measurable terms of micro-level, non-productive profligacy ("two thousand pounds in microscopes") that dissipate the chances of wealth accumulation and transmission along familial lines. Sir Nicholas's preoccupation with the sub-ocular subtleties of living nature betrays identifiable symptoms that challenge a healthy social order, for the misappropriation of family capital produces several deplorable conditions: the "Virtuoso will allow [his nieces] nothing out of [their] fortunes" to lure virtuous eligible bachelors to matrimony;[46] Gimcrack and his wife can only achieve sexual intimacy in extramarital affairs; and Gimcrack loses all hopes of attaining his uncle's estate,[47] enjoying his wife's solvency,[48] or "making a good sum of money off [his] nieces"[49] while he bewails the cause of his misfortune, "I would I had studied mankind instead of spiders and insects."[50] Time and again Sir Nicholas is held up as the defective model of a gentleman. The successful protagonists of courtship, Bruce and Longvil, though not pristine subjects, lay bare an altogether more salubrious assemblage of contrapuntal social attachments: the playhouse, the

[45] Ibid., 1.2.7-13.
[46] Ibid., 1.2.62.
[47] Ibid., 5.6.60.
[48] Ibid., 5.6.125.
[49] Ibid., 5.6.94.
[50] Ibid., 5.6.123.

Anglican Church (where they first see Miranda and Clarinda), and classical erudition. At the play's opening Bruce reads the original Latin of Lucretius focusing not on his atomic theory, but on how the long-dead Epicurean aesthetically reconciled poetry with philosophy by removing divine creation from human affairs.[51] The duty of the gentleman is that of rearticulating what has been verified in the classics, not descending to the opaquely unintelligible and thoroughly un-humanistic world of microscopic biological entities.

Joseph Glide's argument that "the Royal Society, far from being the object of the play's satire, provides a standard for judging the follies of the two principal fools" rings hollow when one considers that the most obstreperous moments of ridicule are lifted directly from Society Curator of Experiments Robert Hooke's *Micrographia*, one of the earliest folios published under corporate imprimatur, and editions of the *Philosophical Transactions*, edited and published by Society Secretary Henry Oldenburg.[52] As Al Coppola asserts, "Hooke may have been the primary target, but this worked as a kind of dodge for the playwright, who could more readily attack the Royal Society's relatively low-born curator of experiments—a man perhaps but one social step above the mechanicks, watchmakers, lens grinders, and instrument makers he is often seen associating with in his diary."[53] Shadwell does indeed set his sights on a larger quarry but he camouflages his jibes by segregating Gimcrack's activities from the Royal Society with an inserted remark from Lady Gimcrack that "The [Gresham] College indeed refused him," because, in her blandishing, false opinion, "They envied him."[54] Yet Gimcrack's activities are those ordered and authorized by the Society's Council and official meeting minutes. A broad

[51] Shadwell, *Virtuoso*, 1.1.1-12.
[52] Joseph M. Glide, "Shadwell and the Royal Society: Satire in The Virtuoso," *Studies in English Literature, 1500-1900* 10.3 (1970): 469.
[53] Al Coppola, *The Theater of Experiment: Staging Natural Philosophy in Eighteenth-Century Britain* (Oxford: Oxford University Press, 2016), 46-47.
[54] Shadwell, *Virtuoso*, 2.2.304.

spectrum of diverse and geographically distant Society investigations are conducted under the roof and in the gardens of Sir Nicholas's estate. Sir Samuel Moreland's article about the "Speaking Trumpet" in the 22 January 1671/2 issue of the *Philosophical Transactions* manifests itself as Gimcrack's "strentrophonical tube" that will obviate the need for a multitude of parish parsons, replacing them with a sole religious orator able to deliver sermons from a network of pipes.[55] Several of Boyle's queries come under ridicule. In Act IV, Gimcrack invites Bruce and Longvil to breathe in some bottled air with him, like a wine aficionado, reveling in how he "employs men all over England, factors for air, who bottle up air and weigh it in all places, sealing the bottles hermetically. They send me loads from all places. [. . .] Now if I have a mind to take country air, I send for maybe forty gallons of Bury air, shut all my windows and doors close, and let it fly in my chambers."[56] Shadwell, here, references barometric investigations conducted by Boyle, Brouncker, Wren, Moray and Petty as early as 5 December 1660 and elaborated in Boyle's *New Experiments Physico-Mechanical, Touching the Spring of the Air and its Effects*.[57] And in Act V, Gimcrack's discussions of "a lucid sirloin of beef" and reading "a Geneva Bible by a leg of pork" mockingly rehash the findings of Boyle's "Some Observations about Shining Flesh" printed in the 16 December 1672 issue of the *Philosophical Transactions*. These lampoons are mordant but they do not convey the same social and political corrosiveness as does the onto-epistemological instability of interscalar couplings for which Hooke's *Micrographia* provides the critical vocabulary.

The preface to *Micrographia* proffers passionate overtures to world-melding and cosmological construction that countermand Shadwell's opening volley of Lucretian

[55] Ibid., 5.2.58-62.
[56] Ibid., 4.3.256-59;264-66.
[57] See Birch, *History*, 1:5. See also Claude Lloyd, "Shadwell and the Virtuosi," *PMLA* 44, no. 2 (1929): 480-82.

conservatism, which warns that "The Gods, by right of Nature, must" be "Far off removed from us and our Affairs."[58] Hooke, instead, advocates a prosthetic conjunction of man, instrument, and nature that dislodges the gods from their dwellings and dismantles the petrifaction of universal place:

> By the means of Telescopes, there is nothing so far distant but may be represented to our view; and by the help of Microscopes, there is nothing so small, as to escape our inquiry; hence there is a new visible World discovered to the understanding. By this means the Heavens are open'd, and a vast number of new Stars, and new Motions, and new Productions appear in them, to which all the antient Astronomers were utterly Strangers. By this the Earth it self, which lyes so neer us, under our feet, shews quite a new thing to us, and in every little particle of its matter, we now behold almost as great a variety of Creatures, as we were able before to reckon up in the whole Universe it self.[59]

In Hooke's paradigm, sublunary nature and the heavens are not static but under constant mechanical revision, enlargement, and displacement, including the mechanical supercession or supplementation of human apperception. Hooke's homage to the dehiscence of hitherto closed systems is a churlish upending of order and toppling of hierarchy with at least two pronounced results. The first, as Jim Bennett argues, verifies that the universe is connate with machinery: "Manipulating the natural world by a machine will reveal nothing of its inner workings unless it too is a machine; otherwise the natural and the artificial will simply fail to engage."[60] Hooke was explicit about this, perpetuating the mechanical analogy of natural operations where and when he could: "We may perhaps be inabled to discern all the secret workings of Nature almost in the same manner as we do those that are the productions of Art, and are manag'd by Wheels, and

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[58] Shadwell, *Virtuoso*, 1.1.7-9. This translation is by John Wilmot, Earl of Rochester. The original Latin reads, "omnis enim per se divum natura necessest / immortali aevo summa cum pace fruatur / semota ab nostris rebus seiunctaque longe." See Shadwell, *Virtuoso*, 9.

[59] Robert Hooke, *Micrographia: or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses with Observations and Inquiries thereupon* (London: Royal Society, 1667), Preface 4.

[60] Jim Bennett, "Hooke's Instruments," *London's Leonardo: The Life and Work of Robert Hooke* (Oxford: Oxford University Press, 2003), 67.

Engines, and Springs, that were devised by humane Wit."[61] And if, as many in the Royal Society assumed, the cosmos functions like a machine, then mechanically inclined polymaths and the manually dexterous, not those of traditional genteel status, are the most suitable explorers to sift out its secrets. The second result is an arrogant attack on the obvious and conventional order of things:

> And it is my hope, as well as belief, that these my Labours will be no more comparable to the Productions of many other Natural Philosophers, who are now every where busie about greater things; then my little Objects are to be compar'd to the greater and more beautiful Works of Nature, A Flea, a Mite, a Gnat, to an Horse, an Elephant, or a Lyon.[62]

In this closing passage of *Micrographia*'s preface, a techno-aesthetic labor that intermingles the formerly separate ontological scales of human and pest supplants either peak regal escutcheons or traditional extensions of human labor and warfare – all animals associated with costly aristocratic avocations (Horse, Elephant, and Lion). Hooke's technoscientific desegregation of phenomenological ambits and the blurring inter-corporeal boundaries enunciates an epistemic ecology that overruns the intelligible hierarchy growing from landed wealth and its concomitant labors.

Shadwell takes great pains to illuminate this inter-ontological fascination as a subaltern cabal with narrative and real-world political effects. In Sir Formal's elocution and Gimcrack's exhilarating commentary, vermin of questionable origins, that is vermin thought to be spontaneously produced in putrefaction,[63] bear forth the generative seeds of a model government that challenges the Restoration settlement under Charles II:

> SIR FORMAL: I do assure you, gentlemen, no man upon the face of the earth is so well seen in the nature of ants, flies, humble-bees, earwigs, millepedes [sic],

[61] Hooke, *Micrographia*, Preface 4.
[62] Ibid., 27
[63] See Doina-Cristina Rusu, "Same Spirit, Different Structure: Francis Bacon on Inanimate and Animate Matter," *Early Science and Medicine* 23, no. 5-6 (2018): 444-458.

> hog's lice, maggots, mites in a cheese, tadpoles, worms, newts, spiders, and all the noble products of the sun by equivocal generation.
> SIR NICHOLAS: Indeed, I ha' found more curious phenomena in these minute animals than in those of vaster magnitude.
> LONGVIL: I take the ant to be a most curious animal.
> SIR NICHOLAS: More curious than all the oviparous, or egg-laying, creatures in the whole world. [. . .] The black will pinch the dark brown with his forceps till it kills it upon the place; the like will the dark brown do by the filemot. I have dissected their eggs upon the object plate of the microscope, and find that each has within it an included ant, which has adhering to its anus, or fundament, a small black speck, which becomes a vermicle, like a mite, which I have watch'd whole days and nights. And Sir Formal has watch'd 'em thirty hours together.
> [. . .]
> BRUCE: What does it concern a man to know the nature of the ant?
> LONGVIL: O it concerns a virtuoso mightily; so it be knowledge, 'tis no matter of what.
> BRUCE: Sir, I take 'em to be the most politic of all insects.
> SIR FORMAL: You have hit it, gentlemen. They have the best government in the world. What do you opine it to be?
> LONGVIL: O, a commonwealth most certainly.
> SIR NICHOLAS: Worthy sir, I see you are a great observer; it is a republic resembling that of the States General.[64]

Among Shadwell's risible targets are Edmund King's article from issue no. 23 of the *Philosophical Transactions* and Hooke's dissection of the ant captured in the pages of the *Micrographia*.[65] The political danger is not the puerile rapture that ensues from Gimcrack's dilettantish anatomical and behavioral studies of the ant. Rather, a whiff of sedition arises when Sir Nicholas elicits from his trivial pursuits a form of governmentality that mirrors the confederal States General of the Dutch Republic, a nation whose wealth (unlike England at this time) was sustained less by cultivated land and more by ocean trade and freshwater transit systems, and with whom the English had just closed a maritime war in 1674. In Gimcrack's benighted opinion, the republican assembly of both the ant and the Dutch exceeds the restored monarchy of

[64] Shadwell, *Virtuoso*, 3.3.1-33
[65] For King's article on the ant, see pages 322-323 of this dissertation and Edmund King, "Observations Concerning Emmets or Ants, Their Eggs, Production, Progress, Coming to Maturity, Use, etc." *Philosophical Transactions* 23 (1666/7), 425-28. See Hooke, *Micrographia*, 203-05.

England. Gimcrack's commemoration of "equivocal generation" runs against the grain of an entrenched English agrarian nationalism and his impulsive allegiance to a commonwealth draws startled attention to some of the Puritan origins of the new science while casting a long dubious shadow over his potential political affiliations. He naturalizes republican governmentality at the site of the ant colony, and by doing so circumvents appeals to English domestic iterations of anthropocentric governance. In another instance, Gimcrack chooses the company and life lessons of an affable spider over the great works and wisdom of human ingenuity:

> BRUCE: That's curious indeed. I never heard of a tame spider.
> SIR NICHOLAS: One above all the rest; I had call'd him Nick, and he knew his name so well he would follow me all over the house. I fed him indeed with fair flesh flies. He was the best natur'd, best condition'd spider that ever I met with.
> [. . .]
> LONGVIL: Have you observ'd that delicate spider call'd tarantula?
> SIR NICHOLAS: Now you have hit me; now you have come home to me. Why I travel'd all over Italy and had no other affair in the world but to study the secrets of that harmonious insect.
> LONGVIL: Did you not observe the wisdom, policies, and customs of that ingenuous people?
> SIR NICHOLAS: O by no means! 'Tis below a virtuoso to trouble himself with men and manners. I study insects, and I have observ'd the tarantula does infinitely delight in music, which is the reason of its poison being drawn out by it. There's your phenomenon of sympathy![66]

This rollicking parlay is a mordacious barrage upon Society members John Evelyn, and, of course, Robert Hooke, with John Ray receiving a good bit of witty shrapnel at the edge of the blast zone.[67] Gimcrack transposes human sociality onto Nick the spider, and with it elides the guiding mores and artifacts of political association – wisdom, policies, and customs – of the Latin birthplace of European civilization. In Shanahan's words, Sir Nicholas "has not cultivated humanistic prudence and wisdom, but instead has immersed himself in an inverted chain of

[66] Shadwell, *Virtuoso*, 3.3.71-92.
[67] Concerning John Ray, see pages 317-318 of this dissertation, which discuss Ray's article published in issue no. 65 of the *Philosophical Transactions*. In *Micrographia*, when addressing the hunting spider, Hooke includes a florid anthropomorphic account from John Evelyn during his travels in Italy. See Hooke, *Micrographia*, 200-202.

being. In fact, by celebrating spiders instead of bees and putrefaction rather than cultivation, Gimcrack is crafting a perverse new form of the georgic sensibility."[68] More to the immediate point, Gimcrack's numerous impositions of his microscopic flirtations continually pull Bruce and Longvil from amorous pursuits of their nubile inamoratas. The conjunction of man, machine, and insect literally deconstructs the comedic plot from the inside out, and thus disassembles the matrimonial foundation of western economic society. Gimcrack ventriloquizes Shadwell's socio-national anxieties when he reveals his extrinsic commitments and regressive sources of natural knowledge: "I am beholden to Finland, Lapland, and Russia for a great part of my philosophy."[69] Trifling with the world of insectoid minutia, the virtuoso praises Dutch republicanism, abolishes Italian classicism, foils marital courtship rituals, and attaches himself to the hinterlands of European social formations, thus making himself a thoroughly suspicious (un)Englishman and casting experimental philosophy as a suspiciously un-English devotion.

The sum total of Gimcrack's virtuosic frivolity amounts to a revocation of the ultimate guarantee of Latour's modern constitution: "there shall exist a complete separation between the natural world (constructed, nevertheless, by man) and the social world (sustained, nevertheless, by things)."[70] Sir Nicholas contaminates the nonhumanity of nature with his incessant transspecies fraternizing and devalues the sphere of anthro-sociality by reducing it to the innate behaviors of lower organisms. What could be and often is laughably piddling in his self-indulgent oeuvre also has grave political consequences as it gains epistemological momentum and purchase in formulations of European culture at the very centers of modern governance (like London and Paris). The increasingly frequent use of instrumental enhancements makes

[68] Shanahan, "Theatrical Space," 559.
[69] Shadwell, *Virtuoso*, 3.3.108-09.
[70] Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993), 31.

Gimcrack's and his colleagues' absurd assertions more difficult for the layperson to refute. When their zealous host abandons himself to the wonder of his intuitively false visions of the moon, Bruce and Longvil offer no public refutations:

> LONGVIL: Do you believe the moon is an earth as you told us?
> SIR NICHOLAS: Believe it! I know it. I shall shortly publish a book of geography for it. Why, 'tis as big as our earth. I can see all the mountainous parts, and valleys, and seas, and lakes init; nay, the larger sorts of animals, as elephants and camels; but public buildings and ships very easily. I have seen several battles fought there. They have great guns and have the use of gunpowder. At land they fight with elephants and castles. I have see 'em.
> [. . .]
> There's now a great monarch who has armies in several countries in the moon, which we find out because the colors which we see are all alike. There are a great many states which we take to be confederates against him. He is a very ambitious prince and aims at universal monarchy, but the rest of the moon will be too hard for him.[71]

For the telescopically unlettered observer, it is impossible to tell where the boundaries of the instrument end and the quixotic reverie of Gimcrack begins, but (unarguably) what is not on offer here is natural facticity denuded. The raw geography of the moon passes over two inflection points: the telescope and the virtuoso. "Apparatuses" as Karen Barad states, "are not passive observing instruments; on the contrary, they are productive of (and part of) phenomena."[72] The occasion of the moon's "universal monarchy" and teeming populations is inextricable from its capture as light in a system of lenses as much as it is bound to Gimcrack's fevered perception. As a combined unit, Sir Nicholas and his instrument engage in world configuration and "boundary-drawing practices" that, minus one or the other of its constituent parts, could find no place in debates surrounding the status of the moon and cosmological politics.[73] His adventures with apparatuses are controversial "productions," not observations, that

[71] Shadwell, *Virtuoso*, 5.2.80-98
[72] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007), 142.
[73] Ibid., 140.

rival the licensed theatricality of the royal seat of power because they are not isolated events, but indicative of science-in-the-making's defining practices. A fevered and imaginative techno-romantic masturbation of Gimcrack with his instrument stands in for organized, corporate practices that factor unseemly variables of phenomena into the discursive management of social, political, and natural realities, and waggishly smudge their constitutional boundaries.

Sir Nicholas, as Tita Chico and Andrew Black argue, is far from the modest witness and orthodox embodiment that the Royal Society attempted to advertise through figures such as Robert Boyle and Edward Tyson.[74] His corporeality is a site of sexual promiscuity, financial dissipation, and monstrous hybridity with the vermin he investigates. In one of the most humorously biting scenes, Gimcrack is revealed tethered to an amphibian counterpart while a swimming master coaches his virtuosic student to "Observe the frog. Draw up your arms a little nearer, and then thrust 'em out strongly. Gather up your legs a little more. So. Very well. Incomparable."[75] Sir Nicholas, ebullient but exhausted with his achievements, rejoices,

> So it is wonderful, my noble friend, to observe the agility of this pretty animal which, notwhithstanding I impede its motion by the detention of this filium or thread within my teeth which makes a ligature about its loins, and though by many sudden stops I cause the animal sometimes to sink or immerge, yet with indefatigable activity it rises and keeps almost its whole body upon the superfices or surface of this humid element.
> SIR FORMAL: True, noble sir. Nor do I doubt but your genius will make art equal if not exceed nature; nor will this or any other frog upon the face of the earth outswim you.
> SIR NICHOLAS: Nay, I doubt not, sir, in a very little time to become amphibious.[76]

And yet, "becoming amphibious" is devoid of all purposeful action, for when Gimcrack is pressed by Longvil about having tested his newly acquired skills in water, he replies, "No, sir,

[74] See Chico, "Gimcrack's Legacy," 30; and Black, "Orator," 9. For details on Edward Tyson, see 217-218 and 334-41 of this dissertation.
[75] Shadwell, *Virtuoso*, 2.2.7-10.
[76] Ibid., 2.2.15-28.

but I swim most exquisitely on land. . . . I hate the water. I never come upon the water, sir. . . . I content myself with the speculative part of swimming; I care not for the practice. I seldom bring anything to use; 'tis not my way. Knowledge is my ultimate end."[77] Knowledge with no end, pure speculation, lacks a motile body that conforms to habitat; it has no function or Aristotelian final cause, and is thus a chimerical fancy with no world in which to thrive and replicate – it dies on the speculative vine. Gimcrack's obsession with interspecies enmeshment transmogrifies his body into an amphibious subject that cannot exist in water – a monstrous body, a dysfunctional body, led by the frantically flailing musculature of the frog. As Lucinda Cole argues, this scene "collaps[es] differences between the high-minded scientists and the struggling member of a lower species," but it does not, as she also suggests, make the frog "the absent, normative center."[78] Gimcrack's amphibious counterpart is a means to a freakish end saturated with the hybridity of human and frog with no habitation. For the virtuoso, the normative center is, much like the inflated language he uses, the grotesque and impractical, neither frog nor man, pure exertion with no objective.

Anxieties about heinous interspecies transformations able to deplete conjugality, kinship ties, socio-political hierarchies, and land-based economic relations litter Shadwell's play. According to Bruce, "the race of gentlemen is more degenerated than that of horses,"[79] and Longvil "would rather be trumpeter to a monster and call in the rabble to see a calf with six legs than show such a blockhead [i.e., the Virtuoso Gimcrack]."[80] Clarinda claims her great Uncle Snarl "should be destroyed like drone [bees] that have lost their stings and afford no honey."[81]

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[77] Ibid., 2.2.79-86.
[78] Lucinda Cole, *Imperfect Creatures: Vermin, Literature, and the Sciences of Life, 1600-1740* (Ann Arbor, MI: University of Michigan Press, 2016), 84, 83.
[79] Shadwell, *Virtuoso*, 1.1.23-24.
[80] Ibid., 1.1.283-84.
[81] Ibid., 1.2.135-36.

Sir Formal eulogizes the mouse ad nauseam just before getting caught in his own mousetrap designed by Clarinda and Miranda. His turgid misdirection of human speech, "using as many tropes and flourishes about a mousetrap as he would in praise of Alexander," works its incantatory powers of mutation on the orator himself.[82] Shadwell's qualms about transspecies abasement are most explicitly expressed over the topical bugbear of xenotransfusion experiments conducted by Society Fellows Coxe, Lower, and King, with Hooke's mechanical assistance.[83] The actual human subject, Arthur Coga, who received a blood from an emittent sheep, is depicted by Shadwell to become "wholly ovine or sheepish" in the incapable hands of Gimcrack. The fictionalized, satirized Coga of Gimcrack's creation "bleated perpetually and chew'd the cud; he had wool growing on him in great quantities; and a Northamptonshire sheep's tail did soon emerge or arise from his anus or human fundament."[84] By presenting both the products and practitioners of Royal Society/Gimcrack's praxis as freakish amalgams, Shadwell adumbrates, according to Elizabeth Grosz, "an object of simultaneous horror and fascination . . . an ambiguous being whose existence imperils categories and oppositions dominant in social life" but at the same time "confirms the viewer as bounded, belonging to a 'proper' social category."[85] The constitutive operations of experimental philosophy form a sick tautology: dysfunctional, mutant bodies with their extrasensory apparatuses (aka, fallen gentlemen) will eventually fabricate anomalous, unnatural objects of teratism. Shadwell inscribes the ambiguous politics of a burgeoning interspecies epistemology into the very corporality of the virtuoso to monstrously enflesh science-in-the-making at the turbid formal and conceptual limits of the social order. By

[82] Ibid., 3.4.131-32.
[83] See pages 389-405 of this dissertation.
[84] Shadwell, *Virtuoso*, 2.2.191-94.
[85] Elizabeth Grosz, "Intolerable Ambiguity: Freaks as/at the Limit," in *Freakery: Cultural Spectacles of the Extraordinary Body*, ed. Rosemarie Garland Thomson (New York: NYU Press, 1996), 57, 65.

lumping various forms of deviance (sexual, political, financial, corporeal) into the semiotic body of the *virtuoso as monster*, Shadwell makes the socio-legal case for experimental practice as a policeable and potentially punishable offense.[86]

A clue to a principle cause of Shadwell's anxiety over experimental philosophy's interspecies constitutions at micro-scales can be found in the paratextual matter of his play. The published version of *The Virtuoso* is dedicated to William Cavendish, Duke of Newcastle, to whom Shadwell claims he is "more obliged than to all Mankind," especially for his "Encouragement" and critical eye in crafting the play.[87] Newcastle and his wife, Margaret Cavendish, had been Shadwell's patrons since as early as 1668. Dedicatory epistles to one or both of them appear before his plays, *The Sullen Lovers*, *The Humourists*, *The Libertine* and *Epsom-Wells*, the last of which contains the praise:

> Your Grace [William Cavendish] has by so many and extraordinary favours so entirely made me your own, that I cannot but think what ever is mine is so. [. . .] You are He, who still preserves and maintains the Magnificence and Grandeur of our ancient Nobility; and being one that's truly great in Mind as well as Fortune, you take delight in the rewarding and encouraging of Art and Wit.[88]

To Margaret Cavendish, Duchess of Newcastle, he gushes, "All our Sex have reason to envy you, and your own to be proud of you, which by you have obtained and absolute Victory over us,"[89] and again emphasizes her bulwark nature in the decaying ancient patronage system, "When none of all the Nobility of England gives encouragement to Wit, but my lord Duke and your excellent self, you are pleased to receive favourably and encourage the very endeavours

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[86] For an expansion on the cultural semiotics of monsters, see Jerome Jeffrey Cohen, ed., *Monster Theory: Reading Culture* (Minneapolis: University of Minnesota Press, 1996); and Michael Chemers, *The Monster in Theatre History: This Thing of Darkness* (New York: Routledge, 2018).
[87] Thomas Shadwell, *The Virtuoso: A Comedy, as it is Acted by Their Magesties Servant*s in *The Dramatick Works of Thomas Shadwell, Esq., in Four Volumes* (London, 1720), 1:307-08.
[88] Thomas Shadwell, "Dedicatory Epistle" to *Epsom-Wells: A Comedy, Acted at the Duke's Theatre* (London, 1676).
[89] Thomas Shadwell, "Dedicatory Epistle" to *The Humorists: A Comedy, Acted by his Royal Highnesses Servants* (London, 1671).

towards it; and under that notion this poor Play begs your Pardon and Reception."[90] Al Coppola argues that Shadwell's Virtuoso promotes a country-Whig agenda through his absent "social ideal" of "the sophisticated country gentleman of sense," which stands in direct contrast to the politically ambiguous, "pro-commonwealth, and cryptopuritan, but also libertine" virtuoso.[91] Whatever form of Whiggism Shadwell espoused before the Exclusion Crisis is a matter of anachronistic conjecture. As Tim Harris shows, "There definitely was a growing conflict between the Court and country during the first two decades of Charles II's reign, and by the mid-1670s the two groupings had developed a rudimentary organisational structure, [but] what is certain, is that the Court-Country conflict did not anticipate the later split between Tories and Whigs."[92] The origin of the latter party development was due to religious issues "that cut across constitutional tensions": namely, issues of High Anglican domination and Catholic Succession, against which Anthony Ashley Cooper, Earl of Shaftesbury, organized Protestant Dissenters.[93] And though Shadwell would later defend Shaftesbury in *The Medal of John Bayes* (1682), he nevertheless expressed a moderate Whig position against the Bill of Exclusion in *Some Reflections upon the Pretended Parallel in the Play Called the Duke of Guise*: "I for my part believe that the Crown of England being hereditary, the next in Blood have an undoubted Right to succeed, unless God make them, or they make themselves uncapable of Reigning. They who talk otherwise of the Succession, would make as if England were the Estate of a King, viz. That he were sole Proprietor of all the Land, and that the People were only his Stock or Cattel upon

[90] Thomas Shadwell, "Shadwell to Duke and Duchess of Newcastle" in *Letters and Poems in Honour of the Incomparable Princess, Margaret, Dutchess of Newcastle* (London, 1676,) 129.
[91] Coppola, *Theater of Experiment*, 51.
[92] Tim Harris, *Politics under the Later Stuarts: Party Conflict in a Divided Society, 1660-1715* (London and New York: Longman, 1993), 64.
[93] Ibid., 65.

it."[94] Coppola is mistaken to locate Shadwell's mature Whiggery of the 1680s in the early phase of Danby's administration during the mid-1670s, but he is precise in his diagnosis of Shadwell's nostalgia for the vertical and predictable economic relations of a fading land-based aristocracy. His patron Newcastles are exemplars of a dying breed, remnants of a bygone era, singular entities "who still preserve and maintain the Magnificence and Grandeur of our ancient Nobility," and Shadwell is relentlessly holding onto and polishing their preciosity. It is probably more accurate to say that in the years immediately following the Test Act of 1673, with the Duke and Duchess as his sponsors, Shadwell was voicing an Anglican-Cavalier-Country position during a time when high taxation, falling grain and cattle prices, and a drop in rents were squeezing the incomes of the landed gentry while the Court had given itself over to extravagance and questionable alliances with both Catholics and noncomformists.[95] In contrast to Shadwell's devotions, the Royal Society was a suspiciously heterogeneous group evading dogmatic positioning and operating on the periphery of status-based norms.

In the opinion of Margaret Cavendish as lifted from her *Observations upon Experimental Philosophy*, the Royal Society fluctuated between a frivolous, profligate pastime and a threatening epistemological counter-politics. Prior to her May 1667 visit to the Royal Society, the majority of Cavendish's critique was levelled at Robert Hooke and his *Micrographia*. At one extreme, Cavendish, analogized microscopy to "boys that play with watery bubbles or fling dust into each other's eyes, or make a hobbyhorse of snow, [who] are worthy of reproof rather than praise, for wasting their time with useless sports."[96] Presenting the minute details of the louse

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[94] Thomas Shadwell, *Some Reflections upon the Pretended Parallel in the Play Called the Duke of Guise* (London, 1683), 20.
[95] The Test Act was a predominately anti-Catholic measure passed on 20 March that required all holders of civil and military posts to receive the Anglican sacrament and denounce transubstantiation.
[96] Cavendish, *Observations,* 52.

does nothing to prevent them from antagonizing the beggar, and experimental philosophers on the whole, Cavendish avers, have done nothing to benefit agriculture, architecture, trade, or bureaucratic reform. At the other extreme, the Duchess saw Hooke's artificial empiricism as the diseased corruption of human understanding:

> Wherefore the best optic is a perfect natural eye, and a regular sensitive perception; and the best judge is reason; and the best study, is rational contemplation joined with the observations of regular sense, but not deluding arts; for art is not only gross in comparison to nature, but, for the most part, deformed and defective, and at best produces mixt or hermaphroditical figures, that is, a third figure between nature and art: which proves, that natural reason is above artificial sense.[97]

Whatever faults exist in human perception, it is reason alone that supplies the necessary emendations, not the imagistic distortions of human sense at the hands of rude mechanical men. According to Cavendish, nonhuman creatures are already perceptible at ordained scales of sensibility; altering that scale is a perversion resulting in monstrous "hermaphroditical third figures." The Duchess also, as Peter Dear argues, delegitimizes experimental philosophy by contrasting its sociability with gentlemanly norms of conduct and disembodied speculation.[98] Hooke pleaded with his social betters to tap the cognitive and mechanical resources of tradesmen, lamenting "that the Arts of life have been too long imprison'd in the dark shops of Mechanicks themselves, & there hindred from growth, either by ignorance, or self-interest."[99] Reserving mental virility for the nobility, Cavendish, conversely, characterized contributory manual labor as effete and destitute of cognitive vigor. In the tract's dedication to her husband, the Duke of Newcastle, Cavendish professes, "though your Grace is not only a lover of virtuosos

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[97] Ibid., 53.
[98] See Peter Dear, "A Philosophical Duchess: Understanding Margaret Cavendish and the Royal Society," *Science, Literature and Rhetoric in Early Modern England*, eds. Juliet Cummins and David Burchell (Burlington, VT: Ashgate, 2007), 129-130.
[99] Hooke, *Micrographia*, Preface, unnumbered page.

but a virtuoso yourself, and have as good and as many sorts of optic glasses as anyone else; yet you do not busy yourself much with this brittle art, but employ most part of your time in the more noble and heroic art of horsemanship and weapons, as also in the sweet and delightful art of poetry."[100] Her husband's aristocratic, rational aloofness hovers over the lowly "artist[s] or mechanic[s]" occupying their time with what Cavendish desperately wants to dismiss as vapid child's play but cannot.[101] In the virtuosos' prosthetic transgressions she senses the epistemological foundations of potential ontological disruptions – Hooke and his colleagues at the Royal Society "busy[ing] themselves more with other worlds, than with this they live in."[102] The threat does not lie with the instrument per se. As Emma Wilkins informs, the Duchess owned her own microscope that was "18 inches long, focused with a screw of 10 threads."[103] Rather, the ontologically destabilizing potential rests in the new sociable and empirical nexus of instrument, low-status technician-artist (e.g. Hooke), and insect subject – a hermaphroditical third space of epistemologically authoritative enunciation between the clean categories of artificial and natural. Cavendish repeatedly strikes a defensive posture of classist prejudice sutured to well-worn speciesist assumptions easily discernible in her anxious refrain about the multi-clustered quality of the fly's eyes:

> If it be really so, then those creatures must needs have more of the optic sense than those that have but two or one eye; [I] for my reason cannot believe . . . Truly, my reason can hardly be persuaded to believe . . . Wherefore I can hardly believe the truth of this experiment concerning the numerous eyes of flies . . . since other creatures which have but two, can make more advantage of those two eyes, than they of their vast number.[104]

[100] Cavendish, *Observations*, 4.
[101] Ibid., 49.
[102] Ibid., 4.
[103] Emma Wilkins, "Margaret Cavendish and the Royal Society," *Notes and Records of the Royal Society of London* 68, no. 3 (2014): 247.
[104] Cavendish, *Observations*, 59-60.

The Duchess does not want to imagine a phenomenology based on anything other than binocular vision, just as she refuses to accept the possibility of a society in which non-nobles and manual laborers occupy epistemic-political space.

Moving Gimcrack and his microscopic creatures among social and corporeal categories of depravity, Shadwell's *Virtuoso* echoes Cavendish's intense opposition, but their criticisms are not without a level of cogency. The revelatory possibilities of magnification was truly world fracturing and the faith of individuals like Sprat placed in the not-yet perfected microscope smacked of a disconcerting religious fervor:

> It is not to be doubted, but still there may be an infinit number of *Creatures*, over our heads, round about us, and under our Feet, in the large space of the *Air*, in the Caverns of the *Earth*, in the Bowels of the *Mountains*, in the bottoms of the Seas, and in the shades of *Forests*: which have hitherto escap'd all mortal *Senses*. In this the *Microscope* alone is enough to silence all opposers.[105]

In the span of a few years the earth's population had increased drastically with unseen creatures in the food, the air, and the water necessary for human life, and co-inhabitants revealed to live within and upon human bodies. Mortals and their impoverished senses could not detect these brimming entities; only the "Microscope alone" could expose the true density of our ecology, but it was never, as Sprat would have it, the "Microscope" and natural object "alone." "Nature" laid bare was always a triptych that included the experimental philosopher and his craft. Hooke, by his own admission, recognized the multi-layered representational process of the natural, sensible object:

> What each of the delineated Subjects are, the following descriptions annext to each will inform, of which I shall here, only once for all, add, That in divers of them the Gravers have pretty well follow'd my directions and draughts; and that in making of them, I indeavoured (as far as I was able) first to discover the true appearance, and next to make a plainer-presentation of it. This I mention the rather, because of these kind of Objects there is much more difficulty to discover the true shape, then of those visible to the naked eye, the same Object seeming

[105] Sprat, *History*, 384.

> quite differing, in one position to the Light, from what it really is, and may be discover'd in another. And therefore I never began to make any draught before by many examinations in several lights, and in several positions to those lights, I had discover'd the true form."[106]

According to Elizabeth Spiller, "What Hooke thus provides for his readers in these 'plain representations' is not something that he never saw by looking through the microscope but rather what he understood to be a re-creation of the underlying object as it truly was."[107] Though Hooke's *Micrographia* precedes the period that Lorraine Daston and Peter Galison examine in their text *Objectivity*, his approach conforms (although imperfectly) to the representational mode they deem "truth-to-nature." Hooke provides composite images filtered through multiple engagements that inform his understanding and delineation of the final engravings, in effect, "taming nature's variability" into the delimited attributes of species or type.[108] The subjective presence of the microscopist is de-emphasized by the interpolation of the machine, but he is nevertheless negotiating *naturalia* from encounter to final standardized replication. Megan Doherty argues that "it was Hooke's involvement with the arts and his awareness of the techniques of draughtsmen and engravers that yielded such striking images" with subtle shadings, dimensionality, line, and riveting composition that created an entirely different vocabulary for miscroscopic representation from that of Henry Power's book published just one year prior.[109] It was not Hooke's descriptions that chiefly fired the imagination of readers, but his skilled depictions. Social and political players like Pepys practically swooned at *Micrographia*'s combination of discovery and aesthetic brilliance: "Before I went to bed, I sat up till 2 a-clock in

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[106] Hooke, *Micrographia*, Preface, unnumbered page.
[107] Elizabeth Spiller, *Science, Reading, and Renaissance Literature: The Art of Making Knowledge, 1580-1670* (Cambridge: Cambridge University Press, 2004), 154.
[108] Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2010), 63.
[109] Meghan C. Doherty, "Discovering the 'True Form': Hooke's *Micrographia* and the Visual Vocabulary of Engraved Portraits," *Notes and Records of the Royal Society of London* 66, no. 3 (2012): 223.

my chamber, reading of Mr. Hookes Microscopicall Observacions, the most ingenious book that ever I read in my life." For Shadwell and his patrons, that alliance of tradesman and natural facticity was a political hazard to the orderly operations of a society decreasingly based on status and land ownership. An exemplum of this fear is evinced when Shadwell equivocally expresses one side of the debates around automation by staging an uprising of ribbon weavers, airing armed grievances against the engine loom reputedly invented by Gimcrack, when in fact the situation was much more economically complex, as the 1675 (the year of *The Virtuoso*'s production) promulgations of London's ribbon weavers defending the engine looms attest: "If engine looms be suppressed it will force the engine loom weavers, being all natural born subjects, to go to remote cities and nations to the great prejudice of the trade of this kingdom and his Majesty's customs and discouragement of ingenuity."[110] The introduction of experimentally based epistemological foundations was never without a sociability that put the hegemonic arrangement of social space at risk. The process of manufacturing factual claims of nature, as Shadwell and Cavendish saw it, was a double denaturalization of the sensible object that placed inordinate power in the hands of the fact producers, first in their mediation of quotidian human experience through instrumental alterations, and second in their artistic/craftsman alteration and commodification of nature into various forms of print, taxidermy, lithographs, wax models, etc., which burst open the onto-phenomenological divisions along the Great Chain of Being and made possible the empirical consumption of the ultramundane.

Cavendish and Shadwell's defensive guard against what they interpreted as the encroachment of the new science's epistemology upon traditional landed arrangements was not without social warrant. At the same time Charles II was choosing ex-nonconformists for

[110] "Ribbon Weavers Defend the Engine Looms, 1675" in *17th Century Economic Documents*, eds. Joan Thirsk and J.P. Cooper (Oxford: Clarendon Press, 1972), 295.

preferment and failing to redistribute confiscated lands back to cavaliers who lost all during the interregnum,[111] a growing number of Latitudinarian (low-Anglican Churchmen) and a contingent of noncomformists progressively espoused a physico-theology drawn from and supporting the religio-politically heterogeneous, international group of experimental philosophers in the Royal Society. Dutch naturalist Jan Swammerdam's microscopical musings on vermin are exemplary of sermonizing inspired by God's book of nature: "Herewith I offer you the Omnipotent Finger of god in the anatomy of a louse: wherein you will find miracles heaped upon miracles and will see the wisdom of God clearly manifested in a minute point."[112] Glimpses of God's vantage on His creations laid open the hidden recesses of an unknown universe that neither required nor demanded theological axioms; only the apparatus of *corrected* perception. True, mechanical theories generally undergirded such experimental observations but as long as, say, a conservative Boylean corpuscularism was favored against Cartesian or Hobbesian strains of crass materialism, then the revelation of the sensible accorded well with the broad and tolerationist and Latitudinarian attitudes that dominated the Royal Society in the latter seventeenth century. Endorsements for the new science could be found in Simon Patrick's *A Brief Account of the New Sect of Latitude-Men*, which claimed "That certainly it must be the Office of Philosophy to find out the process of this Divine Art in the great automaton of the world, by observing how one part moves another";[113] or Erastian Bishop of Oxford Samuel Parker's message that the "truly wise . . . only search after the Properties, Qualities, Vertues, and Operations of Natural Beings";[114] or

[111] Tim Harris, *Politics*, 68.
[112] Jan Swammerdam, "April 1978," *The Letters of Jan Swammerdam to Melchisidec Thevenot*, trans. G.A. Lindeboom (Amsterdam: Smuts and Zeitlinger, 1975) 105, quoted in Peter Harrison, "Reading Vital Signs: Animals and the Experimental Philosophy," in *Renaissance Beasts: Of Animals, Humans, and Other Wonderful Creatures*, ed. Erica Fudge (Champaign, IL: University of Illinois Press, 2004), 201.
[113] Simon Patrick, *A Brief Account of the New Sect of Latitude-Men* (London, 1652), 19.
[114] Samuel Parker, *A Free and Impartial Censure of the Platonick Philosophie Being a Letter Written to His Much Honoured Friend Mr. N.B.* (Oxford, 1666), 64.

John Tillotson's sermon proclaiming that "The Wisdom of God in his creation will appear by considering the works of God."[115] These Latitudinarian divines elevated even the lowliest discrete entities of creation to an ostensibly self-regulating, interactive extension of God's will. Unifying laws of operation could be discerned in the transactional interplay of material bodies, and a comprehension of those laws laid down sufficient ground for a religiously inflected politics that anticipated the constitutional settlement of 1688-89, shot through with its ideology of "monarchy limited by law." Theologian, Cambridge mathematician, and Newton's mentor, Isaac Barrow, aptly characterized a philosophy of the sensible that would not tolerate James II's future absolutist dismantling of corporate charters and entrenched rights: "As in the world natural, the parts thereof are so fitted in varieties of size, of quality, of aptitude to motion, that all may stick together . . . and all co-operate incessantly to the preservation of that common union and harmony which was there intended; so in the world political we observe various propensions and attitudes disposing men to collection and coherence and co-operation in society."[116]

The course texture of perceivable Nature revealed God's providential blueprint for human politics, but, like William Davenant's formalistic sensorium, these were perceptions made possible only through perspectival multiplication, networks of inter-class sociability, non-human mechanisms of sensation, and multi-species entanglements. By 1683, Shadwell's politics would harmonize beautifully with the Latitudinarian *via media* of irrefutable laws accommodated by many Royal Society Fellows' budding natural theology, as evident in his satiric sketch of Dryden, *The Medal of John Bayes*: "But Heaven preserve our Legal Monarchy, / And all those

[115] John Tillotson, *The Works of the Most Reverend Dr. John Tillotson, Late Archbishop of Canterbury*, ed. Ralph Barker (London, 1752), 2:551.
[116] Isaac Barrow, *The Theological Works of Isaac Barrow*, ed. Alexander Napier (Cambridge: Cambridge University Press, 1859), 5:231-32, quoted in Margaret C. Jacob, *The Newtonians and the English Revolution, 1689-1720* (Ithaca: Cornell University Press, 1976), 62.

Laws that keep the People free."[117] But in 1675, before the turmoil of the Exclusion Crisis, the counter-public and counter-political consequences of Society interspecies constitutions were incompletely ascertainable but nevertheless inauspicious for traditional aristocratic and economic hierarchies. Epistemological sovereignty formed by the conjunction of transspecies and transclass bodies in increasingly inaccessible laboratory spaces was gaining a political legitimacy that Shadwell and others sought (ultimately futilely) to culturally and aesthetically delegitimize. With the popular medium of periodical print in the early eighteenth century, science-in-the-making's affective economy would leak into the proto-liberalized public sphere of post-1688 London, and interspecies associations would become less defined by aristocratic vertical, linear arrangements than by horizontal mediations of journalistic print and the public performance of the self within new bourgeois conceptions of domesticity and masculinity.

[117] Thomas Shadwell, *The Medal of John Bayes: A Satyr against Folly and Knavery* (London, 1682), 2.

Epilogue:

"Transspecies Domesticity and Sentient Spectacles in the Early Enlightenment"

At the close of Chapter One I explored how individuals like John Browne, against established forest laws, "mobilized the companionable hunting dog as a politicized site through which layers of sovereign ascendancy were exfoliated and appropriated." In the early and middle decades of the seventeenth century, acts of poaching and environmental destruction enacted with illicit companion canines valorized a genre of domestic authority in direct conflict with sovereign prerogative and the monarch's legal-administrative apparatus placed over forests and categorized distinctions between valid animals of the *domus* (domestics) and the forests' wild inhabitants. By refusing to mutilate his mastiff dog and engaging in hunts mocking royal venery, Browne (among others) impelled the animal into a state of exemption from regal authority and traditional cultural formations of human-canine relationality. This epilogue, not so much by way of conclusion as by way of looking forward toward the eighteenth-century transformation of transspecies domestic arrangements into sites of authority, briefly examines how social movements sutured that state of exemption for the domestic animal to new modes of empathy and nascent popular idioms of representation in art and print that were not readily available in the mid-seventeenth century. It is my working hypothesis that these popular representations imbricated an interspecies and intersexed domesticity with behavioral gentlemanly norms to legitimize a more empathic and politically decorous genre of conducting privateness in public.

Citing the induction of nomenclature into the written record of public transactions is one method, albeit an imperfect and incomplete one, for constituting the advent of a sociological object. According to the Oxford English Dictionary, the term "pet," denoting "(a)n animal (typically one which is domestic or tame) kept for pleasure or companionship," first arises in the

19 December 1710 issue of Richard Steele's periodical *The Tatler*. The word's appearance foregrounds the slippery social relations and gendered anxieties clustered around the non-human attachments implicated in dialectics of polite human sociability and domesticity. In a bit of *Tatler* news, Sam Trusty regales Steele's mouthpiece, Isaac Bickerstaff, with a tale of his recent disastrous visits to two eligible widows. Trusty diagnosis the central obstacle to his passionate and financial achievements as the misplacement of rickety feminine affect: the first widow, "with all the Advances which Years have made upon her, goes on in a certain Romantick Road of Love and Friendship which she fell into in her Teens; the other has transferred the amorous Passions of her first Years to the Love of Cronies, Petts, and Favourites, with which she is always surrounded." His forays into the wilderness of widowhood end in frustration for the first visitant is consumed by her "Courtship" to a female friend and their planned evening at the opera, while the second's protective animal coterie of "old Shock dog with one Eye, a Monkey . . . a great grey Squirrel . . . and a Parrot" rebuff Trusty's advances with scratches and bites, allowing their matron to continue imbibing her well-trodden romantic literature. It would be a precipitous error to reduce these queer investments of affect to a new gloss on redundant iterations of early modern misogyny. The quasi-fictitious male figures of this *Tatler* issue do not form a united front in their assessment of approved aging femininity. Bickerstaff withholds any condemnation of the widows' characters and even defends the first widow against Trusty's insults while summarizing his opinion that "one or two Fop women [a category in which these widows are not included] shall not make a ballance for the Crowds of Coxcombs" among men. The article, rather, is a public speculation on models of gender and the mediation of non-human companionship in private negotiations of affect. The "Pett" in Steele's periodical is an oddly

non-contractual familial acquisition imposing itself on the adjudication of personal conduct within the intentional framework of domestic intimacy.[1]

By the mid-eighteenth century, representations of gentry households in theatre and print became the touchstone for testing the normative conduct of gentility and enfranchised personhood, and in many cases newly deemed "pets" served to mediate the sexed performance of domesticity. It is my contention that as patriarchalism became unmoored from dynastic sovereignty, the periodicity of performance and print served a contractual policing function for the public conduct of *private* masculinity mediated by relations to non-human animate life. A species co-production of the household was cyclically linked to animal-based medical research that shaped the discourse of gender in which that very same paradigm of the household was grounded. For the purposes of this dissertation's conclusion, I will only offer up a few dissections of the existent dialogue between theatrical and journalistic articulations of human attitudes toward animal as they inflect the affective charge of mitigated (or softened) patriarchal domesticity. Post-Restoration domestic masculinity moved through two rhetorical and representational phases: the first was a mode gentlemanly politeness; the last was infused with the language of sensibility and bound by the enunciative possibilities of the companionate marriage.[2] Causality for this social manifestation is overdetermined, but the following brief enumeration focused on long-eighteenth century inclinations toward contractualism will have to suffice for the purposes and limitations of this epilogue. The most "natural" affective bonds of the sexual household were repeatedly subject to incursions of legal, medical, and public controls

[1] Richard Steele, *The Tatler*, no. 266 (December 1710).
[2]This declaration finds affinity with the work of Susan Dwyer Amussen, Michael McKeon, Lawrence Stone, Peter Earle, Thomas King, and Kathryn Shevelow who argue that after the Glorious Revolution the proper performance of political subjectivity became increasingly associated with "middling" domesticity and sexual complementarity rather than proximity to the sovereign head of state.

that, in effect, authenticated those bonds as biologically and socially spontaneous (i.e., constructed them as natural). Tim Hitchcock argues convincingly that in the late seventeenth century, published discourses on penetrative conjugal sex supplanted knowledge of sexual foreplay transmitted orally in kinship and social networks.[3] Popular texts like *Aristotle's Masterpiece; or, the Secrets of Generation Displayed in All the Parts Thereof* appeared in numerous editions alongside *Onania; or, the Heinous Sin of Self Pollution . . .*, which separated and condemned masturbation from its medieval coupling with bestiality and its associated mélange of legal statutes against sodomy. This print emphasis on procreative sex must be understood in the context the Revolution of 1688 and John Locke's proto-liberal theory distinguishing the social contract of state from the customary arrangement of the family, which was tantamount to a separation of paternal and magisterial forms of authority.[4] Locke's *Two Treatises of Government* was published in 1689, and a substantial portion of the text was dedicated to rebutting Filmer's claims on the Biblical inheritance of a partriarchalist socio-political structure, or a rejection of what could be classified as the naturalized co-implication of paternal and political power. Locke was very clear on the separation of powers over the *oikos* and the principality:

> But these two powers are so perfectly distinct and separate; are built upon so different Foundations, and given to different Ends, that every Subject that is a Father, has as much Paternal Power over his Children, as the Prince has over his; And every Prince that has Parents owes them as much filial Duty and Obedience as the meanest of his Subjects do to theirs; and can therefore contain not any part or degree of that kind of Dominion, which a Prince, or Magistrate has over his Subject.[5]

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[3] See Tim Hitchcock, "The Reformulation of Sexual Knowledge in Eighteenth-Century England," *Signs* 37, no. 4 (2012): 823-832.
[4] See Michael McKeon, "Historicizing Patriarchy: The Emergence of Gender Difference in England, 1660-1760," *Eighteenth-Century Studies* 28, no. 3 (1995): 297.
[5] John Locke, *Two Treatises of Government*, ed. Peter Laslett (Cambridge: Cambridge University Press, 1988), 314.

In contrast to the authority of the magistrate, paternal power "ends with Nonage," and all enactments of filial devotion that follow the period of youth place "no Scepter in the Father's hand, no Sovereign Power of Commanding."[6] For Locke, the domains of domesticity and political authority diverged and could in no way be tantamount to one another, except beyond a short list of their shared formal attributes. More radically, however, Locke recategorized paternal power in Enlightenment language and form that spoke to the actual structural-functional gendered makeup of the *domus*: "*Paternal Power* . . . seems so to place the Power of Parents over their Children wholly in the *Father*, as if the *Mother* had no share in it, whereas if we consult Reason or Revelation, we shall find she hath an equal Title. This may give one reason to ask, Whether this might not be more properly called *Parental Power*." (303) According to this logic, paternal authority is in actuality parental authority and it is secured as maximally legitimate in a complete domestic architecture of equitable distribution of power along lines of gender.[7] The contemporaneous and entwined nature of popular discourse on conjugal sex and liberal Lockean re-evaluations of patriarchalism had a profound impact on restructuring domestic authority in the valence of the companionable marriage. Along with three other immense social transformations, a new type of public discourse knitted together determinants (from various social fields of legitimation) to actuate sovereign declarations of exemptions on inutile domestic animals: 1. the use of Leeuwenhoek's microscopic investigations to establish the generative theory *preformationism* (contra *epigenesis* the idea that a preformed individual organism was present in either the spermatozoa or ovule) and the ensuing debates between *spermists* and *ovists*, effectively ending with Spallanzani's discovery of the mutual contribution of both sperm and egg

[6] Ibid., 313, 314.
[7] See Gordon J. Schochet, *Patriarchalism in Political Thought: The Authoritarian Family and Political Speculation and Attitudes, Especially in Seventeenth-Century England* (New York: Basic Books, 1975), 249.

in the process of fertilization;[8] 2. Alterations to marriage contracts beginning in the 1730s coincided with the introduction of the strict settlement into English inheritance codes, both of which mollified patriarchal tyranny over wives and, in particular, eldest sons, and which, according to Katie Barclay, "enabled affection between family members" for a great number of gentry households;[9] 3. The passage of the austere Black Act in May 1723 created fifty new capital offenses primarily concerned with trespassing and poaching; the act directly challenged plebian usage of the king's and great gentry's lands, thus blunting literary gestures toward English pastoral idealism and effectively discouraging previous challenges to sovereign authority over wild nature and other forms of "property."[10] The Black Act also elaborated antique forest laws in the idiom of capitalist derived property and delineated what animals clearly comprised that property, especially with the Act's object of legal protection being a form of wild conspicuous consumption supported by the commercial ventures of many Whig constituents. As E.P. Thompson states, "what was now to be punished was not an offence between men . . . but an offence against property."[11] These five protracted and durable social transitions must be taken in league with the proliferation of contractual/public obligations placed on conjugality and the discursive arrival of "pet" into the gendered norms of eighteenth-century sentimental domesticity.

Laura Brown avers that "[t]he literary representation of the canine pet first bec[ame] widespread in the eighteenth century, and its first expression [was] almost exclusively female,"

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[8] See Eve Keller, "Embryonic Individuals: The Rhetoric of Seventeenth-Century Embryology and the Construction of Early-Modern Identity," *Eighteenth-Century Studies* 33, no. 3 (2000): 321-348; Carlo Castellani, "Spermatozoan Biology from Leeuwenhoek to Spallanzani," *Journal of the History of Biology* 6, no. 1 (1973): 37-68.; and Clara Pinto-Correia, *The Ovary of Eve: Egg and Sperm and Preformation* (Chicago: University of Chicago Press, 1997).
[9] Katie Barclay, "Natural Affection, the Patriarchal Family and the 'Strict Settlement' Debate: A Response from the History of Emotions," *The Eighteenth Century* 58, no. 3 (2017): 311.
[10] See E.P. Thompson, *Whigs and Hunters: The Origin of the Black Act* (New York: Pantheon, 1975).
[11] Ibid., 207.

but that summation overlooks Poet Laureate Thomas Shadwell's unwieldly preoccupation with land-rich men and their costly emotional attachments to beasts of sport in the latter decades of the seventeenth century.[12] Shadwell is inexhaustible in his derision of affective engagements with hounds, hawks, and horses, and their ability to stymie the reproduction of landed wealth through conjugal affiliations. His first and most involved representation surfaces on the eve of the Exclusion Crisis in his comedy *A True Widow* (1679). Weaving his way in and out of a main plot concerned with accurate self-presentation in marriage negotiations and the procurement of capital, the coxcomb Prig satirizes the profligate libertine gamester who believes a gentleman's duty is nothing but to act according to sensual dictates: "Think? What a Pox should a Gentleman think of but Dogs, Horses, Dice, Tennis, Bowls, Races, or Cock-fighting? The Devil take me, I never think of anything else, but now and then of a Whore (when I have a mind to her)."[13] The initial impression Prig creates is one of Rochester-circle libertinism that is explicitly anti-pastoral ("A pox of Strephons and Phillises."), or in other words, he dissolves into what should remain a sensuous background supporting the feverish romantic aims of marital union.[14] But on closer examination Prig is a socio-literary aberration who refuses to let his animals be the mere supporting structure of sportive pleasures. In three elaborate speeches he recounts his devotion to a lineage of hounds as an extension of his own kinship network:

> But there is one Dog we call *Ranter*, I Christened him, I was his God-Father; he was gotten upon my Lord's famous Bitch-Lady. . . . Oh poor *Lady*! I was not sorryer when my Sister died, than when poor Lady died. . . . Yet *Ranter's* an admirable Dog . . . I love and honour *Ranter*, I care not who knows it. I made a song of him, have his Picture by my Bed-side, and some of his Hair here in a crystal Locket.[15]

[12] Laura Brown, "The Lady, the Lapdog, and Literary Alterity," *The Eighteenth Century* 52, no. 1 (2011): 35.
[13] Thomas Shadwell, *A True Widow: A Comedy, acted by the Duke's Servants* (London, 1679), 9.
[14] Ibid., 10.
[15] Ibid., 21.

Prig does not purport a consummate rejection of pastoral configurations, but instead problematizes them when he announces the beloved object in his matrimonial paradigm is both canine and male. The poetic conceits and protocols of courtship that populate his transspecies romance disturb the iconography of solitary bachelorhood and the expressed benefits of conjugal fulfillment that mandate transmitting wealth across generations.

Shadwell ostensibly harbors anxiety about the distractive potentiality of affective engagements between humans and other species, but he does not seriously consider the sociological condition of interspecies habitation. Rather, he mobilizes close association with non-human animals in his commentaries on high politics, satirizing such affective behavior in a Whiggish mode of political critique. This is most apparent in his censored satire *The Lancashire Witches, and Tegue O'Divelly, The Irish Priest* (1682), which posits Sir Edward, "A worthy, hospitable, true English Gentleman, of good Understanding and honest Principles," at its moral center.[16] Sir Edward captures Shaftesbury's political principle of a quasi-independent, locally constituted gentry in his speeches laden with Elizabethan nostalgia, mild xenophobia, and patriotism:

> I love to have my Servants part of my Family; the other were to hire Day-Labourers to wait upon me: I had rather my Friends, Kindred, Tenants and Servants should live well out of me, than Coach-makers, Taylors, Embroiderers, and Lace-men should. . . . But our new-fashon'd Genry love the French too well, to fight against 'em; they are bred Abroad, without knowing anything of our Constitution and come Home tainted with Foppery. . . . For my part, I think 'twas never good Days, but when great Tables were kept in large Halls . . . with Dog Turds and Marrow-bones as Ornaments in the Hall: These were signs of good House-keeping.[17]

[16] Thomas Shadwell, *The Lancashire Witches, and Tegue O'Divelly, The Irish Priest* in *The Works of Thomas Shadwell, Esq., in Four Volumes* (London, 1720) 3:222.
[17] Ibid., 258.

"Good House-keeping" in Sir Edward's estimation is tantamount to autonomy from foreign fashions and the Tory indenture to French specie, High Anglicanism, and the slow dismantlement of corporate integrity and constitutional rights. "Dog Turds" in the halls mark the bounds of not just the *domus*, but the manor-polity within the state, and one able to provide for its walled community. Hounds of course factor into that imaginary, but solely as implements to mark civic borders and signify its autonomous abundance. This image starkly contrasts with Sir Edward's Prig-like son, Young Hartfort, who is completely given over to his bucolic sports and greyhounds that draw him away from thoughts of amorous union and augmenting his country estate. For Shadwell, animals litter the domestic scene but they function as a barometer for the social independence and economic health of the gentry. Their place is in the semi-public halls and their byways with the scraps, not within the private bedchamber or in the laps, lockets, and picture frames of the dissipated lord's person.

By the early eighteenth century, periodical literature offered a more serious and robust consideration of animals as part and parcel to the sociability of polite conduct and domesticity, rather than the mere symbolic capital of high political satire. Because of their thrice weekly periodicity and accessibility in coffeeshops and vendors of cheap print, Richard Steele's *Tatler* (1709) and Joseph Addison and Steele's *Spectator* (1711) arguably had the most pervasive and encompassing influence on early eighteenth century social mores and modes of consumption. Gentlemanly conduct was imbricated in approved patterns of filial and spousal affection, and these patterns were inextricable from journalistic ruminations on interspecies affiliative behavior. In the 14 January 1710 issue of *The Tatler,* Steele expresses ambivalence toward what he itemizes as "Voluntary friendships between Animals of different Species." These embraces "arise from Instinct" but the enormous proportions and public dimensions within which they

manifest are puzzling, if not unseemly. Steele is of the opinion that "Lap-dogs, Parrots, or other Animals" are surrogates for a repressed surplus of affect, but his critique is open-textured and riddled with doubts. The public preference of some "Country Squires [who] won't scruple to kiss their Hounds before all the World" or the "Torrent of Kisses" a most "agreeable woman of her Sex" decants on a cherished cat "in the Presence of her Admirers" destabilize the facile dichotomy of gentility and transspecies taboos.[18] Instinct straddles the gap between nature's course that one should follow and the rejection of social constraints. In 27 September 1711 issue of *The Spectator*, animal instinct is the ideal model for the exercise of parental authority and good breeding. Writing against unfeeling parents who do not allow their children liberty in the choice of a marriage partner, Mr. Spectator argues that God has implanted "an Instinct, that supplies the Place of [an] inherent Goodness" and that this instinct "runs through all the Species of Brute Creatures, as indeed the whole Animal Creation subsists by it." Therefore, the Man who "can overcome this powerful instinct, and extinguish natural Affection, debases his Mind even below Brutality."[19] Addison and Steele proffer a solution to patriarchal despotism in the form of a rudimentary comparative ethology. The more one muses on the behaviors of non-human species, the better, more natural parent one becomes within the providential outlines Divinity has proposed.

The complete gentleman achieves that status only when his masculinity is conditioned by other-than-human animate life. Issue 120 of *The Spectator* portrays the proper delegate of country living as a philosophical speculator "of Nature," combining the reading of natural history with "passing so much . . . Time among his Poultry" and "sitting an Hour or two together near and hen and Chicken" or picking out "a particular Cock [as a] Favourite." Through such

[18] Richard Steele, *The Tatler*, no. 121 (January 1710).
[19] Joseph Addison and Richard Steele, *The Spectator*, no. 181 (September 1711).

employments the country gentlemen might still deny reason to animals, but he cannot deny an empathetic recognition of "the genial warmth" of their natural Love for offspring. Taking this into consideration, the proper bourgeois masculine subject then wriggles in disgust at the "barbarous Experiments" of vivisection and "Instances of Cruelty" enacted simply to confirm hypotheses verifiable by non-invasive procedures of the lay natural historian.[20] The import of Addison and Steele's editorials is not so much the final opinion each article conveys on the facticity or sociability of animals, but their solemn considerations of non-human subjects as integral to the empathic exhibition of a polite, sociable, yet autonomous private masculinity. The epistemology of this masculinity is inextricable from a more-than-human ontological awareness that "Every living creature is inhabited. . . . Thus every nobler Creature is as it were the Basis and Support of Multitudes that are his inferiors."[21] Steele's layered, involuted ecological awareness pronounces the biological porosity of human subjectivity. The periodical's recurrence of "making sense" of modern sociality through transspecies engagements throws into relief the contingency of human subsistence on non-human materiality. It is not that a human or animal chooses to cohabitate, but rather that cohabitation constitutes the fabric of life itself, which is why Mr. Spectator comfortably analogizes himself to the "domestick animal" moving from room to room, touching the lives that surround and infest it.[22] How one senses and inhabits this interspecies *domus* marks him or her as properly human.

Looking into the intermediate function of the lap-dog in two plays separated by several decades, Richard Steele's *The Tender Husband* (1705) and Henry Fielding's *The Modern Husband* (1732), buttresses the thesis that attitudes toward canine cohabitants were implicated in

[20] Joseph Addison and Richard Steele, *The Spectator*, no. 120 (July 1711).
[21] Richard Steele, *The Tatler*, no. 229 (September 1710).
[22] Joseph Addison and Richard Steele, *The Spectator*, no. 12 (March 1711).

and affected by, among other things, popular (and periodical) interspecies appraisals of patriarchal ecologies. Steele's more mature and nuanced interpretation of "domestick animals" interpolated into the pages of *The Spectator* lies fallow in his early play *The Tender Husband*. The lap-dog is the chosen affective accoutrement on which Mrs. Clerimont fixates her inordinate amount of vanity and passion for all things French, including her fashionable dalliances with the foppish Fainlove (a woman disguised as a pretty gentleman). Splitting her attention between the mirror and her canine appendage, Mrs. Clerimont enthuses,

> What a pretty company a glass is, to have another self! [Kisses the dog.] The converse is soliloquy. To have company that never contradicts or displeases us! The pretty visible echo of our actions. [Kisses the dog.] . . . But I look best when I'm talking.
>
> [Kisses the lap-dog in *Fainlove's* arms.][23]

The dog is, like the glass, a simulacrum of the self. The self-love Mrs. Clerimont lavishes on what she collapses into an uncontentious animalized reflection of the ego-ideal is the strait gate that leads from vacuous sociality to the moral corruption of her extramarital tryst with effeminate Fainlove. It is only in the final act of the play when Mr. Clerimont upbraids and corrects his wife that she ventures on a strictly English reformation of manners.

For Henry Fielding in *The Modern Husband* (1732), the lap-dog operates similarly as a commentary upon domesticity but the view purported is much more sympathetic to interspecies companionship while being critical of patriarchal abuses. Two of the most decadent and corrupt characters in the drama, Mrs. Modern (a tragic figure abjectly prostituted by her husband) and the rakish Lord Richly (who achieves orgasmic delight in purchasing sexual access to his colleagues' wives), mock "Women of Fashion" able "to carry Husbands, Children, and Lapdogs

[23] Richard Steele, *The Tender Husband; or, The Accomplished Fools* (London, 1791), 50.

about with 'em, three Things [Mrs. Modern] never cou'd be fond of."[24] A doctrine to which Lord Richly replies, "If the Ladies were not fonder of their Lapdogs than of their Husbands, we shou'd have no more Dogs in St. James's Parish, than there are Lions at the Tower."[25] The triumvirate of Husband, Children, and Lapdogs squares the familial geometry with the wife performing her vital stabilizing function of fourth pillar. Regarding Mrs. Modern, it is her deficiency of affect and the penury of her own conjugal happiness that impels her to identify all three (Husband, Children, and Lapdogs) as a domestic paradigm, and yet to simultaneously reject them as improbable phantasms. In this exchange between Richly and Modern, ensconced within a play highly critical of abusive husbands and inhabited by spouses suffering through countless infidelities; a play sympathetic to the economic and emotional contribution of wives and populated with the heavy contractual oversight of lawyers, the ladies' fondness for faithful lapdogs appears as a quite logical deposition of finite affect, especially if those ladies are hoping for equivalent returns on their investments.

What I want to emphasize is that within Fielding's *The Modern Husband,* the discursive manufacture and critique of identity through its entanglements with non-human animals enters a firm social architecture of domesticity on public display, and that in 1732 this presented a challenge to outmoded (although still viable) assertions of inflexible patriarchy. As masculine sensibility appropriated feminine virtue in lieu of aristocratic codes of honor, affective engagements and domestic arrangements with animals would become integral to professions of sovereign personhood. As Ingrid Tague has argued, interspecies sentimentalism achieved its most polished respectability at mid-century in statesman Horace Walpole's frequent assertions of

[24] Henry Fielding, *The Modern Husband: A Comedy, As it is Acted at the Theatre-Royal in Drury-Lane by His Majesty's Servants* (London 1732), 32.
[25] Ibid., 33.

animal dignity and his high valuation of pet-keeping.[26] The explosion of representations of the domestic pet in family portraiture militated against critical currents that rejected the household dog as extravagantly conspicuous consumption or an emblem of socially frigid self-involvement. In compositions such as Arthur Devis's *Sir George and Lady Elizabeth Strickland* (1751), Thomas Gainsborough's *Mr. and Mrs. Hallett: 'The Morning Walk'* (1785), and George Romney's *Sir Christopher and Lady Elizabeth Sykes* (1786), the personal lap-dog has grown into a larger canine fulcrum of companionate marriage (Figures 5-7).[27] On expansive walks through idyllic landscapes the furry mediator of domesticity directs our attention toward the couple as a functional affective unit; his/her canine presence generates a neo-pastoral romantic imaginary of unmediated naturalness that dominates the painting's cosmopolitan network of fabrication.

Figure 5. Arthur Devis, *Sir George and Lady Elizabeth Strickland* (1751)[28]

[26] See Ingrid H. Tague, *Animal Companions: Pets and Social Change in Eighteenth-Century Britain*, (University Park, PA: Penn State University Press, 2015), 218-227.
[27] See Kate Retford, *The Art of Domestic Life: Family Portraiture in Eighteenth-century England* (New Haven: Yale University Press, 2006), 49-82.
[28] Arthur Devis, *Sir George and Lady Elizabeth Strickland* (1751), Ferens Art Gallery, https://artuk.org/discover/artworks/sir-george-strickland-17291808-and-lady-strickland-of-boynton-hall-bridlington-78460/search/actor:devis-arthur-17121787/page/4/view_as/grid.

Figure 6. Thomas Gainsborough, *Mr. and Mrs. Hallett: 'The Morning Walk'* (1785)[29]

[29] Thomas Gainsborough, *Mr. and Mrs. Hallett: 'The Morning Walk'* (1785), The National Gallery, https://www.nationalgallery.org.uk/paintings/thomas-gainsborough-mr-and-mrs-william-hallett-the-morning-walk.

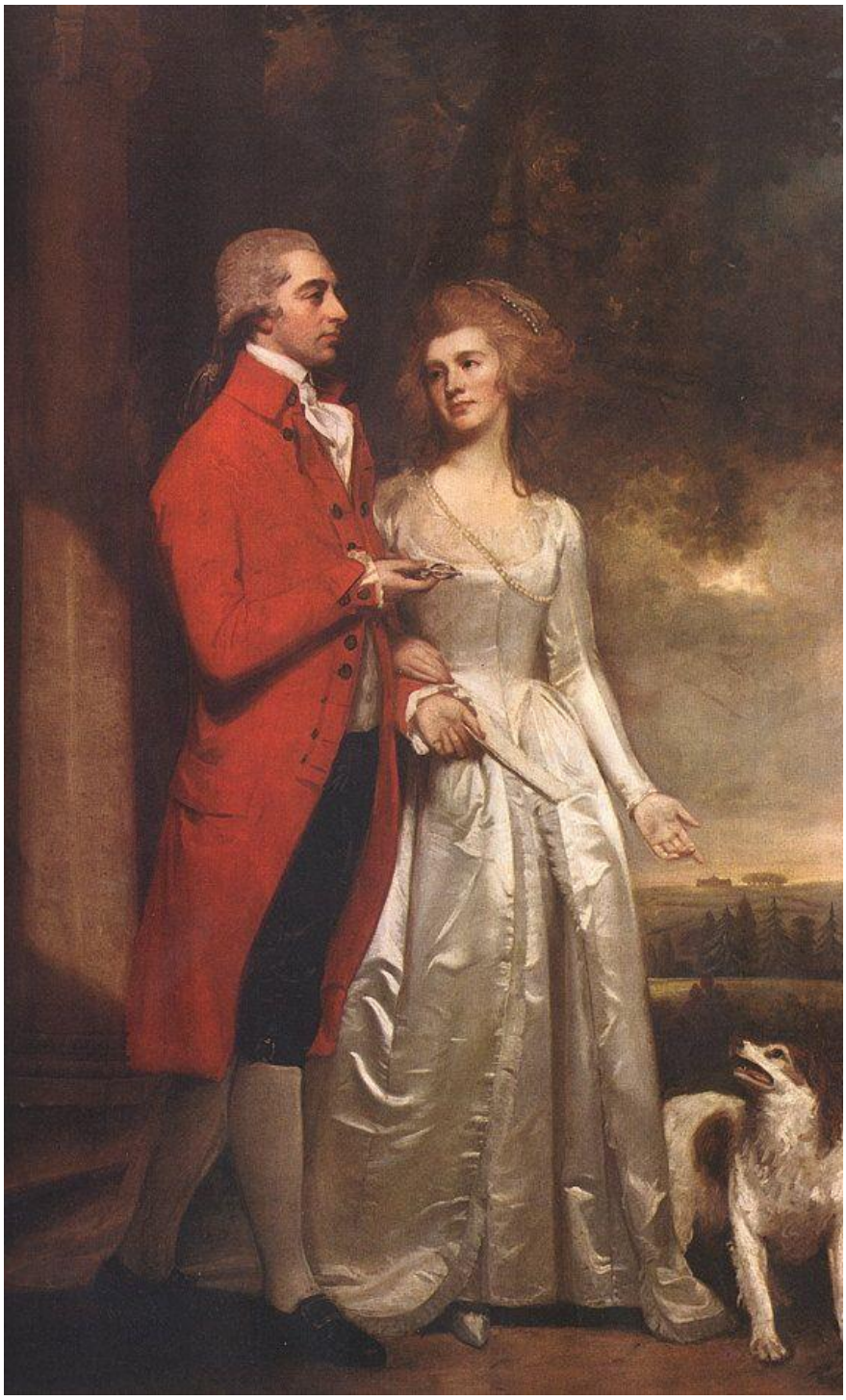

Figure 7. George Romney, *Sir Christopher and Lady Elizabeth Sykes* (1786-93)[30]

[30] George Romney, *Sir Christopher and Lady Elizabeth Sykes* (1786-93), https://uk.pinterest.com/rgossettbanic/art-george-romney/, Public Domain, https://commons.wikimedia.org/w/index.php?curid=57249417.

The domestic canine is the point of access to and glue that holds together a viable and affectively rich bourgeois-artistocratic performance of conjugally inflected masculinity. This site of authority, cemented in time and place by the “pett,” posed a significant challenge to, if not abrogation of, models of pederastic authority defined by proximity to the king and his material person. The harmonious balance of dignity, sexuality, and domestic-economic legitimacy were cognizable and contingent on the animal’s gaze. By the early eighteenth-century, the canine’s exemption from sovereign prerogative had become inextricable from the proper performance and social legibility of a private politico-sexual economy.

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