CULTURAL TRANSLATIONS

A Global history of the chili pepper in architecture

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Abstract

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The chili pepper came to occupy global cuisine in variegated ways through performative negotiations of cultural differences. From the Inca royal garden, *Moyas,* a locus of power where doves feed on chilies to the swidden farms of the Carribean in which the chili grows wild; from the formalized pleasure gardens where it sits among cyclamens and tulips in Europe at the dawn of early modernity to the battle fields of Hungary-Ottoman frontier; from colonial plantations of the Portuguese bordering the Indian west coast to the royal miniature paintings of the Mughal court; from the domestic gardens of the poor to the banqueting spectacles of the British colonists; through space and time, the chili pepper is betwixt and between: history and folklore, human and non-human, the colonized and the colonizer. This thesis unfolds this global history of architecture as activated through continuous cultural translations of the chili pepper across discontinuous geographies. In the process this thesis suggests of the tacit ways in which food and architecture materialize each other.

To the simple, yet rich act of eating

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ACKNOWLEDGEMENTS

Knowledge is in the end based on acknowledgement.
- Ludwig Wittgenstein

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Deepthi Bathala

CHAPTER 1 INTRODUCTION

Big histories are always best told through insistent, if humble, details.

-Anna Lowenhaupt Tsing in The mushroom at the end of the world: on the possibility of life in capitalist ruins,2015. Pg 254.

"*At the beginning of the Incan world, four men and four women came out of certain rocks near the city. The first brother was Manco Capac who founded the city of Cuzco, conquered the nations around the city, teaching them to live like men, and from him all Incas descended. The second brother Ayar Cachi or salt, represents reasoning that the Inca bestowed and the third Ayar Uchu or the chili pepper represents the delight that the people attained from this reason. There is no mention of the fourth brother."1(*Image 1)

"In the 16th century, there was a front-line of scorched wilderness, fortress gutted by fire, running across Hungary. For over a century, this area was the battle ground of the Ottoman Turks and the Hungarian armies who forged strange friendships over Paprika and wine. The Turkish army did not succeed in decisively breaking through the line of border fortresses, the Paprika however, achieved what

[1] Vega, Garcilaso de la, and Clements R. (Clements Robert) Markham Sir. 1963. "*First Part Of The Royal Commentaries Of The Yncas.*" Works Issued By The Hakluyt Society. New York: B. Franklin. https://ehrafworldcultures.yale.edu/document?id=se13-003.pg 72-74.

the victorious armies of the Sultan failed to do; hold ground beyond the boundaries of the Ottoman empire." [2] (Image 2)

Meanwhile a breakfast scene in 19th century colonial India at Fort William has "*down the center a row of tables at which a batch of recruits lately arrived from Europe are taking their breakfast. What a glorious spread they seem to think is before them! See the gusto with which they devour those savory but apparently hot curries; which while they tickle the palate, bring streams of water from their eyes! Observe how they lick their lips*…"[3] (Image 3)

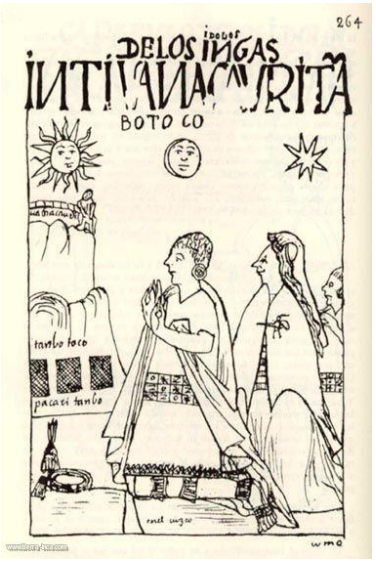

Image 1 The Inca Origin myth of the ancestral siblings.

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335 (Image from The Royal Danish Library, Copenhagen)

[2] Halász, Zoltán. *Hungarian Paprika through the Ages*. Budapest: Corvina Press, 1963.pg.15.

[3] Narayanan, Divya. *Cultures of Food and Gastronomy in Mughal and post-Mughal India.* 2015 http://www.ub.uni-heidelberg.de/archiv/19906 pg. 125.

Image 2 Hungarians and Turks fraternizing over paprika and wine.

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15.

Image 3 British breakfasts of 'spicy curry' at Fort William.

Source: London British Library archives ,The Times.1924.

From the Incan origin myth, the Ottoman-Hungary battlefield to the British colonial spectacle, the chili pepper has come to occupy a critical space in various local histories. Through space and time, the chili pepper seems betwixt and between – between history and folklore, human and non-human, and the colonized and the colonizer. How did the chili pepper occupy such variegated spaces in history and how did it translate itself in different contexts? Most

of the ingredients that make up the contemporary daily diet are recent additions. Food and cuisine have been and are still constantly shaped by historical exchanges of ingredients that are intricately linked to economic, social, cultural and in particular, non-human histories.

One of the critical events in global history is the food exchanges initiated at the beginning of the 1500s due to the colonial contact with the Americas which transformed the landscape of world cuisine in a matter of just five decades. Potatoes, tomatoes, Maize, cacao, pineapples, chilies along with a horde of other foods not only expanded the global inventory of agricultural crops and diet but also mobilized several global processes that had a significant impact on human and non-human history. There are two ways in which the introduction of these new foods unpacked history – crops like potato, cassava and corn which were significant improvements in calorie and nutritional value became staple, while crops like tomatoes, cacao, chilies complemented existing food largely by improving taste.[4] These could be termed as 'foods of taste' for they were non-essential foods that translated their way through cultures. These 'foods of taste' thus came to occupy global cuisine in more variegated ways then in the staple foods. Their impact on the built environment was also markedly different. The transformation brought about by the former was more direct. For example, the potato, which was an improvement over existing staples, was heavily cultivated and went into large-scale production. The latter's diffusion was more sporadic because of existing food cultures and the bio-cultural preferences of taste. Unlike staples, these latter foods had to negotiate larger cultural biases of taste, race, perceptions and gender and had

[4] Nunn, Nathan, and Nancy Qian. "The Columbian Exchange: A History of Disease, Food, and Ideas." *Journal of Economic Perspectives* 24, no. 2 (2010): 163-88.

to, as a result, undergo a more significant process of translation in order to be incorporated into existing food culture.

One such way of translation is through architecture. From sites of cultivation and systems of distribution to the facades of peasant houses to the domestic kitchens, the global history of each of these foods in different contexts is vast and rich interpellated with narratives of fiction, power and colonialism and the non-human plant.

The chili pepper offers one such intriguing tale of non-human agency within the assemblage of human history and the making of architecture. Today it is one of the most widely used condiment, emblematic of many national cuisines. Even so, the chili pepper in history has been over shadowed by pepper-centric historiography driven by trade and economic processes. One of the problems is the lack of sources on its exact route of diffusion. As a garden crop the chili was ignored and never taxed or recorded. But what made the chili pepper a garden crop instead of a commodity? How did it nevertheless gain widespread traction and how did humans, in spite of lacking the taste buds for the chili's heat, grow accustomed to it?

In his book entitled, *The Botany of Desire,* Micheal Pollan contends that many of the activities that humans undertake for their own good purposes are mere contingencies as far as nature is concerned.[5] Although, the history of commodities is mostly a dynamic of conscious human efforts, the history of the chili pepper, as will be revealed, is largely driven by the nature of the plant itself. The taste receptors for 'spicy' is absent in humans and for the very same reason

[5] Pollan, Michael. *The Botany of Desire : A Plant's-eye View of the World.* 1st Trade Pbk. ed. New York: Random House Trade Paperbacks, 2001.pg xxi.

physiological studies establish only five taste sensations (sweet, sour, salty, bitter and umami) among which the sensation produced by the chili pepper is absent. The chili pepper's burn or the spicy 'taste' produced by the chemical capsaicin is, in fact, a trick to dissuade mammals from eating it, because the mammalian digestive process normally destroys chili pepper seeds, preventing further propagation. Birds—which do not destroy chili pepper seeds during digestion—have no analogous receptors. Capsaicin, excites pain receptors on your tongue that are linked to the sensation of temperature, not because it's burning off taste buds. It's more of a sensation of heat than something physical. Chili's spiciness is therefore not a taste but just a heat sensation. The brain responds to this false alarm of high temperature by transmitting pain signals and endorphins to relieve the pain. These endorphins trigger a sense of euphoria which is similar to a 'runners high.' [6]

The chili's influence is thus part physiological and part psychological such as that of coffee and tobacco. However, what makes it different from the other two is the plant's ability to adapt and produce variegated forms of itself. In other words, the chili pepper, by selective process is adept at creating ecological niches in a diverse range of environments.

As this thesis will demonstrate, the chili across different contexts changes in shape, color, size and pungency as it moves from one place to another adapting to the climate, geography and the soil. This attributes to it varied usages and aesthetics which is then appropriated culturally. These transformations continue, both biologically and physiologically at the same time trnalsting culturally. The trajectory of cultural translation of the chili in history is, thus, as Boris Buden

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[6] *The Encyclopedia of Country Living*, 40th Edition. *California Bookwatch*, 2013, California Bookwatch, Jan, 2013.pg 56.

describes in his essay 'Cultural translation', that of a tangent, which touches the circle of each cultural context in one single point only to follow thereafter its own way[7] materializing in architecture. There are no origins at all, but only their traces, only their copies instead and there is no end to the progression or regression of signs in space and time in which architecture is constantly becoming.

OUTLINE OF CHAPTERS

The exact geographic origin of the chili pepper within the Americas is contested. In this research which focuses on the exchange and translation of the chili across space and time in the 15th and 16th centuries, it is important to emphasize that micro-scale exchanges and translations of the chili pepper existed within the Americas long before colonialism dating back to 5000 BCE. Chapter 1 on the Inca empire of the Peruvian Andes in 1438 CE reinforces this point by examining how the chili pepper was translated and incorporated within the empire as a political strategy. The story of the Inca incorporation of the chili was a two-fold process which was accompanied by cultural translation of local origin histories, historical spaces and functional storage houses. The Inca legitimized their power over the subjugated by creating a cultural niche for the chili – as food in storage houses, as tribute in the royal treasury and as a sacred plant to feed birds in royal orchards. The central argument of this chapter is that these processes lead to the incorporation of the chili pepper in variegated forms of spatialization.

The chili pepper's rich and complex diffusion history made its way to the Caribbean islands around 600 CE by way of human migration. The Taino of the Greater Antilles, present day

[7] Buden,Boris. *Cultural Translation: Why it is important and where to start with it.* eipcp european institute for progressive cultural policy. June 2006.

Haiti and Dominican Republic, embody a complex *pattern that connects*[8] architecture, the ecology of the chili pepper and the nature of its consumption in mind and body. The second chapter examines this *pattern* of the Taino in Hispaniola and its reading by the European colonists. Colonial contact with the Americas and the intersection of ideas – of architecture, ecology and food as exhibited by the chili, this chapter argues, is entangled in the processes of the exotic other.

The discussion of the continuity of the Taino desire and the colonial desire projected onto the chili pepper sets the stage for the next chapter where this intersubjectivity translates to pleasure gardens and *hortus botanicus* in Europe.

Simultaneously, the epistemic violence of early modernity classifies the chili in both space and representation. Also partaking in this cultural violence of translation is negation- the misconceptions, assumptions and errors that were simultaneously in place. The chili did not achieve much eminence because the genus capsicum belonged to the nightshade family, a family of poisonous flowering plants, that was misconceived as very deadly to humans by the scientific community. Another assumption that was carried over with the production of the exotic other, was the diseased other. Sixteenth-century Europeans consistently claimed that direct experience

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[8] Gregory Bateson. 1979. Introduction. In *Mind and Nature: A Necessary Unity*. Dutton, Penguin Books. Pg. 131.
According to Bateson, relationships are the essence of the living world, and that we need a language of relationships to understand and describe it. His major goal was to discover "the pattern which connects". According to him " *the right way to begin to think about the pattern which connects is to think of it as primarily (whatever that means) a dance of interacting parts and only secondarily pegged down by various sorts of physical limits and by those limits which organisms characteristically impose."*

demonstrated the indigenous diet was unhealthy and dangerous. Chapter 2 argues that the chili was thus an instrument of racial othering through the concept of taste, diet and digestion.

While this wave of translation fueled by cultural violence slowly ripples from the West and South of Europe, another wave of the chili pepper translation-incorporation was sweeping in from its East and South. And at the frontier of these two waves was the Hungary-Ottoman battleground where the chili pepper served to dismantle binary political divisions. The chili pepper in the form of paprika became the cultural glue in this zone of conflict, forging diplomatic relationships, providing security for the refugees and security for the farmers as food. Chapter 3 argues that the translation here is multi-faceted and bio-cultural – the chili pepper plant biologically adapts as the paprika and Hungary cultivates a taste for the spice as a way to mediate political conflicts.

Chapter 4 looks at how the succession of the unfamiliar and familiar and thereafter *translation-transformation-incorporation* [9] of the chili in India is primed by Portuguese colonialism and the Mughal rule in India. It discusses intersubjectivity in the nature of being in Sanskritic texts and in the dietary practices of the Mughal emperors in determining the process of translation as *intra-active*, which is to say, the cultural incorporation of the chili pepper as emerging through the constant *diffracting* of forces of colonialism and cosmopolitanism. Architecture is an active agent in this phenomenon, that undergoes transformation catalyzed by the British trope of the curry and the chili pepper as integral to their conception of a Pan-Indian

[9] Narayanan, Divya Cultures of Food and Gastronomy in Mughal and post-Mughal India 2015 http://www.ub.uni-heidelberg.de/archiv/19906 pg. 27-28.
Divya Narayan argues that local contextualization was the key factor for the incorporation. She posits this *"so called cultural translation, rendering of the unfamiliar to the familiar, is characterized by the progression of translation-incorporation-transformation of food culture."*

cuisine. This leads to the production of a curry house culture akin to the coffee houses of Europe. The chili hinged on its physiological similarities with the coffee as a stimulant and addiction, to create the Curry house culture that is widespread even today.

The concluding chapter discusses how discontinuous geographies are rendered continuous in this global story of architecture. The global history over ruptures of three centuries, shows how the chili pepper has been through and through a silent negotiator with significant consequences. The chaotic world of the chili pepper mirrors the way in which architecture, unbeknownst to modernity, is in fact a constant becoming and materialization – an entanglement. The story of the chili pepper looks to renew the sense of entanglement architecture has, not with just ecology and the banal trope of culture but with the complex sets of relationships that emerge and move to form the pattern that is architecture. While the process of translation is used to define the historical process of architectural becoming, it is evidently a simplification of the simultaneity of the chaotic threads. Traversing these threads as continuities and discontinuities unpacks how architecture is not a stand-alone ideation but is rather woven into the story in various ways, in the verification of a collective fiction, reflection and refractions of early colonial relationships, as a contestation of political and economic desires and the resistance towards modernity.

CHAPTER 2 THE INCA, EMPIRE BUILDING AND THE ORIGIN MYTH

In 1524, Huayna Capac the Incan ruler of Cuzco is said to have asked the Spanish explorer Pedro de Candia, on seeing his insatiable desire for gold, "*Do you eat this gold?",* to which Candia replies, "*We eat this gold.*"(Image 4) This exchange describes not only the Conquistador's avarice for American gold but also illuminates what in the Incan world parallels to this economic significance of gold – food. Indeed, the vast Incan empire known as *Tawaninsuyu* that stretched from present-day Argentina to Columbia was an empire built on the economics of food.[10] Of course, bartering of food was not a novel concept at the time, however the large-scale centralized economy of the Incas based on food produced an architecture that was not only based on the production and management of food systems but also one that was devoid of marketplaces and shops which were the conventional and standardized places of exchange. This chapter focuses on explicating the ideas of architecture forged in association with the chili in the Incan world.

[10] McEwan, Gordon Francis. The Incas : New Perspectives. Understanding Ancient Civilizations. Santa Barbara, Calif.: ABC-CLIO, 2006.

Image 4 Huayna Capac asks Candia if they eat gold

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p. 371 (image from The Royal Danish Library, Copenhagen)

The history of the chili in the Andes dates back to the 5th Millenium BCE when Pre-Columbian Americans began tinkering with the genomes of the chili parallel to experimenting with maize. [11] The first domesticated chili evolved over several centuries from a handful of separate genetic *Capsicum* lineages through human intervention: *Capsicum annuum*, *Capsicum frutescens, Capsicum chinens, and Capsicum baccatum*. The chilies that became *C.aanuum* came from Mexico and *C.frutescens* and *C.chinens* came from chilies of Northern South America. *C.baccatum* originated from Peru under Incan horticulture.[12] The horticulture of the Inca was an

[11] De, A. (2003). *Capsicum : The genus Capsicum (Medicinal and aromatic plants--industrial profiles ; v. 33)*. London ; New York, NY: Taylor & Francis.
[12] Arndt Anderson, Heather. *Chillies : A Global History*. Edible. London, UK: Reaktion Books, 2016.pg.23-26

intricate system of agricultural practices that emphasized community. All land holdings were communal under a centralized system. Instead of broad flat plains prevalent in the rest of the world, they cultivated crops in millions of tiny plots scattered throughout thousands of square kilometers along the slopes of the Andes.(Image 5)

Image 5 Inca farming terraces at Pisac Valley, Peru

Source: Author

This method was extremely efficient in terms of the volume produced and the varieties of crops cultivated. The Incas took advantage of this variance and cultivated different crops suited to different conditions. The infrastructure that supported this intensive agriculture and economy spread over a large area was an equally intensive infrastructure of storage houses and an intensive recording system accompanying administrative practices.

Qollqas and the Khipus

The absence of markets and other conventional sites of trade made the storage houses the main centers of distribution. These storage houses were known as the Qollqas.(Image 6) Each

citizen was issued food, tools and other necessities out of the Qollqas. What made these storehouses the center of administrative power is the accompanying system of supervising state activities through an intensive record-keeping system. These storehouses were built on the outskirts of towns on a high, cool and windy place near the major road networks.

Image 6 Qollqas at Ollantaytambo, Peru

Source: Author

In addition to the absence of currency the Inca did not invent a system of writing in the form of a graphic script. Instead, they developed a system of record keeping in the form of cords and knots known as *Khipus* and *Yupanas*, a system of trays of different sizes for calculations.(Image 8 and 9) The khipus embodied in different configurations, semasiographic (form of communication where meaning is conveyed through signs and pictures) sign units that were constituted and reconstituted in different settings as the accountants or *khipukamayuqs* went about supervising, recording, assessing and assigning agriculture produce, tributes throughout the empire. Thus, this system of record keeping was a critical technology in the evolution of the political and economic complexity that enabled the extension (image 7) and administration of the

empire.[13] The Qollqas, khipus and Yupanas in union thus formed the instrument of control and power within the Incan empire. How this instrument of control is pertinent to the chili pepper needs to be followed by the understanding of the physical and cosmological space the chili came to occupy in the Inca world.

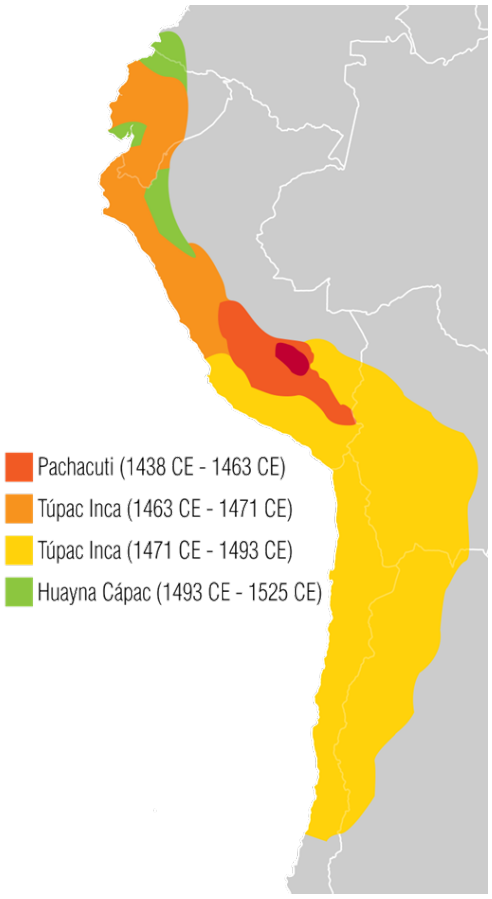


Image 7 Inca Empire Expansion map.

Source: Public domain CC. 12 March 2018 accessed through

https://commons.wikimedia.org/wiki/File:Inca_Expansion.svg

[13] Urton, Gary. *Inka History in Knots : Reading Khipus as Primary Sources.* First ed. Joe R. and Teresa Lozano Long Series in Latin American and Latino Art and Culture. Austin, TX: University of Texas Press, 2017.pg.5,20,21

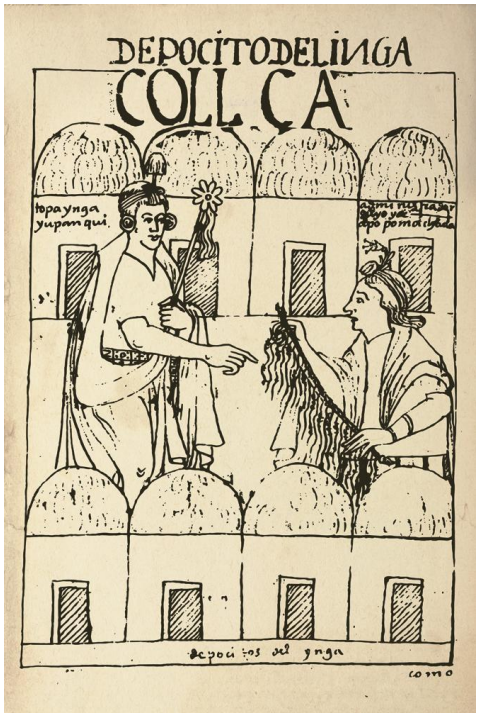


Image 8 [Left]A khipukamayuq holding a khipu. Bottom left is an illustration of a yupana

Image 9 [Right] Storehouses of the Inca. An administrator, identified as Poma Chaua showing a quipu, presumably with some tally of the storehouses' contents, to Topa Inca Yupanqui (1471-93)

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335 (Image from The Royal Danish Library, Copenhagen)

Inkawasi: Spatialization of units and power

Inkawasi or Incahausi is located on the South coast of Peru in the Cañete Valley. (Image 10) It is a planned town with standardized storehouses, *qollqas*, that housed chili peppers among other surplus. It was built as a staging area for the Inca conquest of the Huarco people in the south

and was built similar to Cuzco, the Incan capital. Also found in the *Qolqawasi*, the storehouse complex, were *khipus* covered by and associated with large amounts of chili pepper.[14]

Image 10 Layout of Inkawasi

Source: Alejandro Chu ,2015 La plaza y el ushnu mayor de Incahuasi, Cañete, 3,Año Cuadernos del Qhapaq Ñan.

The *Qolqawasi* is organized around and on both sides of a passageway leading to a central platform. On either sides are a pair of rectangular structures known as *kallankas*(UA01-05), two long rectangular sites for sorting and drying the chilies (UA 07,08)(Image 11). Two *khipus* were found inside a rectangular basket covered with chilies in this drying space UA 07. Study of the quipus and the storehouse spaces establish how the accounting of surplus chili pepper and similar foods is first translated into spatial measure before recording it in the *khipus*.

[14] Urton, Gary. *Inka History in Knots : Reading Khipus as Primary Sources.* First ed. Joe R. and Teresa Lozano Long Series in Latin American and Latino Art and Culture. Austin, TX: University of Texas Press, 2017.pg.154-178

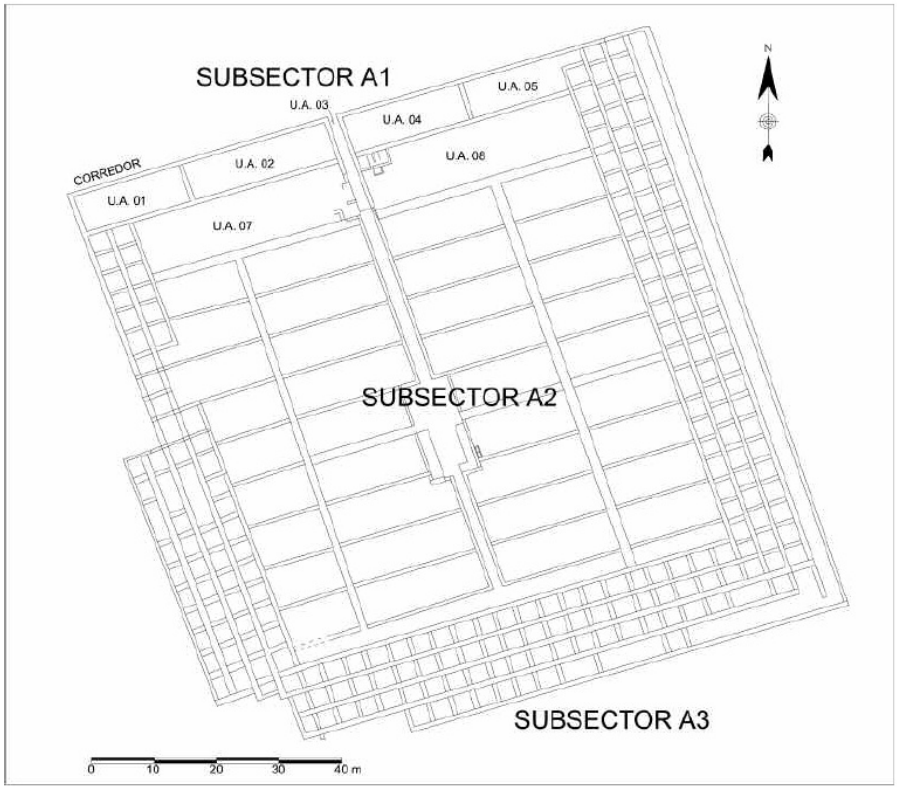


Image 11 Layout of the Qolqawasi

Source: Urton, Gary, and Alejandro Chu. "Accounting in the King's Storehouse: The Inkawasi Khipu Archive." 26, no. 4 (2015): 512-529.pg.518

Evidence implies that these large open spaces were a spatial measure for recording the large quantities of the chilies. A grid-like pattern was laid out in the mud floor by pressing ropes onto a damp floor (Image 12). All the squares measure 23X 23 cm. Each of the grid panels consisted of 117 squares with a narrow walkway separating them. The squares were a standardized unit for the chilies. They would have been spread out in the grids for quantifying the units of agricultural produce being brought into the storehouses and then recorded on the *khipu*. Similar spaces are present in the Inkan administrative site of Farfán, Je-quetepeque Valley on the north coast of Peru.[15]

[15] Ibid.pg.156-159.

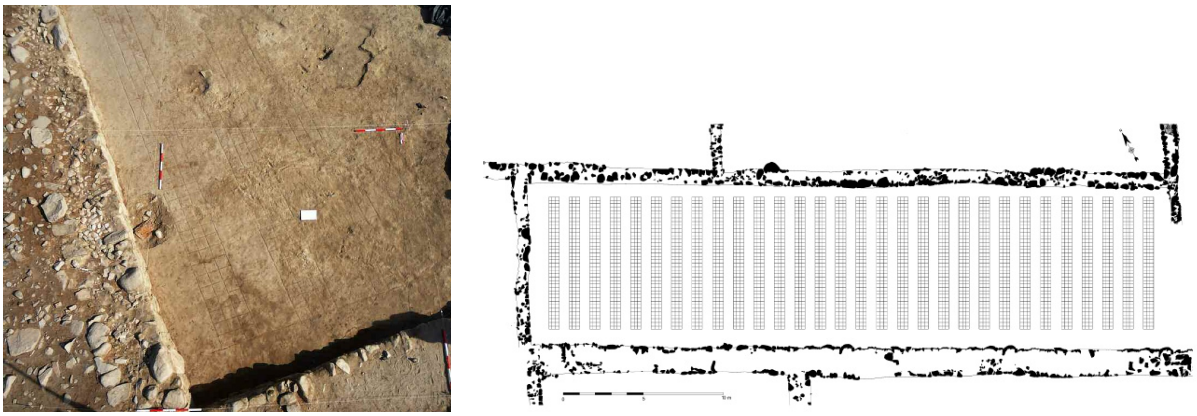


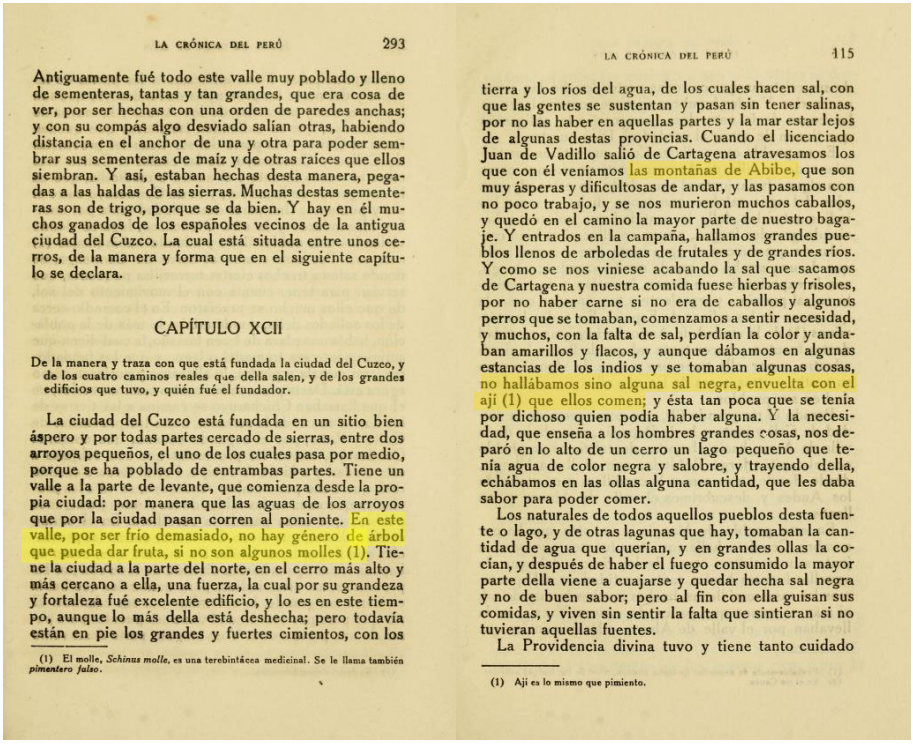
Image 12 The grids in the Qolqawasi

Source: [left] Photograph by Alejandro Chu,[right]Urton, Gary, and Alejandro Chu. "Accounting in the King's Storehouse: The Inkawasi Khipu Archive." 26, no. 4 (2015): 512-529.pg.518. pg.526

These spaces that were made for the storage and rigorous documentation of the chili suggest it was a precious commodity. Moreover, historical accounts of Cieze de Leon, 1553[16] suggest that the Inkawasi was to be a temporary military garrison for the conquest, and the large amounts of chilies and records of it suggests chili occupied a significant place in the brief occupation of the Inkawasi. We know from Leon's accounts of Cuzco (Image 13 and 14) that chili could not be grown in the high altitudes of Cuzco. Therefore, it is most likely that the Incan fields of the Canete valley which is a subtropical desert was more suitable for the cultivation of the chili or it was acquired from lower altitude regions of the extended Incan empire. But the story of what it was acquired for and how the chili come to occupy the elaborate physical space of the Inkawasi requires unpacking of the cosmological world of the Incas in which the chili is interwoven with myths of Incan ancestral origin and divinity. The story of the chili in the Incan

[16] Pedro Cieza de León (1520-54) was a Spanish conquistador and chronicler of Peru. He is known primarily for his history and description of Peru, *Crónicas del Perú*.

world as discussed below reveals itself to be a microcosm of Incan thought and life that directly translates to an important position in the physical world.



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Antiguamente fué todo este valle muy poblado y lleno de sementeras, tantas y tan grandes, que era cosa de ver, por ser hechas con una orden de paredes anchas; y con su compás algo desviado salían otras, habiendo distancia en el anchor de una y otra para poder sembrar sus sementeras de maíz y de otras raíces que ellos siembran. Y así, estaban hechas desta manera, pegadas a las haldas de las sierras. Muchas destas sementeras son de trigo, porque se da bien. Y hay en él muchos ganados de los españoles vecinos de la antigua ciudad del Cuzco. La cual está situada entre unos cerros, de la manera y forma que en el siguiente capítulo se declara.

CAPÍTULO XCII

De la manera y traza con que está fundada la ciudad del Cuzco, y de los cuatro caminos reales que della salen, y de los grandes edificios que tuvo, y quién fué el fundador.

La ciudad del Cuzco está fundada en un sitio bien áspero y por todas partes cercado de sierras, entre dos arroyos pequeños, el uno de los cuales pasa por medio, porque se ha poblado de entrambas partes. Tiene un valle a la parte de levante, que comienza desde la propia ciudad: por manera que las aguas de los arroyos que por la ciudad pasan corren al poniente. En este valle, por ser frío demasiado, no hay género de árbol que pueda dar fruta, si no son algunos molles (1). Tiene la ciudad a la parte del norte, en el cerro más alto y más cercano a ella, una fuerza, la cual por su grandeza y fortaleza fué excelente edificio, y lo es en este tiempo, aunque lo más della está deshecha; pero todavía están en pie los grandes y fuertes cimientos, con los

(1) El molle, *Schinus molle*, es una terebintácea medicinal. Se le llama también *pimentero falso*.

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tierra y los ríos del agua, de los cuales hacen sal, con que las gentes se sustentan y pasan sin tener salinas, por no las haber en aquellas partes y la mar estar lejos de algunas destas provincias. Cuando el licenciado Juan de Vadillo salió de Cartagena atravesamos los que con él veníamos las montañas de Abibe, que son muy ásperas y dificultosas de andar, y las pasamos con no poco trabajo, y se nos murieron muchos caballos, y quedó en el camino la mayor parte de nuestro bagaje. Y entrados en la campaña, hallamos grandes pueblos llenos de arboledas de frutales y de grandes ríos. Y como se nos viniese acabando la sal que sacamos de Cartagena y nuestra comida fuese hierbas y frisoles, por no haber carne si no era de caballos y algunos perros que se tomaban, comenzamos a sentir necesidad, y muchos, con la falta de sal, perdían la color y andaban amarillos y flacos, y aunque dábamos en algunas estancias de los indios y se tomaban algunas cosas, no hallábamos sino alguna sal negra, envuelta con el ají (1) que ellos comen; y ésta tan poca que se tenía por dichoso quien podía haber alguna. Y la necesidad, que enseña a los hombres grandes cosas, nos deparó en lo alto de un cerro un lago pequeño que tenía agua de color negra y salobre, y trayendo della, echábamos en las ollas alguna cantidad, que les daba sabor para poder comer.

Los naturales de todos aquellos pueblos desta fuente o lago, y de otras lagunas que hay, tomaban la cantidad de agua que querían, y en grandes ollas la cocían, y después de haber el fuego consumido la mayor parte della viene a cuajarse y quedar hecha sal negra y no de buen sabor; pero al fin con ella guisan sus comidas, y viven sin sentir la falta que sintieran si no tuvieran aquellas fuentes.

La Providencia divina tuvo y tiene tanto cuidado

(1) Ají es lo mismo que pimiento.

Image 13 [Left] Cieze de Leon writes of Cusco being too cold for any fruit bearing plant except the molle:

"In this valley, for being too cold, there is no tree genus that can give fruit, if they are not some molles. "

Image 14 [Right] Cieze de Leon writes of encountering "black salt wrapped in chili pepper" in Abibe mountains north of Cusco in present day Columbia.

Source: Cieza de León, Pedro de. 1922. La crónica del Perú. Madrid: Calpe.pg.115,293. Accessed via https://archive.org/details/lacrnicadelper00ciez/page/114 on 21st April 2019.

Chili as an Incan microcosm

The origin myth of the Incas follows the emergence of eight ancestral siblings from a mountain location at Pacariqtambo. They were said to be born under the command of T'iqsi Wiraqocha or creator god. One of them is Ayar Uchu which may be translated to 'ancestor chili

pepper' and Ayar Cache, 'ancestor salt'. Uchu was the condiment they use for seasoning their dishes, which the Spaniards called pepper; the Indians of Peru had another kind.[17]

Upon the ancestral siblings' emergence driven by greed and power, they set out in search of fertile land and decided when they find it, would conquer and subdue the people who lived there.[18] Pedro Sarmiento de Gamboa gives an account of this: "…the eight ancestors began to stir up the people who lived in that part of the mountain, setting as the prize that they would make them rich and they would give them the lands and estates that they conquered and subjugated."[19]

According to the myth, corn was given to the Inca on their emergence from the mountains. When they arrived at Cuzco valley with these seeds, they found the Valley was occupied by the Huallas who were growers of coca and chili which were both considered products of the jungle. In other words, they were both "primeval and wild", analogous to the powers of nature as perceived by the Incan ancestors. These powers were vanquished by the corn-growing Incas. Agriculture, for the Incas, was thus a battle between humans and nature.

In this story, the formation of the Incan state and capital at Cuzco is said to be driven by the conquest and oppression of the Hualla people, the earlier inhabitants of Cuzco. These mythical conquests of the region were reenacted in rituals to promote and perpetuate the divine nature of

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[17] Vega, Garcilaso de la, and Clements R. (Clements Robert) Markham Sir. 1963. *First Part Of The Royal Commentaries Of The Yncas*. Works Issued By The Hakluyt Society. New York: B. Franklin. https://ehrafworldcultures.yale.edu/document?id=se13-003.pg 72-74.

[18] Urton, Gary. *The History of a Myth : Pacariqtambo and the Origin of the Inkas*. First ed. Austin: University of Texas Press, 1990.pg.22.

[19] Sarmiento De Gamboa, Pedro. *History of the Incas. Medina's Biblioteca Hispano-americana.* Cambridge: Printed for the Hakluyt Society, 1907.pg.50.

the elite and social hierarchies as the natural order in human history.[20] One way the transmission of the non-Inca period to the Inca period based on this origin story is the concept of fasting; abstinence not of food itself but of flavors, salt and chili pepper. The pre-ritual fasting is preceded by the post-ritual feasts with food flavored with lots of chilies and salt.[21]

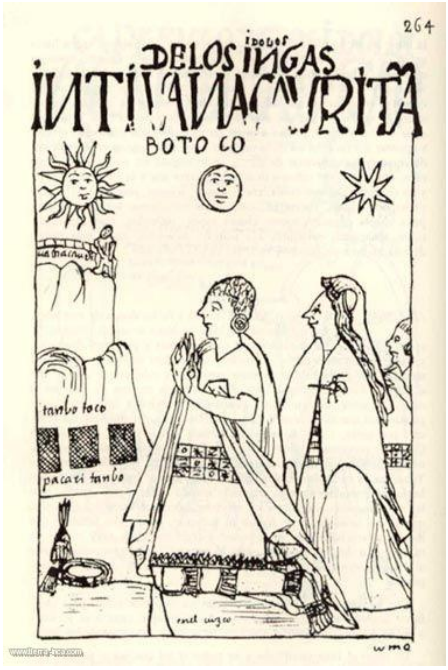

Image 15 The Inca Origin myth of the ancestral siblings.

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335

Reconstructing ancestral histories

Now, this forms only one of many versions of the Inca origin story. This origin story was appropriated by the Incas in different contexts in order to attain dominion over the territories they

[20] Bauer, Brian S. "Legitimization of the State in Inca Myth and Ritual." American Anthropologist 98, no. 2 (1996): 327-37.pg.327,333.

[21] Classen, Constance. "Aesthetics and Asceticism in Inca Religion." Anthropologica 32, no. 1 (1990): 101-06. doi:10.2307/25605560.pg 102.

conquered. The Incas created a totalizing political theology whereby they led the people they defeated or wanted to subjugate to believe that they were subordinate descendants of the Incas. They did so by ordering the subjugated people to pay homage to the Incan Sun god while insisting on continuing worship of their local gods as well. The Incas thus incorporated the varied cosmological views of the various Andean peoples, which was largely based on the landscape and agriculture of the Andes, into their own but always as a subset of the Incan cosmology.[22]

This political reconstruction of history and cosmology not only enabled the Incas to gather revenue but also both cultivate and incorporate crops that weren't and couldn't be grown in the vicinity of the Cuzco valley. Owing to this complex reconstruction of history, religion and rituals, it can be purported from the accounts that remain today that the myths, rituals and agriculture associated with the chilies along with their consumption are the products of local cultural translations. That is to say, came to occupy prolific physical space in Incan administration, religion and cuisine through a process of continuous reconstruction and extension of existing histories. Reconstructing these histories required material evidence. To legitimize the story and to establish its importance, it had to be grown at the locus of power, in a place that exudes not just importance but exclusivity. An outcome of this are spaces like *moyas* or royal orchard-gardens which embody the oscillating roles and significance of the chilies in the Incan world.

***Moyas*: Royal orchard-garden**

In accounts of state-owned estates, the term *moya* is used to refer to lands devoted to orchards and those which employed resettled workers know as *mitimaes*, who were from

[22] Silverblatt, Irene. *Imperial Dilemmas, the Politics of Kinship, and Inca Reconstructions of History*. Comparative Studies in Society and History 30, no. 1 (1988): 83-102.pg.83,89-90.

surrounding regions of Cuzco. Guaman Poma de Ayala gives a description of the moya as an orchard-garden and a yard for celebrations where the Incan ruler would go hunting and enjoy himself with his wife, princes and nobles. [23] The term *moyas* were used in opposition to the agricultural fields known as *tierras*. However, Moyas are to be considered as estates that were devoted to recreational lands where plants were grown and tended to rather than being purely wild lands.[24] There were two kinds of Moyas, of religion and of the Inca (King). It was unlawful to put the livestock of religion in that of the Inca and vice versa.

During the time of Topa Inca(1471-1493) and Huayna Capac(1493-1524) the *moyas* were located at the ends of agricultural holdings(Image 16). Accounts also place these lands in association with lakes, waterworks and wooded canyons. In addition to recreation, they were also places used for the conduct of certain rituals. Paucarchaca in Yucay was a moya under Huayna Capac where cultivation of crops took place. Chilies and sweet potatoes were grown which were not devoted to production of agriculture; rather they were grown to feed the doves. There are references to nearby lands known as Pacachaca which again mention the growing of chilies and cocoa which were difficult to grown in the high altitudes of the Yucay valley and Cuzco valley. Though Yucay valley is warmer than Cuzco, cultivating these crops would have been a challenge and were not practiced in large scale agriculture in Cuzco and Yucay. Therefore, the chili plants were grown as exotics and for their strong ritual associations. It is possible that the seeds for these

[23]Guamán Poma De Ayala, Felipe, and Hamilton, Roland. The First New Chronicle and Good Government : On the History of the World and the Incas up to 1615. 1st ed. Joe R. and Teresa Lozano Long Series in Latin American and Latino Art and Culture. Austin: University of Texas Press, 2009. Pg.262.

[24] Niles, Susan A. *"Moya" place or yours? Inca private ownership of pleasant places.* Ñawpa Pacha: Journal of Andean Archaeology, no. 25/27 (1987): 189-206. http://www.jstor.org/stable/27977816.pg.191

plants might have been brought in by the *mitimaes*, who were required to bring and grow seeds from their native regions. Both chilies and coca were required for the Purucaya ritual, a funerary ceremony. There are accounts of Huayna Capac spending a whole year trying to acquire chilies and coca for his mother's Purucaya ritual.[25&26]

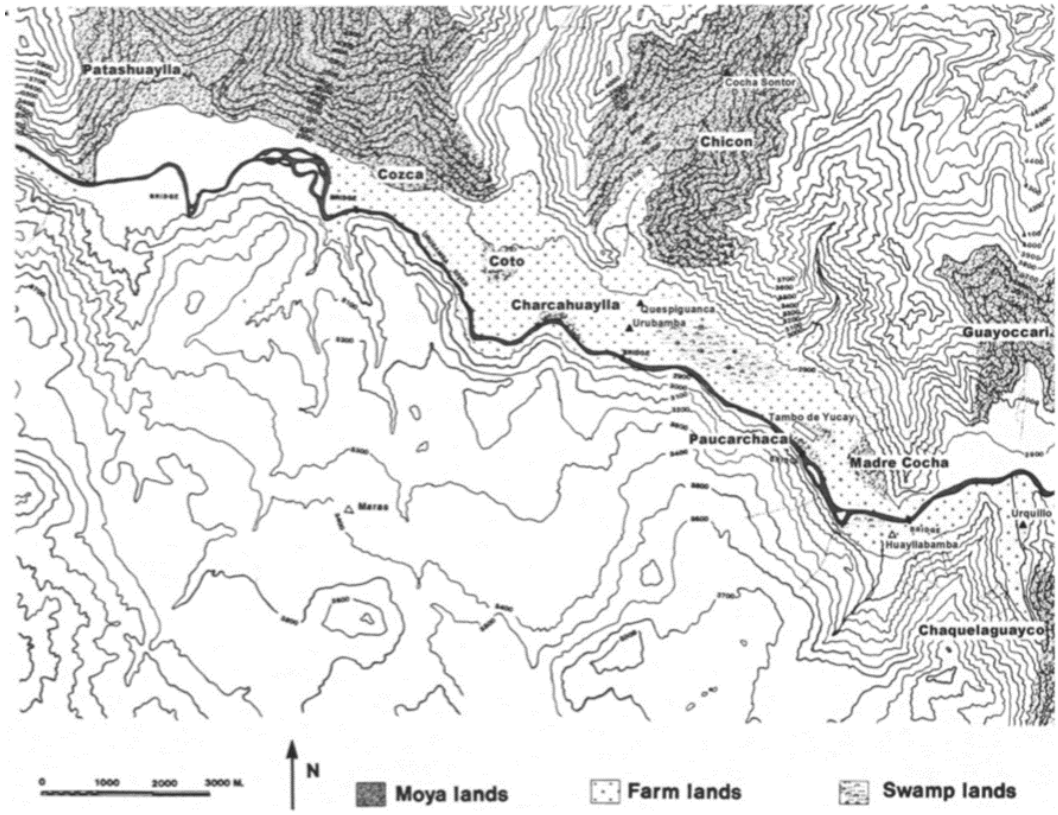

Image 16 Map showing Moya lands during the time of Topa Inca(1471-1493) and Huayna Capac(1493-1524)

Source: Niles, Susan A. ""MOYA" PLACE OR YOURS? INCA PRIVATE OWNERSHIP OF PLEASANT PLACES." Ñawpa Pacha: Journal of Andean Archaeology, no. 25/27 (1987): 189-206. http://www.jstor.org/stable/27977816.pg.200.

[25] Ibid.pg 191-194.

[26] Niles, Susan A. *The Shape of Inca History : Narrative and Architecture in an Andean Empire.* Iowa City: University of Iowa Press, 1999.pg 143.

Chilies in the Incan world occupied a distinctive role as a result of macro and micro forces. Multiple levels of signification emanated from both "outside and inside meanings."[27] Outside meanings arose from the rigorous administrative and economic power hold concomitant with production, storage and documenting processes. While inside meanings arose as a result of these processes and constant reconstruction of local histories and religion, which was largely associated with diet and rituals. Both the spaces of the *Qollqawasi* and the *Moya* are to be understood as examples of architecture as dynamic process of spatialization in emergence rather than as a prescriptive typology which is to say, architecture as becoming rather than being.

Parallel local histories

While discussing events of the chili pepper's history in other parts of America is beyond the scope of this thesis, a brief understanding of concurrent events in the surrounding areas will sharpen the focus of the global story. Continuing archeological studies reveal events related to the other strains of capsicum like *Capisicum annuum* which spread out of Mexico. By 5000 BCE chilies along with other domesticates such as maize, squash, avocado, beans and bottle gourd. were being collected in the Tehuacán Valley. Tehuacán, Mexico and Guilá Naquitz Cave, Oaxaca, Mexico, which were in use over a span of 10,000 years during the Archaic period as a shelter and gathering place show evidence of being sites for microband camps. These "microband" family groupings, would come to occupy cave sites in the region during a time when food resources were especially plentiful. Not much is known about the earliest uses or even their diet, but these

[27] Mintz, Sidney W. *Sweetness and Power : The Place of Sugar in Modern History.* New York, N.Y.: Viking, 1985.pg 20.

examples set the stage for what would be an incremental scaling up of its use, value and spatialization. [28]

[28] Kraft, Kraig H, et al. *Multiple Lines of Evidence for the Origin of Domesticated Chili Pepper, Capsicum Annuum, in Mexico.* Proceedings of the National Academy of Sciences of the United States of America, vol. 111, no. 17, 2014, pp. 6165–70. The paper utilizes scientific micro-archaeology to establish the earliest traces of chilli in prehistoric caves of Coxcatlan in Tehuacan in Mexico. The dating suggests the cave was utilized as storage for chillis cultivated in the Tehuacan Valley.

CHAPTER 3 COLUMBUS, THE TAINO AND THE COLONIAL SUBJECT

> *"In our ignorance we search in foreign parts for spices which we should not need did we but make use of those which grow spontaneously in our own islands. No doubt one day they will be appreciated. It is only the frantic craving for gold that goads the Spaniards on. Everything else, no matter how useful or valuable, is neglected and despised as of no consequence. Our pepper, of which I sent a specimen to (your uncle) Ascanio Sforza, grows abundantly everywhere in this country, just like mallows and nettles at home. The islanders crush it and spread it on their bread, which they soak in water before eating. There are five varieties, and it is hotter to the taste than the pepper of Malabar or the Caucasus. Five grains of ours are equivalent to twenty of Malabar or Caucasian pepper and seasoned with these five grains the juices of meats acquire more flavor than with twenty of the other. But such is human stupidity that whatever is difficult to obtain is always thought to be better*.[29]"

In the above quote, Peter Martyr d'Anghiera, the Italian historian describes the potential of the chili pepper found in Hispaniola in his letters to the Duke of Milan in 1511. He is seen to be lamenting the Spanish appetite for gold and critiquing the conspicuous consumption of spices prevalent in Early modern Europe. His account, most importantly, points to the European perception of the chili as anything but foreign by 1511 precisely at a time when goods from the Americas were still considered exotic in Europe. Why did the chili pepper not gain traction as a

[29] Anghiera, Pietro Martire D', and Macnutt, Francis Augustus. *De Orbe Novo: The Eight Decades of Peter Martyr D'Anghera*. G.P. Putnam's Sons, 1912.pg 251-252.

spice like the black pepper? Was the reason only connected to the economics of supply and demand? Of course, this negation of the chili pepper is not independent of the colonial discourse of othering nor does it stand alone in the multitude of other plants and animals, novel to Eurasia, being exchanged at the time. But what stories specific to the chili pepper contributed to its eventual movement to Europe? The answers to these questions point essentially to one simple question: What is the *pattern that connects* the chili pepper, its ecology, its history to the colonial economy?[30]

Chili pepper in the Caribbean

As noted earlier, *Capsicum annum* was domesticated in Mexico around 5000 BC by the Tamaulipas. Between 5000 BCE and 2500 BCE, several groups of non-agricultural Paleo-Indians from the Central American coast of Meso America are presumed to have migrated to the Greater Antilles via the Mid-Caribbean islands. Later, late Paleo-Indians from Nicaragua region, following sea mammals and using rafts, reached the Greater Antilles introducing cultivation of the chili. The origins of the Taino peoples of Hispaniola can be traced back to the very early agriculturalists group known as Saladoid of 2100 BCE in Venezuela. They lived in small village-like settlements and practiced swidden agriculture, which was a system of cultivation in which a variety of crops were cultivated in small gardens and temporary clearings, and left fallow after a period. They

[30] To be clear, *pattern* here refers to the condition of instability that is not eternal but recursive, which is to be thought of as an epistemological link between the biological, cultural and cognitive realms. Borrowing Bateson's theory of the '*metapattern*'[30] which are functional and meaningful connections, forms in space, processes in time and concepts in mind, [30] one could reimagine the historical pattern of the chili that emerges : between the biology of the plant itself, processes between the chili and the Taino of Hispaniola and further, between the former and the colonial mind.

migrated up north into the Antilles by 600 CE settling in the region of the Bahamas and up to Hispaniola.[31]

Jean Andrews in her book *The Pepper Trail* assumes that the chili, either domesticated or wild, was brought to Hispaniola by them around the same time since it was already a part of their diet.[32] While dispersal by birds before human migration is a possibility, Ridley, the English botanist who documented the dispersal of plants by birds in the 1930s, suggests that the sea and shore birds of the Caribbean did not eat chilies. He discusses the dispersal of Capsicum mainly by three birds, *Zenaida maculate*, *Maccopygia rufipennis* and *M.ruficeps*.[33] Another theory is that the existence of trade and cultural exchange between the Andes and Greater Antilles not too long prior to 1492 distributed the chilies. Similarities in rituals, artifacts, building technologies and cultivation including that of the chili pepper provide evidence of these exchanges.[34]

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[31] Keegan, William F., and Carlson, Lisabeth A. *Talking Taino Caribbean Natural History from a Native Perspective.* Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010.pg.3-5.

[32] Andrews, Jean. *The Pepper Trail History & Recipes from around the World*. Denton, TX: University of North Texas Press, 1999.pg 5-6.

[33] Ridley, Henry Nicholas. *The Dispersal of Plants throughout the World.* Ashford, Kent: L. Reeve &, 1930.pg 397, 503.

[34] Rouse, Irving. *The Tainos: Rise & Decline of the People Who Greeted Columbus*. New Haven: Yale University Press, 1992.

Image 17 Earliest map of Hispaniola as a jungle and temporary structures.

Source: Ramusio, Giovanni. Delle Navigationi Et Viaggi. In Venetia: Appresso I Givnti, 1606.

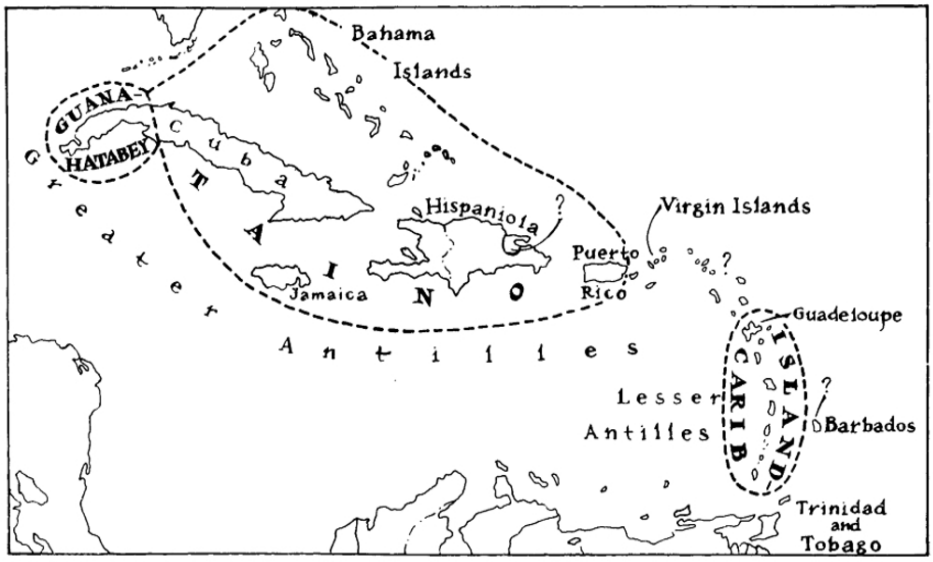

Image 18 The Taino peoples and the Caribs.

Source: Rouse, Irving. The Tainos : Rise & Decline of the People Who Greeted Columbus.

JSTOR EBA. New Haven: Yale University Press, 1992.pg 44.

This migratory history of humans, bird and the chili pepper establishes the intrinsic connection between the three as naturalized and as native to the place. At the time of Columbus' landing in Hispaniola in 1492, the peoples of the Greater Antilles were agricultural people. Archaeological and ethnographic accounts suggest that they were a sedentary society who practiced hunting, fishing and intensive cultivation methods in two ways. First, various plants of immediate use were planted around houses in "house gardens" (*guada*). The second method, known as *conuco,* occupied areas of the forest that were cut and burned and then planted with a variety of crops. Both these forms of cultivation were forms of swidden agriculture, like that of their ancestors. (Image 19) These were located a short distance away from the main village.[35]

Image 19 La Mañiere Et Facon De Jardiner Et Planter Des Yndiens (The Manner and Style of Gardening and Planting of the Indians),ca.1586.

"The Indian making his garden sows several kinds of seeds for his food to make it appear that he is working hard."

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

[35] Keegan, William F., and Carlson, Lisabeth A. *Talking Taino Caribbean Natural History from a Native Perspective*. Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010.pg.71

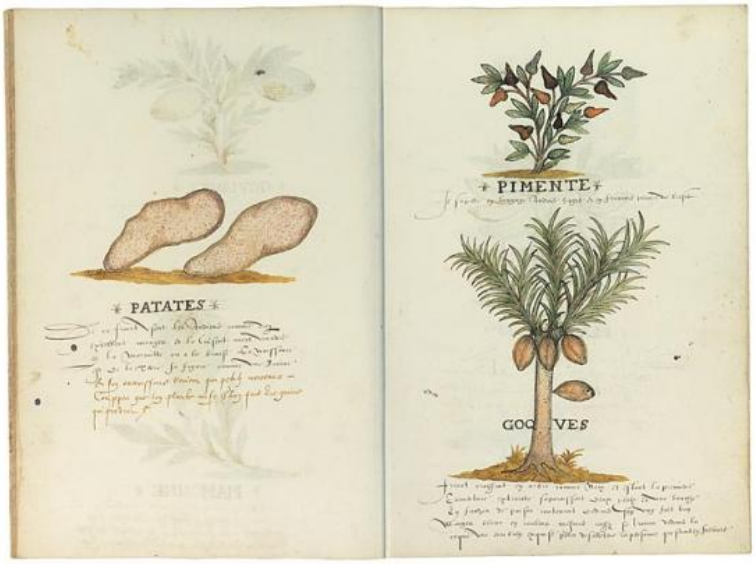

Image 20 Patates (Sweet Potato), Pimente (Pimento/chili), Coqves (Coconut Tree) ca.1586.
" *It is called in the language of the Indians "Hagis" and "poivre de Bresil" in French.*"

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

Image 21 Swidden Cultivation of the Taino.

Source: Harris, David R. "The Ecology of Swidden Cultivation in the Upper Orinoco Rain Forest, Venezuela." Ekistics 34, no. 202 (1972): 150-54. http://www.jstor.org/stable/43618019.

They cultivated crops such as arrowroot, sweet potatoes, pineapple, avocado, maize, various fruit trees and root crops such as yautía and leren, calabashes or gourds, and cotton.[36] Cassava or yuca was the staple and was subject to intensive cultivation. They maintained these multiple croplands under a community land holding system. They were organized into chiefdoms known as *cacicazgos* each of which had a marked territory, with a system of chiefs known as caciques and a ruler. The *caciques* were responsible for the organization of trade and labor and their subordinate class, the *nitanos* who were the warrior and the noblemen, assisted them. They organized villages into regional polities who competed with one another for resources. Each village had about 500 people and each house was inhabited by 30-40 members of a single family. Round, conically roofed dwellings were known as *caneys*.[37] The communal land holding system and the chiefdom system of power lent the settlement a radial layout with houses around a central plaza and a chief's house known as the *bohio*.(Image 22)

It is important to note that sources of socio-political organization of the Taino are mostly colonial accounts and the social stratification was much more complex than stated above. To say that the structure of power in place, the distribution of wealth and the harvesting economy of the Taino was in stark contrast to the European structure of societies would be an understatement. In order to go beyond the trope of differences between 'culture' and to unearth a meaningful

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[36] Anderson-Córdova, Karen Frances. *Surviving Spanish Conquest : Indian Fight, Flight, and Cultural Transformation in Hispaniola and Puerto Rico*. Caribbean Archaeology and Ethnohistory. Tuscaloosa, Alabama: University of Alabama Press, 2017.pp 5

[37] Lovén, Sven. *Origins of the Tainan Culture, West Indies.* University of Alabama Press Pbk. ed. Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010.Pg.339.

descriptive pattern of the chili story, it is imperative to examine the ephemeral space and the processes that the chili occupied on these islands.

Everything was communally owned other than the spaces of the house, an individual orchard contiguous to the house, and beyond the house of the cultivated field assigned to him by the cacique for the production of food enough for the consumption of the family. This open space consisted of an external shed where food was prepared (Image 21 and 22) and consumed. They had no cultivated plant which could be bartered for other wares.[38] Instead, necklaces of shells and metal were exchanged sometimes for other materials. Food was however, produced as a community by cultivation, fishing and hunting of reptiles, birds and small animals.

Image 22 Taino Architecture.[From top] Hamaka/hammock, Caney and Bohio.

Source: Fernández De Oviedo Y Valdés, G., Amador De Los Rios, and Real Academia De La Historia. Historia General Y Natural De Las Indias, Islas Y Tierrafirme Del Mar Océano. Impr. De La Real Academia De La Historia, 1851.764

[38]Lovén, Sven. *Origins of the Tainan Culture, West Indies*. University of Alabama Press Pbk. ed. Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010. Pg.535-535.

Although the Taino seem to have achieved a significant level of specialization in agriculture and the processing of food, Stevens-Arroyo explains that it was not the intensive agriculture, or the political organization found within the Inca empire. Therefore, the economy of the Taino may not be considered as agricultural, rather it is considered to be at a transitional stage between simple harvesting and agriculture which Antonio Arroyo calls 'harvesting economy' for the reason that only cassava was subject to intensive cultivation and other diversity of crops were subject to simple harvesting and gathering from the wild, like the aji or chili. [39] The food resources varied from island to island, making it possible for the natives to develop extensive trading networks. In this way, the Taíno social and political complexity of food relied upon a system of agriculture supplemented with abundant wild estuarine resources and interregional trade.

The Taino followed swidden cultivation, insisted on communal ways of living socially and spatially, and on fluidity between the village and the jungle, land and the sea, built and the natural environment. By contrast, the medieval European monarchy with their strict economic and social stratification and rectangular plots of a single crop, emphasized state control. Although this may seem to be an oversimplification of two very complex epistemic paradigms, the key thing to note is that the intersection of the two can be read through the chili pepper in colonial texts. How the intricate relationship between the Taino and the chili is perceived and translated into ideas in the mind and then eventually forms in space can be analyzed in descriptions contained in colonial texts. The chili pepper is surprisingly well-documented in Columbus' journal and in other chronicles. In part, this attention to the novel spice was because of the reigning importance of the

[39] Stevens Arroyo, Antonio M. *Cave of the Jagua : The Mythological World of the Taínos.* 2nd Ed.]. ed. Scranton [Pa.]: University of Scranton Press, 2006.pg.44-51.

black pepper that Columbus was looking for. In spite of its similarities and dissimilarities with the black pepper like taste, potential market value, ease of growth, the chili pepper came to occupy a place uninhibited by the black pepper.

Columbus' biography, *The Life of the Admiral* written by his son Hernando Colon, locates the context in which the chili was seen and how it grew in his first voyage in 1492:

> "In the bay much fine cotton could be seen, and a long fruit rounded at one end which is their pepper. This is very hot. Near the beach in shallow water a great deal of that weed was growing which they found floating on the ocean sea. They had been right in supposing that it grew near land, was uprooted when ripe and carried a great distance by the sea currents."[40]

The chronicles of Peter Martyr in 1511 records another description of the chili sighted on Hispaniola a few years later:

> *"*Something may be said about the pepper gathered in the islands and on the continent. I mentioned pepper as growing in the forests; but it is not pepper, though it has the same strength and the flavor, and is just as much esteemed. The natives call it axi/aji. It grows taller than a poppy, and the grains are gathered from this bush just as from a juniper or pine, although they are not so large. There are two varieties of these grains, five in the row; one of which is half a finger in length, and its taste is sharper and more biting than that of pepper; the other is round and has

[40] Cohen, J. M. *The Four Voyages of Christopher Columbus; Being His Own Log-book, Letters and Dispatches with Connecting Narrative Drawn from the Life of the Admiral by His Son Hernando Colon and Other Contemporary Historians.* Penguin Classics ; L217. Harmondsworth: Penguin, 1969.pg 100

no more taste than pepper. Its bark, skin, and kernel have a hot flavour, but not very sharp. The third grain does not sting the tongue but is aromatic. When it is used there is no need of Caucasian pepper. The sweet pepper is called boniatiim and the hot pepper is called carribe, meaning sharp and strong; for this same reason the cannibals are called Caribs, because they are strong."[41]

Image 23 Hagis Roges, Hagis Ianne, Hagis Vert (Red Pepper, Yellow Pepper, Green Pepper) ca. 1586

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

They also encountered not just one, but, at least three varieties of the chili of different levels of pungency, as recorded in different settings- at sea, as a weed collected from the jungle, like rose bushes around houses and most importantly in the spatial chaos of swidden agriculture.

[41] Anghiera, Pietro Martire D', and Macnutt, Francis Augustus. *De Orbe Novo: The Eight Decades of Peter Martyr D'Anghera.* G.P. Putnam's Sons, 1912.pg 370.

> "Hagis means pepper in the language of the Indians and there are three kinds. However, the smallest, which is green, is the strongest and its leaf is very good when added to soup and salad. The Indians mash this pepper with salt and put it in the husk of millet and when they go far away where they cannot find fresh water to drink, they east as much as possible of this pepper en route and are not thirsty, feeling always fresh in spite of the very intense heat and their being nude."[42]

While this last observation of associating the enemy with the taste of the chili may seem facile, there is much to unpack here as a link between the experience and the symbolic meaning of consuming the chili and the biology of the plant that is responsible for it. For the Taino the chili can be read as equivalent to the act of consuming the enemy. The chili contains capsaicin that burns humans as a defense mechanism. However, this characteristic generates a biological paradox in the human body with the release of endorphins. This is attested by the absence of taste receptors for 'spicy'. While the physiological process of the heat sensation produced by the chili makes for a better discussion in the following chapter, it is imperative to discussion of the production of the other and its concomitant desire here. While spatial marginality of the chili plants' location such as in the forests might have also played a role in the othering, its association with the Caribs, who are marginal and in opposition to the Taino ethnocentrism arises out of this biologically 'unfamiliar' taste sensation. This unfamiliarity, harshness and the very strong pungency was

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[42] *Histoire naturelle des Indes : the Drake manuscript in* the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

equated with the hostility and fear of the Tainos with the Caribs. This fear of the Caribs is also written in the accounts as associated with their cannibalism.

What this means is, the non-human plant while ensuring its survival by dissuading humans, in turn makes for itself an ecological niche through the cultural niche that is forged by humans. This cycle of unexpected positive feedback loop where the chili is, in the minds of the Taino an act of triumph, in the European imagination as a parallel to the black pepper, rather than just an enhancer of taste is exactly what Bateson refers to when he invokes Korzybskis' words : *the map is not the territory, and the name is not the thing named.*[43] There is a transformation, in the mind and in the body, a coding and a translation between the chili, experience of consuming it, watching its consumption, reflecting and writing on it.

More accounts of the Taino diet not only highlight the importance of the chili in the Taino food but also reinforce European assumptions. During his second voyage in 1493 Columbus referred to the chili as being eaten by the Islanders as frequently as the Spanish ate apples.

> "*In those islands there are also bushes like rose bushes which make a fruit as long as cinnamon full of small grains as biting as pepper; those Caribs and the Indians eat that fruit as we eat apples.*"[44](Image 24)

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[43] Bateson, Gregory. *Mind and Nature: A Necessary Unity*. 1st ed. New York: Dutton, 1979. Pg 30-32.

[44] Andrews, Jean. *The Pepper Trail History & Recipes from around the World*. Denton, TX: University of North Texas Press, 1999.pg 10.

Image 24 Illustration of Columbus and his description of the chili. "In those islands there are also bushes like rose bushes which make a fruit as long as cinnamon full of small grains as biting as pepper; those Caribs and the Indians eat that fruit as we eat apples."

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10

Columbus describes the Taino diet as "*bread made of the roots of vegetable which is half way between a plant ad a tree….they use as seasoning a spice called agi with which they also season their fish and birds….They eat any snakes, lizards or spiders and worms that they find on the ground, and their habits seem to be more beastial than those of any beast in the world.*"[45]

The bread he is referring to here is the manioc or cassava which is a tuber crop. Half of their diet came from plants with the manioc or cassava being the staple. Manioc tubers required

[45] Ibid.pg155.

special processing because they contain poisonous hydrocyanic acid. Sweet manioc has very small quantities of the poison and so can be prepared like sweet potato— peeled and boiled. Bitter manioc, however, requires a more elaborate procedure which involves peeling, grinding or mashing, and squeezing the mash in a basket tube to remove the poisonous juices. The Taino were well versed in the complex processes. After the juice is removed the paste is dried and sieved for use as flour. Water was added to the flour to make the pancake- like cassava bread, which is cooked on a flat clay griddle.[46]

The *agi* in Colombus' accounts is the chili pepper as known by the Tainos. The non-poisonous juice, which is in the form a vinegar, together with chili pepper were the main ingredients of a soup known as the pepper pot. The significance of the pepper pot lies in the nutritional value recovered from the cassava and its ability to be preserved for a longer time in the presence of the pepper. Squash, beans and peanuts were added to it and boiled with meat, fish, and cassava juice. Pepper pots containing these ingredients were kept on the fire to provide food as needed. It also made the consumption of the large hard cassava bread easier, which was dipped into the pepper pot to soften.[47&48] It was a variation of this consumption of bread and chili pepper that Peter Martyr d'Anghiera also refers to in his accounts," *The islanders crush it (chili pepper) and spread it on their bread, which they soak in water before eating."*

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[46] Keegan, William F., and Carlson, Lisabeth A. *Talking Taino Caribbean Natural History from a Native Perspective*. Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010.pg.4.

[47] Rouse, Irving. *The Tainos : Rise & Decline of the People Who Greeted Columbus*. JSTOR EBA. New Haven: Yale University Press, 1992.pg.12.

[48] Lovén, Sven. *Origins of the Tainan Culture, West Indies.* University of Alabama Press Pbk. ed. Caribbean Archaeology and Ethnohistory. Tuscaloosa: University of Alabama Press, 2010.pg 366.

‘Weed’, ‘forest’, ’cannibal’, ‘fierce’, ‘beastial’, are some associations that the early Spanish colonizers forged of the chili and its usage in Taino culture. Furthermore, the lack of an order in farms(the Europeans were not aware of swidden), the fluidity in the communal way of living, absence of a cultivated plant that could be bartered and an external open shed where food was prepared, constructed a *habitus* of the Taino for the Spanish that was very distinct from their own, as discussed above. However, what is worth noting is the image 23 above was published in 1999 which is not a colonial source. Jean Andrews, a rigorous scholar of the *capsicum* genus and its history, in her book ‘The pepper trail’ portrays the hypothetical colonial contact with the Taino and the chili pepper. Two critical points are to be made in analyzing the illustration. Firstly, the image of Columbus dressed as a knight and the Taino as the essentialized people of the forest reinforces the colonial trope of the civilized and the uncivilized. The chili pepper in between the two images stands to convey the intersection and the tacit exchange that is forged between the two; chili as an agent of colonial exchange and an instrument of othering. Secondly, while this contemporary representation of colonial texts is debatable, it indicates the othering of the plant itself, the plant itself as a colonial subject. It must also be mentioned here that even in the 1900s, the general animosity and apprehension towards swidden agriculture was largely due to its imperviousness to state control and extraction, which gave it connotations of the wild. Thus, many of these ideas constructed around tropes of colonialism carried well through 1999.

Other spatial forms supported the Taino’s elaborate usage of the chili in diet, such as the barbeque and the grill. To keep food and meat from spoiling in the tropical climate, they practiced the basic technique of drying/smoking. The chili seems to have been a preservative as well a taste enhancer in their diet. Fish and meat rubbed with *aji* were placed on a wooden lattice and smoked

over an open fire. The grill was known as *Barbacoa*, (Image 25) from which we get the word barbeque.

Image 25 Barbacoa Smoking/drying

Source: Rouse, Irving. The Tainos : Rise & Decline of the People Who Greeted Columbus. JSTOR EBA. New Haven: Yale University Press, 1992.pg.10

One argument that could be made here is that *alienation* was key to making humans and non-humans into resources for investment, as Anna Tsing contends in the case of the matsutake mushroom. She argues that imbuing both things and people with alienation, that is the ability to stand alone, as if entanglements of the living did not matter, is key in the making of mobile assets. This particular alienation did not occur in the case of the chili unlike the black pepper. In the case of the chili pepper, multi-species living spaces remained in place.[49] Although, there was a brief attempt in removing it from its life world, the logic of aesthetic associated with the chili and the

[49] Tsing, Anna Lowenhaupt. *The Mushroom at the End of the World : On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press, 2015.pg 5-8.

curiosity, empathy and recognition could not reduce it to a commodity. Although they saw the possibility of the chili as a precious commodity akin to the black pepper as Martyr and Columbus describe, the chili pepper seems to have resisted alienation and instead resorted to translation, which is discussed in the next chapter. How it resisted alienation has to do with the colonial production of the exotic other and the diseased other. Usually cultural translations are evident only relative to another but that does not mean it is binary – neither the original nor the translation, neither the language of the original nor the language of the translation are fixed and persisting categories. Both spatially and biologically, the chili didn't have an essential quality and were constantly transformed in space, time and mind. The tacit exchange between the Taino, the early colonizers and the chili determined early colonial relationships were the Taino and the non-human chili pepper were equal parts colonial subjects. However, architecture, as we shall see, reflects and physically manifests this translation in space and time.

CHAPTER 4 EUROPEAN MODERNITY, HUNGARY-OTTOMAN FRONTIER AND THE SILENT DIPLOMAT

> *"Finally, he entered the court, with much desire and contest of all, on April 3, a year after he left it. He presented to the kings the gold and things that he brought from the other world; and they and those who were ahead were astonished to see that everything except gold was new like the land where it was born..... They tasted the ají (1), a spice from the Indians, which burned their tongues, and the sweet potatoes, which are sweet roots, and the turkeys, which are better than turkeys and chickens.*"

Lopez de Gomara, the Spanish historian wrote of Columbus' return to the Spanish court (Image 26) after his first voyage and describes the chili as burning their tongues.[50] In addition to the awe and wonder, the Spanish court is taken by the possibilities of renewing their role in and competing in the pepper trade. Therefore, on his second voyage, Columbus is accompanied by the Spanish physician Diego Álvarez Chanca who documents nurseries of chili or *almacigas* in the Antilles. Like Columbus, he was of the opinion that goods from America would be profitable back in Spain. Even the state was convinced it would obviate the expenditure on the expensive pepper from India, which was outside of Spanish control. For this reason, he established a factory in Seville for the 'commercialization of American species. It arrived in Portugal at the same time it did in Spain. However, it caused alarm when people began cultivating it threatening the Portuguese monopoly over the spice trade when the market for spices was already facing a crisis due to

[50] López De Gómara, Francisco, and Gurría Lacroix, Jorge. *Historia General De Las Indias Y Vida De Hernán Cortés. Biblioteca Ayacucho (Caracas, Venezuela)* ; 64-65. Caracas, Venezuela: Biblioteca Ayacucho, 1979.pg.46.

reduction in demand. Such was the brief and practically non-existent history of the chili as a commodity and the economic and political resistance against it.

Columbus' return from the Americas did fuel the possibility of Spain's renewed role in the pepper trade. However, this was because of the gold from the Americas and had little to do with the chili, which was one among the many trinkets of exoticism. As Peter Matyr lamented, "*whatever was difficult to obtain was still thought to be better.*" The life-world of the chili crossed the Atlantic ocean and became essentialized as part of the exotic and the diseased other, instead of a familiar pepper akin to the black pepper.

Image 26 Columbus' return to the Spanish court in 1494.

Source: Eugene Delacroix painting "The Return of Christopher Columbus", 1839.

Familiarity, empathy and recognition in the growing field of botany translated the chili into a poisonous plant because the genus *capsicum* belongs to the Soalancea or nightshades, a family of flowering plants relative of the poisonous nightshade, all of which were considered deadly and

poisonous. Another reason was the fear of New world foods as carrier of diseases. Sixteenth-century Europeans consistently claimed that direct experience demonstrated that the indigenous diet was unhealthy and dangerous (at least for Europeans). The importance of diet, alongside climate, in differentiating Spaniards from Americans was explained with great clarity by Diego Andrés Rocha in his 1681 treatise on the "origin of the Indians." Thus, **'**Race' here functioned as a concept of indigestion. [51]

Curiosities and intellectual exchanges

In the midst of these negations based on fear of poisoning and overt racism, the chili spread to Western Europe and then Central Europe as a rare plant that was exchanged between botanists and collectors as descriptions in letters and enclosed samples. The early modernity that was beginning to dawn in the history of science made for several investigations of these newly arrived plants, their documentation and representation. (Images 27, 28, 29) The question of how to classify the capsicum and thereafter, how it was understood and utilized formed the commencement of its organization in space.

However, these scientific endeavors were not purely objective. The strong rhetoric of the exotic and aesthetics of the chili pepper served as a catalyst to be exchanged among collectors and affluent people. One example is Fra Gregorio's herbarium, where, according to him, the chili was one of the most beautiful plant. Fra Gregorio de Reggio (was an Italian nobleman and a field botanist who possessed a personal herbarium in the garden of his monastery at Bologna in Italy, among which were 25 different kinds of capsicum. His herbarium was known as the '*giardino di*

[51] Earle, Rebecca. *"If You Eat Their Food...": Diets and Bodies in Early Colonial Spanish America.* The American Historical Review 115, no. 3 (2010): 688-713.

cella' or the cell garden. He writes how the plant differs only in the fruits and that they exhibited "*a great variety of slique*" and "*created a beautiful harmony*." In fact, he was so interested in the chili that he had them drawn from life and wrote a treatise on their appearance, varieties, best ways of growing and how to prepare them. He exchanged information and naturalia including dried plants with other naturalists in Italy and Antwerp.[52]

Image 27 Capsicum annuum: (A) Oellinger 1553, Ms. 2362 folio 289. Source: (A) Erlangen, University Library (B) Aldrovandi, Il Teatro della Natura, vol. 6-1, folio 48, 16th century (2d half). Note three types of fruits.; Copyright: (Bologna, University Library.)

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 67.

[52] Florike Egmond. *The World of Carolus Clusius: Natural History in the Making, 1550-1610.* Perspectives in Economic and Social History. Taylor and Francis, 2015.pg.60-62

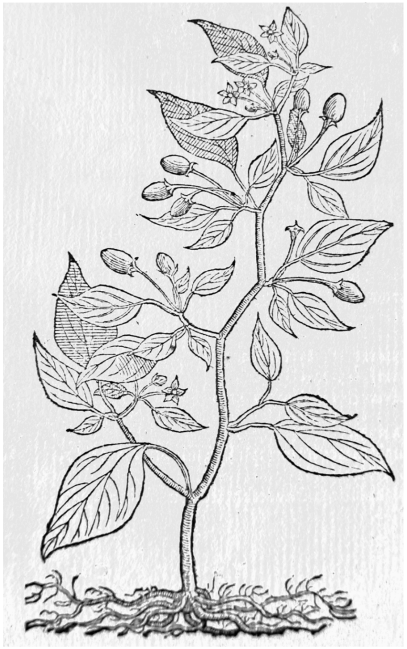

Image 28 Putative Capsicum pubescens or C. baccatum. Source: Lobel 1576 b. Courtesy: Muse´e Requien, Avignon, France.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 68.

Image 29 Capsicum annuum L. [as Piper Indicum maximum longum] Basilius Bessler, Hortus Eystettensis, vol. 3: Primus ordo collectarum plantarum autumnalium, t. 326, (1620) [B. Besler]

Source: https://www.bl.uk/collection-items/hortus-eystettensis accessed on 27th May, 2019.

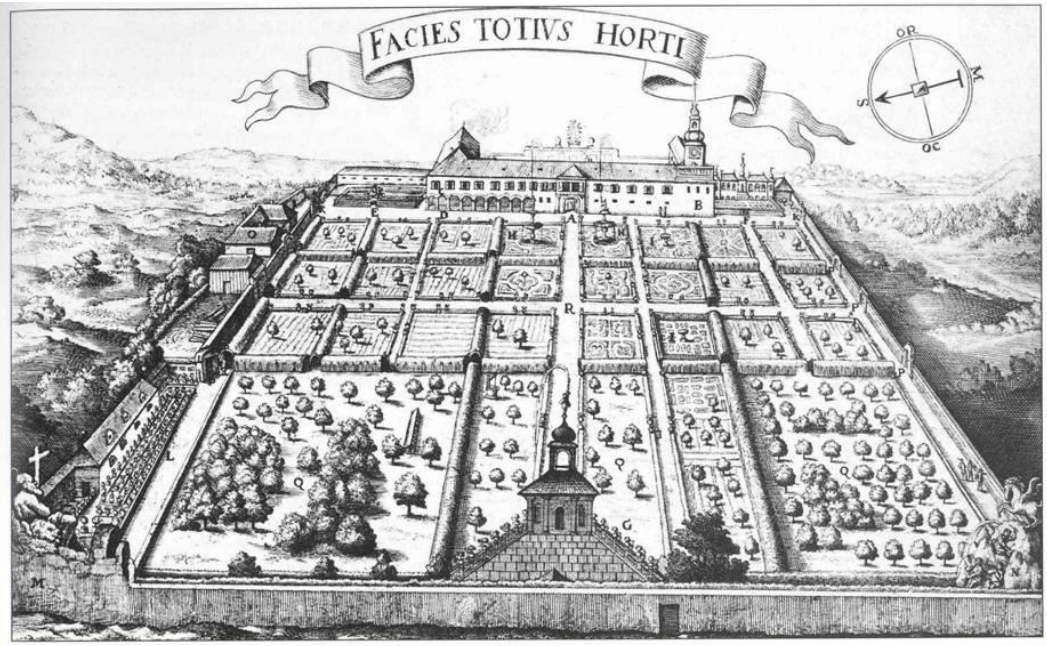

Image 30 György Lippay's Pozsony Gardens 166-69, outskirts of Esztergom(present-day Bratislava)

Source: https://felvidek.ma/2012/01/magyar-szlovak-egyuttmukodessel-ujjaeledhet-a-posoni-kert-genbankok-elodje/ accessed on 21st April, 2019.

Fueled by these exchanges of botanical novelty, scientific thinking and the dissemination of knowledge, the chili began to appear in large institutionalized spaces in addition to personal gardens. These were vast landscapes of novel plants and flowers in estates and in the botanic gardens. Several herbals and publications of the period documented the chili under different names and described these landscapes like Pozsony botanic gardens (of György Lippay and Carolus Clusius' Hortus Botanicus among many others)(Image 30).

In 1590, the University of Leiden obtained about 1500 sqm of land to lay out a hortus medicus for the instruction of medical students and was on the lookout for someone to head the garden and to supply a collection of plants. They chose Carolus Clusius. In 1594, the garden was ready with over 1500 plants in a 39.9 m X 30.9 m area which was divided into four parts or quadrae.

Each quadrae contained 16 areolae or beds, except for the second quadra, which had 12 beds, which made 60 beds in total. Each plant had a place in the garden and the complete list was published as the *Index Stirpium* in the same year.[53]

Before, previously coming to Leiden, Carolus Clusius was given plants five varieties of the chili for scientific purposes and inevitably it appeared in the Hortus Botanicus, not in group of spices but as a vegetable and a fruit because of its biological characteristics. While the university aimed to establish a hortus medicus, a collection of medicinal plants, the presence of novelties and ornamental plants, like the chili pepper, conjured up the earliest places of the botanical garden. The meaning of a garden expanded as a space of combined source of beauty, healing, food and knowledge on nature, a locus of observation and experiment as much as a living collection. Even as it was being recognized as an edible and being used as a condiment in some parts, it continued its journey as an ornamental plant. Clusius also counselled his friend Boldizsar Batthyany in Germany on planting paprika in beds in his leisure garden.[54]

Juxtaposing the swidden agriculture of the Taino against the formal botanical garden developed out of the rigorous classification system, makes clear the epistemic violence of modernity that was subjected to not just how living non-human bodies were othered and objectified but also in how they were classified. This classification and

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[53] Koning, J. de. *Drawn After Nature: The Complete Botanical Watercolours of the 16th-Century Libri Picturati.* Zeist: KNNV, 2008.pg.55-57.

[54] Halikowski Smith, Stefan. *In the Shadow of a Pepper-centric Historiography: Understanding the Global Diffusion of Capsicums in the Sixteenth and Seventeenth Centuries*. Journal of Ethnopharmacology 167 (2015): pg.67.

chopping up of the fluid life ways and relationship that the chili pepper had was manifested in space as formal layouts for gardens.

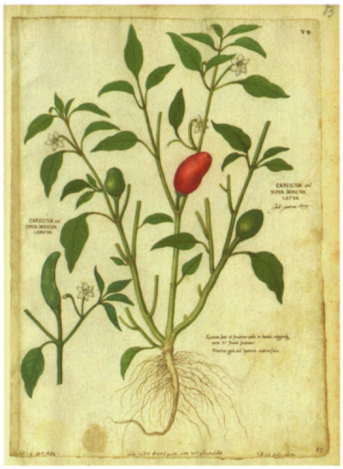

Image 31 Chili pepper illustrated in the Index Stirpium as appeared in the Hortus Botanicus

Source: Koning, J. de. Drawn After Nature: The Complete Botanical Watercolours of the 16th-Century Libri Picturati. Zeist: KNNV, 2008.pg.57.

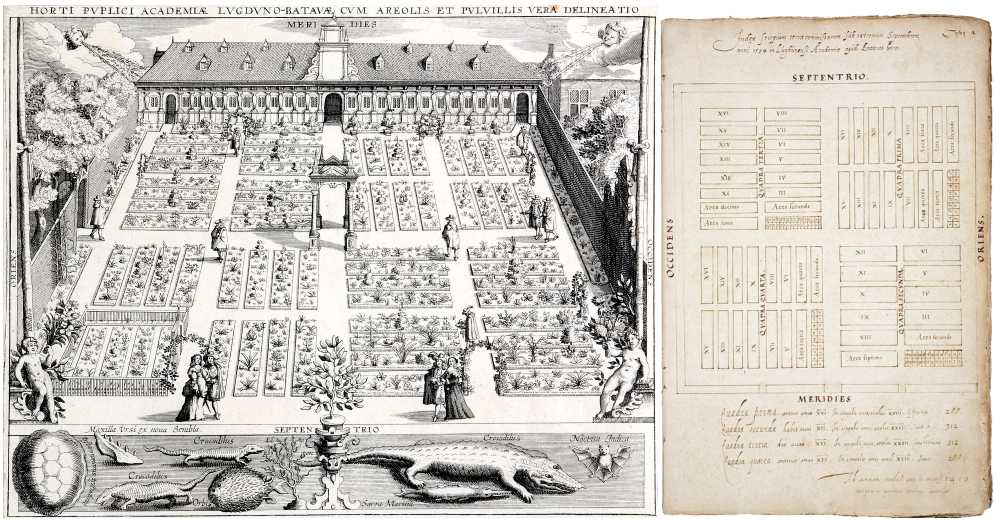

Image 32 Hortus Botanicus, Leiden

Source: https://upload.wikimedia.org/wikipedia/commons/3/30/Hortus_botanicus_leiden.gif

"*In this veritable grove there, besides, 780 different small and large clay vessels, painted like marble, brown, green or multicolored. There are altogether 24 large and three small plots, each of them full of foreign plants, flowers, herbs and other rarities..*"

By 1669, the chili plant was among the foreign plants in Pozsony's garden in Bratislava and occupied a place among lilies, roses, cyclamens and tulips.[55] Apart from being an ornament plant in a live collection, representations of the chili also crystallized in facades of cathedrals. The new bronze doors built for the Pisa Cathedral in 1601(Image 33) were adorned with these new plants among which was the chili pepper.[56] The door was carved by many Florentine artists. By early 1600s the chili had changed hands between not just people of science but also artists and architects.

`Image 33 Medium-size capsicum peppers (C. annuum): on bronze doors of Pisa cathedral, 1601. J. Janick.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 67.

[55] Halász, Zoltán. *Hungarian Paptrika through the Ages*. Budapest: Corvina Press, 1963.pg.16-18.

[56] Janick, Jules. *Horticultural Reviews. Volume 35. Horticultural Reviews* ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 67

Image 34 Earliest illustration of the chili mistakenly identified as siliqvastrum/cardamom, 1542

Source: Leonhart Fuchs' De historia stirpium commentarii insignes (Notable commentaries on the history of plants) published in 1542

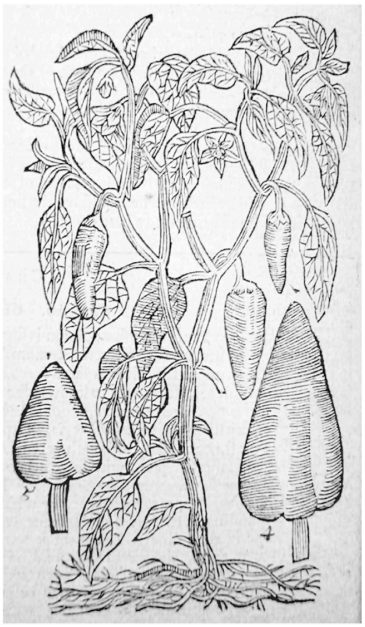

Image 35 (B) from the herbal Theatrum Botanicum. Source: Parkinson 1640. Courtesy: Muse´e Requien, Avignon, France.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 68.

Thus, it was as a curio among collectors and an object of scientific curiosity among intellectuals that the chili spatialized, among lilies, cyclamens and tulips in the pleasure gardens and among the hoard of botanical novelties in *hortus botanicus* or the botanical gardens of Northern and central Europe. It was however, not in markets nor was it taxed because it was considered a 'garden crop'. For this reason, records of the chili from this period are largely from personal accounts. It changed hands among botanists, monks and collectors beyond political and cultural boundaries expanding its geographical habitat. Although the driving force was scientific in nature, the space it occupied in different forms was through translations- as art and representations in books, as an exotic among tulips or as a vegetable/fruit in Hortus Botanicus. We see that these translations and transformations took place relatively slower than the other processes because for one, it was between individuals and creation and dissemination of knowledge took time.

Image 36 The chili as an ornamental plant

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15.

Although, it remained in the gardens in most places and as potted plants in houses, Carolus Clusius documents seeing vast plantations of the chili pepper in Brunn, Moravia in 1585. He also mentions it being commonly used year-round as a substitute for the black pepper.

> "*This capsicum or Indian pepper is painstakingly grown in Castilia both by gardeners and by housewives. Instead of pepper it is used all the year round as a seasoning, either dried or in the form of the freshly picked green pods. It has several varities…I remember having seen, in 1585, vast plantations of it in the suburbs of Brünn, this famous town of Moravia, paprika means a considerable income for the gardeners, because it is commonly used by most people."*[57]

Leonhart Fuchs, a German botanist, was one of the firsts to illustrate and document the chili pepper in in 1543 (Image 34). Fuchs wrote of the chili pepper in the description,

" it is now found almost everywhere in Germany, planted in clay pots and earthen vessels….a few years ago it was unknown in Germany."

For his manuscript, he collected the chili pepper from Hungary and misidentified the chili as 'Siliqvastrvm' or siliquastrum meaning 'big pod' of cardamom from India. [58] Within the assemblage of these social and cultural negations or mistranslations were also objective errors in the identity of the chili due to its ambiguous place of origin. There was some truth in its region of origin as India.

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[57] Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.18-19.

[58] Meyer, Frederick G., Trueblood, Emily W. Emmart, Heller, John Lewis, and Fuchs, Leonhart. The Great Herbal of Leonhart Fuchs : De Historia Stirpium Commentarii Insignes, 1542 (notable Commentaries on the History of Plants). Stanford, Calif.: Stanford University Press, 1999.pp.124

In 1499, when the Portuguese established a trade route to India, they are said to have introduced a myriad of American goods there which were later cultivated by the early 1500s along the western coast of India. It was then, like the other spices, powdered and traded along the spice route to Eastern Europe, the stronghold of the Ottoman empire. The ambiguous and misconstrued origin of the chili not only placed it as a spice in his book but also easily translated to a spice within the spice route network. The familiarity of the origin place, India and of the path it took was crucial to the ready incorporation as one of the spices. Therefore, while the chili was slowly travelling from the west and north as a curio and as a thing of beauty through translation and negation, another wave of the chili pepper was sweeping in from the East and South rendering the unfamiliar familiar through imagined geographies of the East. And at the frontier of these two waves was the Hungary-Otttoman battleground.

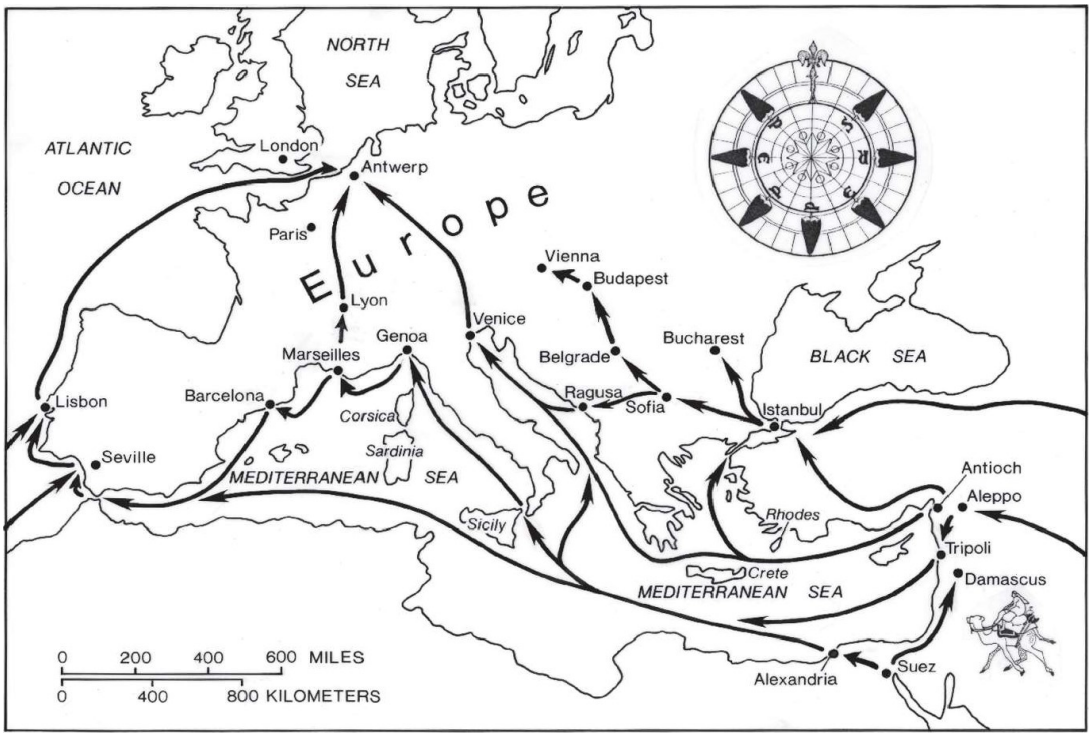

Image 37 Chili reaches the Ottomans through the Spice route.

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10

The Ottoman frontier

In 1527, a large part of Hungary came under the Ottoman control while the other part was under the Hungarian rule. As the Ottoman forces tried to sweep further westward, Hungary became a battleground for several years. (Image 38) By the second half of the 16th century, a line of scorched wilderness and dilapidated fortresses separated the two territories. However, as it happened the two camps forged strange friendships while challenging each other. Sometimes, after a duel, they would feast together. In doing so, the Ottoman warriors indulged themselves freely in the forbidden wine as is custom in Hungarian revelries while the Hungarians took to the aromatic and appetizing red chili. Although, the Turkish army did not succeed in expanding their territory westwards, the chili pepper however came to hold ground beyond the boundaries of the Ottoman empire.[59]

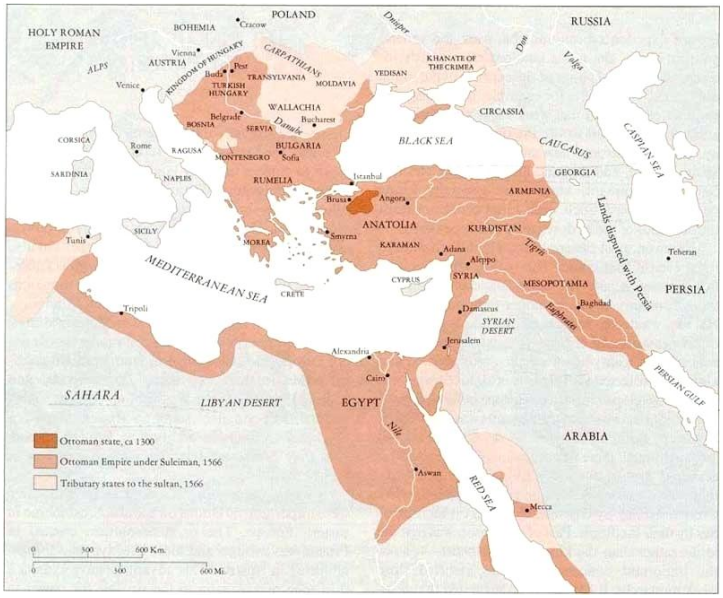

Image 38 Map of Hungary-Ottoman Frontier

Máté, Zsolt. "The Medieval Social Topography of Szeged." Periodica Polytechnica Architecture 40, no. 1 (2009): 29-35.

[59] Halász, Zoltán. *Hungarian Paprika through the Ages.* Budapest: Corvina Press, 1963.pg.22-23

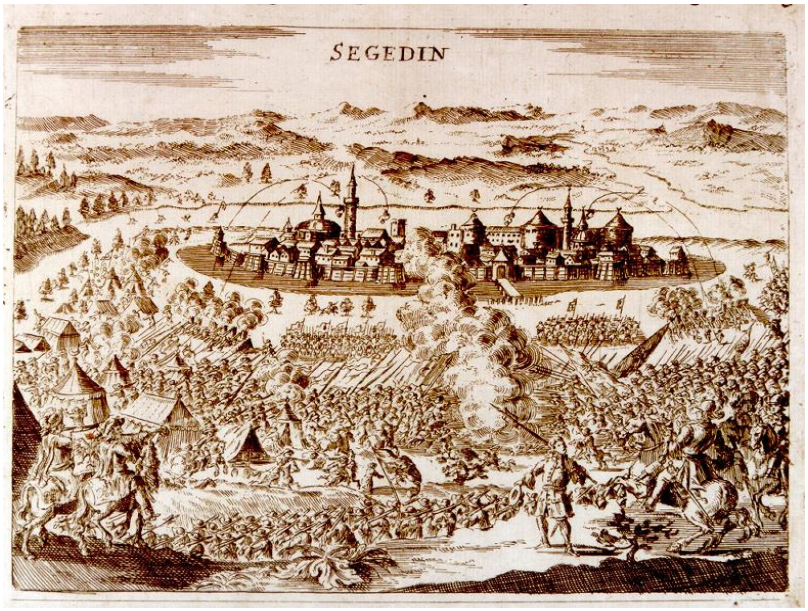

Image 39 Szeged as a battle ground

Source: https://www.awesomestories.com/asset/view/Szeged-Freed-of-Ottoman-Rule

Of the seven regional centers that existed before the Ottoman rule, three towns, Buda, Pecs and Szeged(Image 39), became Turkish frontier fortresses. In other words, these areas became zones of conflict.[60]Szeged in present day Hungary, at the confluence of the rivers Tisza and Maros, was at the time the center of carriage-building, ship-building and iron-craft industry. By the 14th century it grew into an important market-town and great fairs held here making it a center of economic and cultural exchange. The social topographic picture of Sezged in the 14th century was that of a large medieval peasant market town.[61] [62]

[60] Palffy, Geza. *The Impact of Ottoman Rule on Hungary.* Hungarian Studies Review 28, no. 1/2 (2001): pg 109-32.

[61] Ibib.pg 50-51.

[62] Máté, Zsolt. *The Medieval Social Topography of Szeged*. Periodica Polytechnica Architecture 40, no. 1 (2009): pg 29.

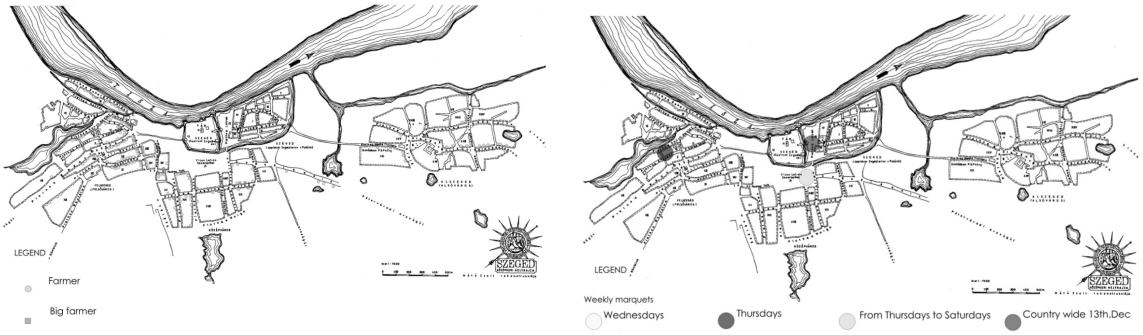

Image 40 Social topographic maps of Sezged, [left] showing farmer distribution, [right] showing market distribution between 1522-1546

Source: Máté, Zsolt. "The Medieval Social Topography of Szeged." Periodica Polytechnica Architecture 40, no. 1 (2009): 29-35.

It was also the battleground of the Christian armies and the Turks at the end of the 14th century and was taken over by the Ottomans in 1548. However, Szeged was able to convince the Ottoman government to grant immunity to the persons and merchants arriving at the fair of Szeged. The Szeged city council in turn tried to maintain cordial diplomatic relations with the Ottoman court by sending gifts. This enabled a free exchange of craftsmanship and skills between artisans and traders of Szeged and the Turks to learn carpet weaving, preparing *saffian* along with paprika gardening among the farmers and eventually the making of the Szeged fish-soup, whose main ingredients are the Tisza fish and Szeged paprika, along the river in the Upper Town. However, the paprika used in the fish soup did not originate from the Upper Town but came from the southern end, known as the Lower Town, which remains to this day as the most important place for the cultivation of the paprika.

With the Ottoman rule, the Hungarian urban settlement pattern was restructured. Peasants of the Great plain which was gutted, moved to Szeged, which was a relatively safe place, and settled in the Lower Town district which became a kind of refugee for Hungarians during the Ottoman rule. Here, monasteries of Franciscan monks had gardens which covered an area of over

fifteen acres where paprika was already grown by the monks for its medicinal value and for scientific purposes, like in rest of Europe.[63] The facilitation of cultural exchange to maintain desirable diplomatic relationship with the Ottoman court , led to the creation of a new livelihood for the refugee farmers in the Lower Town which was surrounded by vast fertile land that the peasantry tilled and eventually grew paprika.

The cultivation of paprika gave rise to a new culture replete with customs, traditions and spatial transformation. It was then taken up by the herdsmen to season meat, cattle farming being one of the primary occupations of the town, followed by the fishermen and finally the Hungarian peasantry themselves who consumed it with great gusto to the point of addiction. A new division of labor became prevalent in the paprika growing community. The farmer- gardeners who cultivated the paprika only carried out the agricultural activities till the drying and another group of people, the ‘ paprika-people’, who were in line of tradesmen invested in the processing and selling of the paprika. The reason for this is the labor-intensive process of paprika cultivation. Although the chili was collected from the wild in the Caribbean and could be grown easily in various gardens of Europe, paprika of a particular character was developed to be eaten. The biology of the chili pepper plant is such that it adapts to varying factors of climate by modifications to its pungency, shape, size, etc. This meant that producing a variety with particular characteristics required careful regulated conditions which was a labor-intensive process.

After harvest, the farmer took his crop home and suspended the paprika in the form of garlands in the porches(Image 41). Houses of the Sezged paprika-growers began to be built facing

[63] Halász, Zoltán. *Hungarian Paprika through the Ages.* Budapest: Corvina Press, 1963.pg.56-57.

south or east to achieve maximum sunlight to dry the paprika.[64] This also manifested in façade representations of the sun to ensure good weather and growing season. Peasant house facades were adorned with abstract carvings of the sun for the same reason(Image 42). The chili motif became increasingly used in decorations not just on walls but also in the everyday objects. Other instruments and tools came into use like the hand mill or the *kulu* which was a hemp-processing tool, which was adapted to process the paprika(Image 43). The chili now translated to a cultural capital that became an integral part of Hungary's political and social identity.

Image 41 Sun-drying paprika in the porches.

Source: https://www.cnn.com/travel/article/paprika-hungary/index.html accessed on 11th April, 2019.

Image 42 Sun motif gables

Source: https://www.cnn.com/travel/article/paprika-hungary/index.html accessed on 19th April, 2019.

[64] Ibid.pg 78.

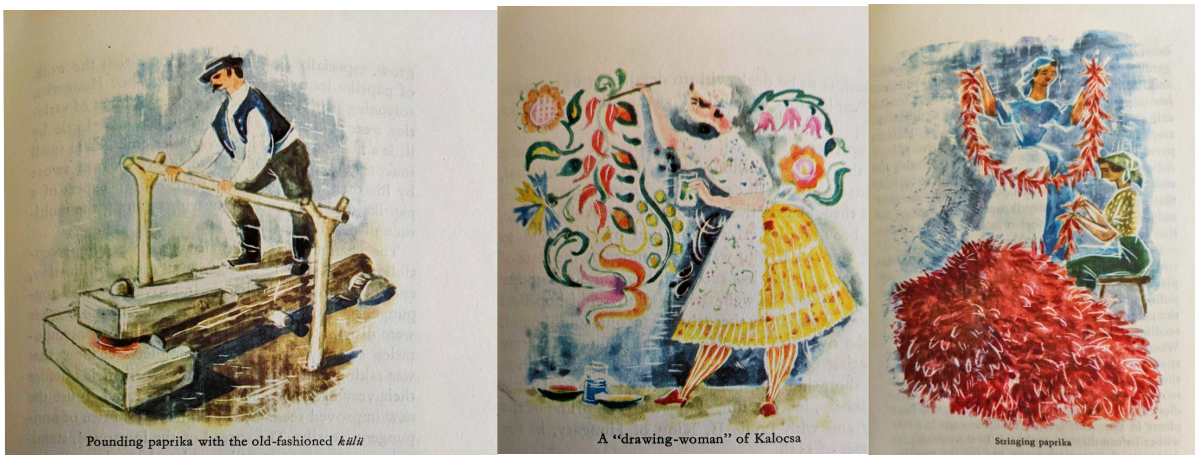

Image 43 Kulu hand mill, Stringing paprika for drying, the chili pepper motif in art.

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15, 28, 45.

In food the chili first gained its place in the kitchens of the common people before it rose up the social ladder to the menus of the aristocracy. It did so hand in hand with tobacco cultivation in the early 18th century. In early 1700s, General Mercy, commandant of Szeged, resolved to acclimatize the tobacco plant which came in from the Americas hoping it would bring profits as it did in foreign lands. Not only was he right but also the peasantry voluntarily began growing it themselves. Tobacco gardeners and gardening thus spread to other regions. This very same tobacco plantation paved way for the large-scale paprika cultivation. The cultivation and processing of tobacco and paprika were similar to a certain extent and thus, the already present infrastructure facilitated its production. It was further intensified when the demand for paprika grew due to the continental blockade when regions beyond Hungary began using paprika instead of pepper. When the demand and the production grew, watermills used for grains were also put to use. Thus, more land came under paprika cultivation.[65]

[65] Ibid.pg 89-93.

What began as a result of forging informal and formal diplomatic relations by using paprika in food, became a large-scale endeavor catalyzed by the tobacco economy and the political conditions of the time. While the wild chili pepper has the ability to propagate rapidly and adapt to different climates, producing the same variety of the chili pepper on a large scale repeatedly diminishes its resistance. This results in more intensive efforts in the cultivation process, which is what happened in the case of the paprika. The early peppers the farmers grew were pretty hot and inconsistent because the seeds and veins (where all the heat is) were removed by hand, making it impossible to be sure exactly how hot the resulting paprika powder would be. Although it was easy to grow initially, yielding numerous varieties of different sizes and pungency, once the most favorable type of chili pepper was cultivated, trying to propagate it with the same kind of characteristics made for a more laborious process – one that was facilitated by the existing architecture and cultural, technical infrastructure.[66]

The chili pepper plant has the ability to undergo extensive transformation in character, color, taste, shape and color as a consequence of the differences in soil, climate and minor changes in the modes of cultivation. The varieties afforded by the difference in ecology coupled with the shifting political conditions made it into an easy economic resource. However, the bio-cultural preference for the particular level of pungency and other characteristics made the process labor intensive which fueled further transformations to make for a regulated environment. The result was the transformation of not only economy facilitated by existing spatial infrastructure but the addition of new utility, symbolism and meaning of existing architecture. These additions played out in the form of architectural facades, planning strategies and meanings imbued in these forms.

[66] Ibid.pg 80-89.

CHAPTER 5 POOR MAN'S PEPPER, MUGHAL COSMOPOLITANISM AND THE BRITISH CURRY

I saw you green, then

Turning redder as you ripened.

Pleasant to look at and tasty in a dish,

But too hot if excess is used.

Savior of the poor, enhancer of good food,

Fiery when bitten, this makes it difficult

Even to think of the good lord himself!

In 1540s, the Kannada poet Purandara Dasa(1484-1564) wrote of the chili pepper in a poem as 'the savior of the poor'.[67] Within a short span of 50 years, the chili managed to reach Karnataka and began to be used extensively by the masses.

Unfortunately, due to a lack of sources it is difficult to ascertain the details of how it first reached Goa. The only possibility seems to be through the Portuguese who are said to have brought it to Calicut and Goa in the 1530s as they established trade posts and later colonized a large area of the Western Coast of India.[68] Carolus Clusius in 1605 confirmed that the 'Spanish or American pepper' was brought from the Spanish West Indies and carried to India by the Portuguese under the name of Pernambuco pepper. [69]

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[67] Ramachandran, Ammini.*Grains, Grains, and grated coconuts: Recipes and remembrances of a vegetarian legacy*. iUniverse, 2008.pg.112.

[68] Andrews, Jean. *The Pepper Trail History & Recipes from around the World*. Denton, TX: University of North Texas Press, 1999.pg.84.

[69] Watt, George. *The Commercial Products of India : Being an Abridgement of "The Dictionary of the Economic Products of India."*. London: John Murray, 1908.pg 265.

"these are an importation into India by the Portuguese, as was the case with many other plants now common there; e.g., Red pepper, the Cashew, Pine apples, etc. At the beginning of the xvnth cent."[70]

Image 44 Portuguese Goa

Source: Jan Huyghen van Linschoten, Itinerario. Voyage ofte schipvaert [...] naer Oost ofte Portugaels Indien [...]. *Amsterdam: Cornelis Claesz, 1596 (Utrecht UB, MAG: T fol 133 (Rariora)).*

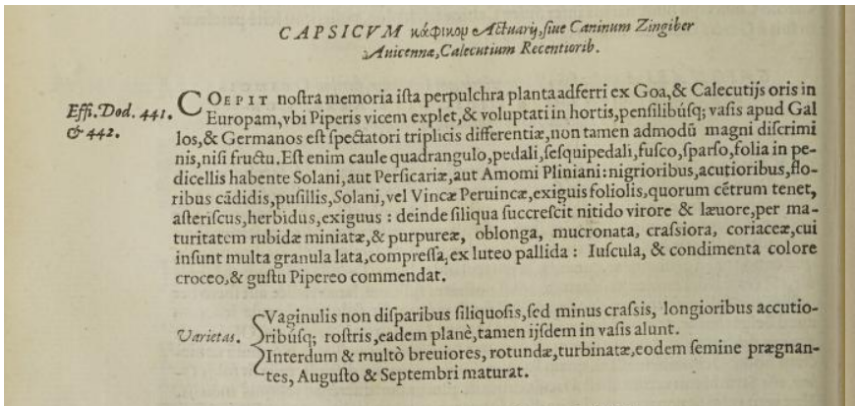
[70] Linschoten, Jan Huygen van, 1563-1611, Pieter Anton Tiele, and A. C. (Arthur Coke) Burnell. *The Voyage of John Huyghen Van Linschoten to the East Indies: From the Old English Translation of 1598 : the First Book, Containing His Description of the East.*London: Printed for the Hakluyt Society, 1885.pg 25.

Image 45 Colonial plantations of Portuguese Goa

Source: Jan Huyghen van Linschoten, *Itinerario. Voyage ofte schipvaert [...] naer Oost ofte Portugaels Indien [...]*. Amsterdam: Cornelis Claesz, 1596 (Utrecht UB, MAG: T fol 133 (Rariora)).

"*The most beautiful memory of this plant is from Goa, the Körös river and Calicut…*"

Matthias de L'Obel, the Flemish botanist documented his sighting of the chili in 1571(Image 46) [71] It is clear that by 1560s, the chilli pepper was both used and grown in Goa and Calicut in India. Because the plantations are mentioned alongside Hungarian Koros river, we can safely assume the scale of cultivation was similarly extensive.



CAPSICVM κάφικον Actuarij, siue Carinum Zingiber Auicennæ, Calecutium Recentiorib.

Essi. Dod. 441. & 442.

COEPIT noſtra memoria iſta perpulchra planta adferri ex Goa, & Calecutijs oris in Europam, vbi Piperis vicem explet, & voluptati in hortis, penſilibúſq; vaſis apud Gallos, & Germanos eſt ſpectatori triplicis differentiæ, non tamen admodũ magni diſcrimi nis, niſi fructu. Eſt enim caule quadrangulo, pedali, ſeſquipedali, fuſco, ſparſo, folia in pedicellis habente Solani, aut Perſicariæ, aut Amomi Pliniani: nigrioribus, acutioribus, floribus cãdidis, puſillis, Solani, vel Vincæ Peruincæ, exiguis foliolis, quorum cẽtrum tenet, aſteriſcus, herbidus, exiguus: deinde ſiliqua ſuccreſcit nitido virore & læuore, per maturitatem rubidæ miniatæ, & purpureæ, oblonga, mucronata, craſsiora, coriaceæ, cui inſunt multa granula lata, compreſſa, ex luteo pallida: Iuſcula, & condimenta colore croceo, & guſtu Pipereo commendat.

Varietas. Vaginulis non diſparibus ſiliquoſis, ſed minus craſsis, longioribus accutioribúſq; roſtris, eadem planè, tamen ijſdem in vaſis alunt. Interdum & multò breuiores, rotundæ, turbinatæ, eodem ſemine prægnantes, Auguſto & Septembri maturat.

Image 46 Stirpium Adversaria Nova, 1571 by L'Obel, Matthias de

Source: https://archive.org/details/b30333180/page/134

[71] Stirpium Adversaria Nova, 1571 by L'Obel, Matthias de accessed through https://archive.org/details/ b30333180/page/134

Unfortunately, written sources mentioning the chili pepper between 1500s and 1600s end there. Even the elaborate documents of the Mughal period, like the Ain-i-Akbari, make no specific mention of the chili. The etymology of the word denoting the chilli in various Indian languages suggest that the term pepper was an umbrella term used for all kinds of pepper and the chili was, in the context of cuisine, used the same way.[72]

At the time of its introduction in the early 1500s, with the Mughal rule in Northern India (1526-1707), Indian politics and gastronomy were already undergoing a significant change, one that was driven by the cultural spatialization of food. By 1535, the Portuguese were in possession of the Western coast from Daman in Gujarat to south of present-day Bombay which was fertile. The Portuguese brought this land under cultivation of the plants that they brought from Americas. Goa is thus believed to be the gateway of the chilies into central and north India(Image 48) However, it came to Goa from the south. The Portuguese succeeded in shipping commodities from India and selling them in Europe. They did so by employing local Syrian Christians and Hindu traders, money lenders and brokers from Tamil Nadu to help them negotiate local customs and financial transactions and procure goods. The chili is said to have been introduced to these local communities who had a palate already attuned to spicy food. It proved to be hardy, easy to grow, prolific in poor soil and resistant to mould unlike black pepper – advantageous in the humid south. The same communities of financiers and traders followed the Portuguese to Goa by 1535. By then there were already three varieties.[73]

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[72] Achaya, K. T. Indian Food : A Historical Companion. Delhi: Oxford University Press, 1994.pg.64.

[73] O' Brien, Charmaine. The Penguin Food Guide to India Penguin UK, 2013.pg.210.

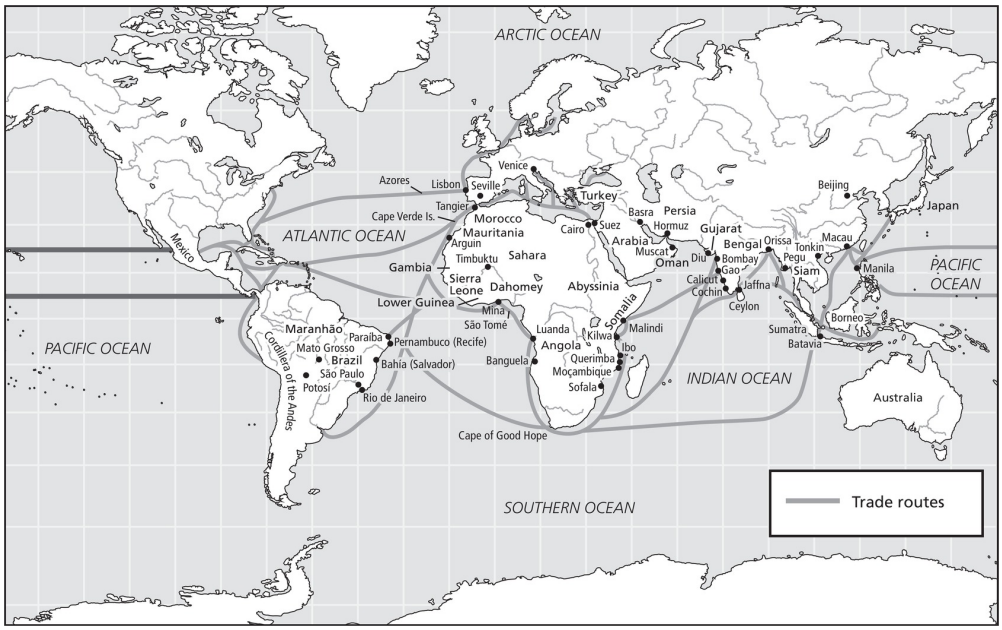

Image 47 Trade routes of the 1500s.

Source: Bentley, Jerry H, Subrahmanyam, Sanjay, and Wiesner-Hanks, Merry E. "The Organization of Trade in Europe and Asia, 1400-1800." In The Cambridge World History, 160-89. Vol. 6. The Cambridge World History. Cambridge: Cambridge University Press, 2015.pg 184.

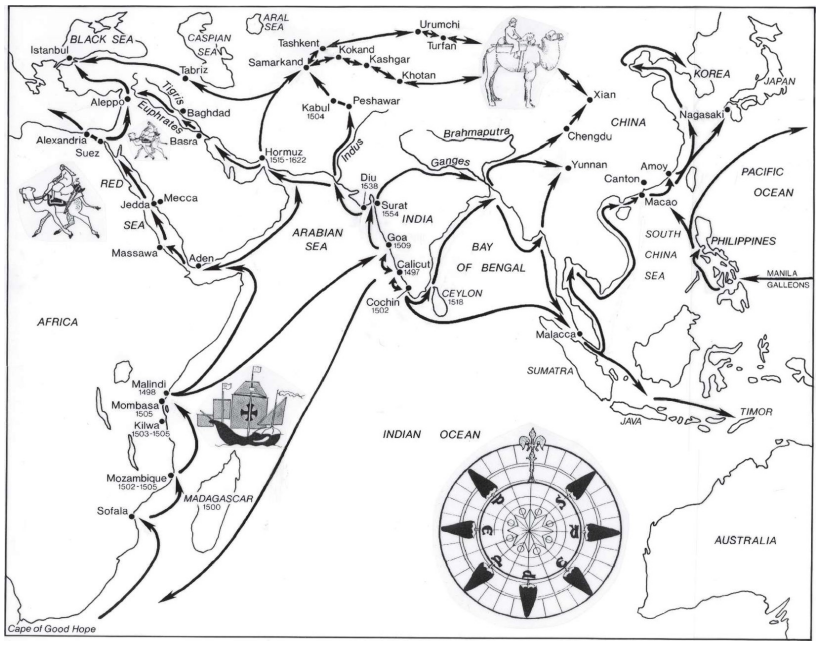

Image 48 Chili reaches India.

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10

We can presume that the ease of chili diffusion was attributed to the Portuguese empire in India , 'Estado da India' of the 16th century which was 'not a well-defined geographic space but an assemblage of territories, establishments, goods, people and administrative interests, created or protected by the Portuguese crown in the Indian ocean and the adjacent seas……. While empires represent a political structure in a set geographic space, Estado da India was ' a net, a system of communication between various spaces.'[74] They manipulated the existing trade routes by loosening control and encouraging trade to everywhere in order to skim off the profits instead of actually transforming routes.

Thus, the chili pepper freely spread everywhere such that in 1664 the defeat of the Mughals in Surat at the hand of Shivaji was said to be due to the chili! The Maratha warriors' fiery temperament was said to be due to the chilies and they became agents of chili dispersion in the areas they conquered.[75] Chili was thus connected to and attributed to masculinity and strength in the Maratha empire. This nexus between strength and the chili pepper further fueled the consumption of chili on a large scale. Mapping the spread of chili in India is difficult due to a lack of records but key evidences of diet and philosophy of food can provide a general assessment of how the chilies spread and its overall impact on the built environment.

Food as medico-moral activity

By the time Babur established the Mughal dynasty in 1527, vegetarianism had become a powerful statement of position in the society. It began in the 5th century BCE when Asoka,

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[74] Pearson, M. N., and Cambridge University Press. *The Portuguese in India*. New Cambridge History of India; I, 1. Cambridge [Cambridgeshire] ; New York: Cambridge University Press, 1987.pg 77.
[75] O' Brien, Charmaine. *The Penguin Food Guide to India.* Penguin UK, 2013.pg.213

advocated for vegetarianism influenced by Buddhist teachings and later the establishment of neo-Rajasya practices made vegetarianism a social marker of the Brahmins. For the then Brahmins, food and eating was an integral part of one's relationship with the gods. What one ate, when and who one ate with was a determinate of one's position in the natural, moral and social order.[76] According to the Susrutha Samhita and Charaka Samhita,ancient Sanskrit texts on medicine and diet, the essence of the world and all that is in it was composed of three basic qualities : Tamashika, Rajashika and Sattvika. In every food, in every man and in every maharaja, one of these qualities predominated and determined the nature of their being.[77] Eating and food was thus a medico-moral activity one that was ontologically connected to the body.

The Mughal conception of food was on the other hand, based on indulging the body in pleasure and keeping the soul satisfied and in harmony. Abu-I-Fazl's version of the *Ain-i-akbari* reasons that "equilibrium of man's nature, the strength of the body, the capability of receiving external and internal blessings, and the acquisition of worldly and religious advantages, depend ultimately on proper care being shown for appropriate food." He goes onto say it is this knowledge that distinguishes man from beast. [78] In fact, it was from these ethical arguments of balance, harmony and equilibrium in the Persian text Aḵẖlāq-i Nāṣirī of Nāṣir al-Dīn Ṭūsī that the ideology of empire was formed.

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[76] Collingham, E. M. *Curry: a Tale of Cooks and Conquerors.* New York: Oxford University Press, 2006.pg 20-24.
[77] Holkar, Shivaji Rao., and Holkar, Shalini Devi. *Cooking of the Maharajas : The Royal Recipes of India.* New York: Viking Press, 1975.pg 12-32.

[78] Abū Al-Faẓl Ibn Mubārak. *Ain I Akbari.* Bibliotheca Indica ; Work No. 61. Lahore: Qausain, 1975.

With these ideas along with the nostalgia of his cosmopolitan homeland, Samarkhand, Babur and his successors began importing multitude of crops, cultivating it and initiated a social and cultural transformation towards a cosmopolitan bazaar.(Image 49 and 50) To grow these ‘exotics’, they made equally intriguing landscapes like the floating gardens(Image 51). What was different was the way in which the locations of acquiring ingredients, methods of preparation and consumption were scaled up to become far reaching networks. While different food marked social classes in the pre-Mughal period, the Mughal period while bringing in various foods from outside of India, created a cultural and social food distribution system which could be accessed by everyone.

Image 49 [Left] Fight at a Bazaar

Image 50 [Right]"Business of Life"

Source: [Left], Babur, and W. M. Thackston. 1996. The Baburnama: memoirs of Babur, prince and emperor. Washington, D.C.: Freer Gallery of Art. [Right]: page 102b from a manuscript of Nasir-ud-Din Tusi: Akhlaq-i Nasiri (Nasirische Ethics "), Akbar period 1590/95, image: 22.3 x 11.5 cm, sheet : 23,5 x 14 cm, collection of Prince Sadruddin Aga Khan - Mughal era

This resulted in not only a transformation in the cultural spatialization of food, which was otherwise restrictive in the ancient Sanskritic textual world but also made gastronomy an instrument of power. This social and transformation continued from the time of Babur who introduced a multitude of crops to India to make up for the lack of good fruits and vegetables he desired from Samarkhand and the Ferghana valley. This was accompanied by his passion for gardening. Although his rule in India was less than five years, his attempts to gratify is desires was the gateway to more vibrant imports and culinary transformation.

It is believed that sometime in the multitude of exports, the chili pepper was also imported, although not incorporated right away. What these new imports did for the built environment was not only the transformation of cuisine of the court and landscape of agriculture, but also introduced new typologies of architecture. Cities and bazaars became cosmopolitan and began resembling the markets of Samarkhand and Herat. Freshly cooked food such as bread was introduced in the market. The imperial kitchen unit was raised in rank For Babur, the desire for food from his home also fueled his desire to see these imports in the similar landscapes at home. These landscapes, if not accurate were almost fictions arising from his immense homesickness. These fictions and imagery turned into the floating gardens of Kashmir and even fictional architecture like floating palaces. Architecture in Babur's time materialized through his bodily desires of his home and its food.

Humayun not only extended these traditions but also brought in Persian techniques of cooking. He conceived not only floating gardens but also mobile floating bazaars. It consisted of four boats, each of which had an arch, two story high. These were provided with gardens and

bazaars and floated on River Jamuna. In addition to it, there was also a foldable staircase and a moving bridge, all of which were made the *najjars* or the carpenters. The halls, gardens and bazaars rested on constantly moving barges.[79] This importation of exotic and foreign foods continued to Akbar's time who not only expanded the growing inventory of food crops and innovation in cuisine but also formalized agricultural land division and court etiquette that spilled over to the public life.

> *"On the third feast-day of every month. His Majesty holds a large assembly for the purpose of inquiring into the many wonderful things found in this world. The merchants of the age are eager to attend, and lay out articles from all countries. The secret's of the empire, the character of the people, the good and bad qualities of each office and workshop, will then appear. His Majesty gives to such days the name of Khushriiz, or the joyful day, as they are a source of much enjoyment."*[80]

The Mughals thus consciously facilitated a cultural translation process to gratify their desire of being home and building their cultural capital through food, lifestyle and architecture. However, the chili pepper did not appear in the Mughal court until Shah Jahan's reign in 1620s although it was widely used in South India from 1540s onwards.

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[79] Husain, Salma. 2008. *The emperor's table: the art of Mughal cuisine.* New Delhi: Lustre Press.pg 44-45.

[80] Ibid. pg 322.

Image 51Floating gardens

Source: Nasir-ud-Din Tusi: Akhlaq-i Nasiri (Nasirische Ethics ,Agha Khan Archives.1590.

This social and economic connotations of the chili as a mere 'substitute' of course did not fit in the royal *dawwatkhana* or the kitchen, which was an institution employing only the best of the talents, finest of the ingredients and the most creative of innovations. Food in the Mughal empire under different rulers was articulated in the event of change in power and food in a way served as to legitimize the imperial status in the society. This institution was not only similar to the processes of the *kharkhana* or the miniature painting workshops but was interlinked by practice. What this entailed was the institutionalizing of the innovative processes of not just the royal kitchen, the *dawatkhana* but also the artists' atelier, the *kharkhana*. The miniature painting school of the *kharkhana* evolved exactly the way culinary innovations were made – with new mediums, novel artists from different places and a remarkable collaboration between them. What ensued was the overlap of aesthetics of the paintings produced in the *kharkhana* and the flavors of the cuisine created from the array of new ingredients. The setting of the *dawat* or the feasts were

also where miniature paintings were viewed for the first time.[81] Thus, the intricate relationship between the royal kitchen and the workshop, not only in activity and creative processes within them but also the melding of both arts of food and art occurred spatially. The intricate relationship between the novel food exchanges and the novel schools of art spatialize.

Agricultural land division

During the time of Akbar, a detailed classification of land based on advantageous qualities was done under two main categories, i.e. unirrigated and irrigated. The former comprised the Barani and the Sailabi whereas the latter included the Abi, Chahi and Nahri lands. The chili peppers were documented as grown in the Chahis, which were well-irrigated lands. [82] Well-irrigated lands were quite common across the country and although not much information is available on this, we can assume that there were no noticeable infrastructure additions or transformation for the chili.

Sources that refer to the chili in the 1500s and 1600s end there. There were no major spatial transformations connected to it like in the case of Hungary although we know that its cultivation was of a comparable size. Black pepper still held its prestige well through the 1600s and to break its monopoly would be a complicated restructuring of the very rigid techno-economic and social assemblage in place. Although it didn't transgress the pepper-centric assemblage, it became an agent of cultural substitution. The process of translation by substitution involves replacing a context-specific item in the source text with a target language item which describes a

[81] Bilgrami ,Alia. *Palates & Palettes: Food, Art and the Mughals.*Papercuts Magazine Vol 17. Spring 2017.

[82] Grover, B. R. Classification Of Agrarian Land Under Akbar. Proceedings of the Indian History Congress 23 (1960): 198-209. http://www.jstor.org/stable/44304064. pg 208.

similar concept in target culture, having a similar impact on the target readers.[83] Although the chili pepper was not a direct substitute for black pepper in trade or in the royal courts, it was an equivalent in the food of the masses. Similarly, Divya Narayan argues that local contextualization was the key factor for the incorporation. She posits this so-called cultural translation, rendering of the unfamiliar to the familiar, is characterized by the progression of *translation-incorporation-transformation* of food culture. She writes "*if it finds a place within the cultural and sensory universe of the new host culture, then it is successfully incorporates into it. Through this process, both the food and the culinary culture into which it is amalgamated are irreversibly altered (transformation).*" [84] The process of translation is, in this way, two-fold: first the substitution at the local level and the eventual incorporation in the royal courts.

Unlike in Europe where the scientific rigor fueled the chili exchange, in India local palate for black pepper served as the impetus. The ease with which the chili grew in the tropical climate of South India facilitated its growth in house gardens instead of large plantations. For the same reason, there are no records of it. However, conversations with the local people and the previous generations confirm that the chili pepper plant was a common plant in kitchen gardens and homesteads of the south. [85] Assessing the use of the chili in contemporary daily food of these places implies it might have formed an integral part of the local cuisine to be termed a 'savior of the poor' in the 1500s. However, the gradual incorporation of the chili in the aristocracy can be

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[83]Dabaghi, Azizollah, and Mohammad Bagheri. "The Issue of Translating Culture: A Literary Case in Focus." *Theory and Practice in Language Studies* 2, no. 1 (2012): 183-86. Pg 244.

[84] Narayanan, Divya. *Cultures of Food and Gastronomy in Mughal and post-Mughal India.* 2015 http://www.ub.uni-heidelberg.de/archiv/19906,pg 233.

[85] Conversations with my own and friends' family members in the region of Andhra Pradesh and Kerala.

assessed through textual sources. It was not until 1796-97 that the chili appeared in the Indo-Persian agricultural manual isāla Dar Bayān-i Aṭʿima. A Persian cookbook of 1730-1750 has reference to the red chili as *mirch-i-surkh* in a chutney recipe. Other sources of the eighteenth century include chutney recipe of the Ḵẖwān-i Niʿmat dedicated to Nawāb Qāsim ʿAlī Ḵẖān Bahādur, Ḥājī Qambar's Alwān-i Niʿmat the red chill is used in two pickle recipes (achār-i līmūn kāg̲ẖazī and achār az khichṛī, and in the translated cookbook, Nusḵẖa-i Niʿmat Ḵẖān. Narayan notes that in other dishes pepper continued to be used in regular food and chili served as a component in ancillary dishes like chutneys and pickles.[86] The substitution and incorporation had a distinct pattern. The chili made its way to the food as an adjuvant component in food and later as the 'base of the diet'. By 1762-63 chilies seem to have become common according to Āzād Bilgrāmī. He writes whether rich or poor, the base of the Indians' diet was dāl-i tūr (split pigeon pulse; Cajanus cajan), to which they added little to no oil or ghee (be raug̲ẖan yā kam raug̲ẖan). Instead, they added red chillies (mirch-i surḵẖ), asafoetida (ḥiltīt) and turmeric (zard chūba) to all their dishes (dar har mākūl dāḵẖil mīsāzand). He adds that some Indians had learnt the use of the chili only in the past ten or twenty years.[87]

Although these references are limited to the Persian and Mughal records, Mughal cuisine did not evolve to be a pan-Indian cuisine neither did it attain the identity of Indian cuisine during the time. The chili did not become the quintessential ingredient in Indian food until British Colonialism introduced the tropes of Indianness as essentially Mughals (or the other way around) and the trope of the spicy Indian curry. Infact, the Mughals were not alone in politicizing and

[86] Narayanan, Divya. *Cultures of Food and Gastronomy in Mughal and post-Mughal India.* 2015 http://www.ub.uni-heidelberg.de/archiv/19906. Pg 237.

[87] Narayanan, Divya. *Cultures of Food and Gastronomy in Mughal and post-Mughal India.* 2015 http://www.ub.uni-heidelberg.de/archiv/19906. Pg 243.

attempting to systematize food and crop exchanges. In 1820, Roxburgh notes six varieties of the *Capsicum* in the *Flora Indica* (Image 50) out of which he mentions one variety, (C. frutescens) as available in markets all over India.[88]He writes,

> *"In 1796, I found a single plant of this species [Capsicum purpureum, R] in the Garden, but from whence it came I could never learn…..the seeds have for thirteen years continued to produce, in all situations, plants exactly the same as the original one…"*

However, to assume that the chili was widely incorporated across the Indian sub-continent would be fallacy because some varieties were and some were not. Out of the six varieties Roxburgh documents, only two were commercialized and used as a condiment.

He writes of another variety, *C.annum, Willd*.

> *"This does not appear to be a native of India, as the Hindoos have no name for it, nor is it even found in their gardens. In India the Capsicums are all shrubby, but produce so badly after the first year, and begin to look so scraggy, that they are seldom suffered to remain longer than one season."*

C.frutescens,Willd sp

"There is a pointed variety, with the fruit yellow, or of a bright orange color when ripe, which the Hindooos call simply gachhmurich, it is the sort most used; particularly when dried, in which state it is to be found in every market."

C.grossum, Willd

[88] Roxburgh, William, and N. Wallich. *Flora Indica, Or, Descriptions of Indian Plants*. Printed at the Mission Press, 1820.pg 259-260.

"Kaffree-chilly is the name by which this sort is generally known, amongst Europeans; the plant does not appear to me to be native of India. The thick fleshy skin of this species is but triflingly acrid, and a palatable condiment is made of them."

And lastly,

C.ceraiforme, Willd.

"I doubt much whether this be a native of India, for I have only found it in the gardens of the curious."

One of the varieties failed to grow well, another was capable of producing off shoots with the same characteristics and yet, another which was only found in gardens as a curiosity. The shape shifting chili plant produced many varieties over the years and continued to occupy variegated spaces, from palates to botanic gardens. Even after being successfully incorporated in diet, it maintained the mysticism and confusion well into the end of the 1700s. Even as some varieties were widely consumed, the British colonial enterprise of using botany to execute enlightenment ideals of western science for the benefit of the empire was yet another attempt to contain the chaotic pattern of the chili and systematize it.

The Garden mentioned by Roxburgh as containing the variety producing consistent off spring in his book, is the Calcutta Botanic garden which was established in 1786. It was one of the earliest institutions in India based on Western science. Robert Kyd, the Scottish Office who was the Military Secretary to the Board of Inspection proposed for a Botanic garden in Calcutta neither for collecting rare plants nor for pleasure but for the extension of commerce of the British colonial empire.

> "But I take this opportunity of suggesting.... a Botanical Garden, not for the purpose of collecting rare plants (although they also have their use) as things of mere curiosity or furnishing articles for the gratification of luxury, but for establishing a stock for disseminating such articles as may prove beneficial to the inhabitants, as well of the natives of Great Britain, and which ultimately may tend to the extension of the national commerce and riches; and this I conceive can best be effected by Government procuring from the different parts of India, and establishing a nursery stock, from which private individuals may be supplied gratis. . ."[89]

In 1788, he wrote:

> "The natives are so strongly addicted to the customs of their ancestors that they will not, without the utmost difficulty, even in the case of famine, adopt any species of food that they are unaccustomed to…….Hence not a mere nursery, but an actual plantation of such articles as are intended for their relief is necessary."[90]

The English Botanist Joseph Banks who was the president of the Royal society was behind a number of botanical enterprises. He is credited to have given the British a sense of botanical nationalism with his plans for "a network of colonial botanic gardens which would serve as bases for plant hunting and act as experimental gardens for crops…which might lead to colonial economic development." He wanted to use botanic gardens to organize the process of plant and

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[89] Thomas, Adrian P. "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786–1806." *Journal of the Royal Asiatic Society* 16, no. 2 (2006): 165-77.pg 167.

[90] Thomas, Adrian P. "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786–1806." *Journal of the Royal Asiatic Society* 16, no. 2 (2006): 165-77.pg 169.

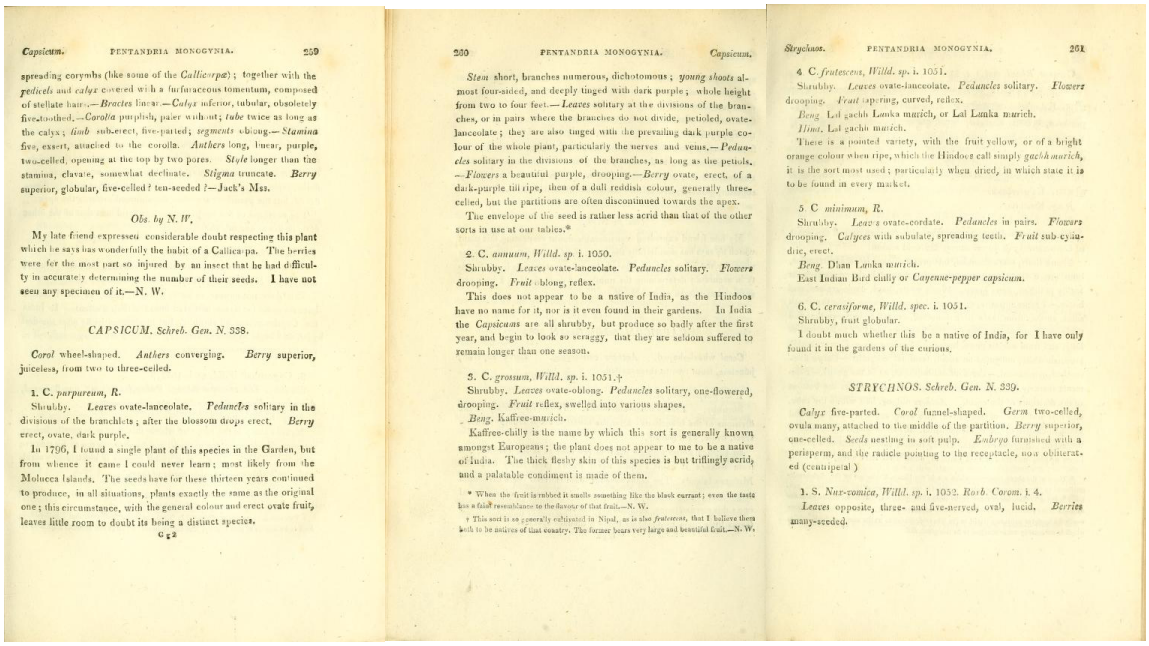
crop exchanges more systematically.[91] It was in this Garden that was meant to be an instrument for economic and social development in the British colonial enterprise, that Roxburgh writes of the variety of the chili that grows consistently and the ones that do not.(Image 53 and 54) The paradox is that the variety he writes as reproducing consistently is documented as a 'accident' in the 'donors and time' section. The botanic garden in addition to still being in the adamant clasp of modernity to systematize and control the chaotic nature of translations, is also a space that materializes out of the contestation of indigenous tacit knowledge of foodways and the systematic food production generated by modern western science. Roxburgh's observation also point to the rigorous undertaking of the colonial re-ordering and control of the 'alien' environment. This colonial project was efficiently summarized by the motto of the Asiatic Society of Bengal founded by Sir William Jones in 1783: "*Man and Nature; whatever is performed by the one or produced by the other."*[92]

[91] Thomas, Adrian P. "The Establishment of Calcutta Botanic Garden: Plant Transfer, Science and the East India Company, 1786–1806." *Journal of the Royal Asiatic Society* 16, no. 2 (2006): 165-77.pg 169.

[92] Axelby, Richard. "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment." *Archives of Natural History*35, no. 1 (2008): 150-63.pg 152.

Image 52 Plan of the Calcutta Botanic garden, 1816.

Source: Axelby, Richard. "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment." Archives of Natural History35, no. 1 (2008): 150-63.pg 154.



Capsicum. PENTANDRIA MONOGYNIA. 259

spreading corymbs (like some of the *Calliocarpæ*); together with the *pedicels* and *calyx* covered with a furfuraceous tomentum, composed of stellate hairs.—*Bracteæ* linear.—*Calyx* inferior, tubular, obsoletely five-toothed.—*Corolla* purplish, paler without; *tube* twice as long as the calyx; *limb* sub-erect, five-parted; *segments* oblong.—*Stamina* five, exsert, attached to the corolla. *Anthers* long, linear, purple, two-celled, opening at the top by two pores. *Style* longer than the stamina, clavate, somewhat declinate. *Stigma* truncate. *Berry* superior, globular, five-celled? ten-seeded?—Jack's Mss.

Obs. by N. W.

My late friend expresses considerable doubt respecting this plant which he says has wonderfully the habit of a Callicarpa. The berries were for the most part so injured by an insect that he had difficulty in accurately determining the number of their seeds. I have not seen any specimen of it.—N. W.

CAPSICUM. Schreb. Gen. N. 338.

Corol wheel-shaped. *Anthers* converging. *Berry* superior, juiceless, from two to three-celled.

1. C. *purpureum, R.*

Shrubby. *Leaves* ovate-lanceolate. *Pedunckes* solitary in the divisions of the branchlets; after the blossom drops erect. *Berry* erect, ovate, dark purple.

In 1796, I found a single plant of this species in the Garden, but from whence it came I could never learn; most likely from the Moluccа Islands. The seeds have for these thirteen years continued to produce, in all situations, plants exactly the same as the original one; this circumstance, with the general colour and erect ovate fruit, leaves little room to doubt its being a distinct species.

Gg2

260 PENTANDRIA MONOGYNIA. *Capsicum.*

Stem short, branches numerous, dichotomous; *young shoots* almost four-sided, and deeply tinged with dark purple; whole height from two to four feet.—*Leaves* solitary at the divisions of the branches, or in pairs where the branches do not divide, petioled, ovate-lanceolate; they are also tinged with the prevailing dark purple colour of the whole plant, particularly the nerves and veins.—*Pedunckes* solitary in the divisions of the branches, as long as the petiols.—*Flowers* a beautiful purple, drooping.—*Berry* ovate, erect, of a dark-purple till ripe, then of a dull reddish colour, generally three-celled, but the partitions are often discontinued towards the apex.

The envelope of the seed is rather less acrid than that of the other sorts in use at our tables.*

2. C. *annuum, Willd. sp.* i. 1050.

Shrubby. *Leaves* ovate-lanceolate. *Pedunckes* solitary. *Flowers* drooping. *Fruit* oblong, reflex.

This does not appear to be a native of India, as the Hindoos have no name for it, nor is it even found in their gardens. In India the *Capsicums* are all shrubby, but produce so badly after the first year, and begin to look so scraggy, that they are seldom suffered to remain longer than one season.

3. C. *grossum, Willd. sp.* i. 1051.†

Shrubby. *Leaves* ovate-oblong. *Pedunckes* solitary, one-flowered, drooping. *Fruit* reflex, swelled into various shapes.

Beng. Kaffree-murich.

Kaffree-chilly is the name by which this sort is generally known amongst Europeans; the plant does not appear to me to be a native of India. The thick fleshy skin of this species is but triflingly acrid, and a palatable condiment is made of them.

* When the fruit is rubbed it smells something like the black currant; even the taste has a faint resemblance to the flavour of that fruit.—N. W.

† This sort is so generally cultivated in Nipal, as is also *frutescens*, that I believe them both to be natives of that country. The former bears very large and beautiful fruit.—N. W.

Strychnos. PENTANDRIA MONOGYNIA. 261

4. C. *frutescens, Willd. sp.* i. 1051.

Shrubby. *Leaves* ovate-lanceolate. *Pedunckes* solitary. *Flowers* drooping. *Fruit* spering, curved, reflex.

Beng. Lal gachh Lanka murich, or Lal Lanka murich.

Hind. Lal gachh murich.

There is a pointed variety, with the fruit yellow, or of a bright orange colour when ripe, which the Hindoos call simply *gachh murich*, it is the sort most used; particularly when dried, in which state it is to be found in every market.

5. C. *minimum, R.*

Shrubby. *Leaves* ovate-cordate. *Pedunckes* in pairs. *Flowers* drooping. *Calyces* with subulate, spreading teeth. *Fruit* sub-cylindric, erect.

Beng. Dhan Lanka murich.

East Indian Bird chilly or *Cayenne-pepper capsicum.*

6. C. *cerasiforme, Willd. spec.* i. 1051.

Shrubby, fruit globular.

I doubt much whether this be a native of India, for I have only found it in the gardens of the curious.

STRYCHNOS. Schreb. Gen. N. 339.

Calyx five-parted. *Coral* funnel-shaped. *Germ* two-celled, ovula many, attached to the middle of the partition. *Berry* superior, one-celled. *Seeds* nestling in soft pulp. *Embryo* furnished with a perisperm, and the radicle pointing to the receptacle, now obliterated (centripetal).

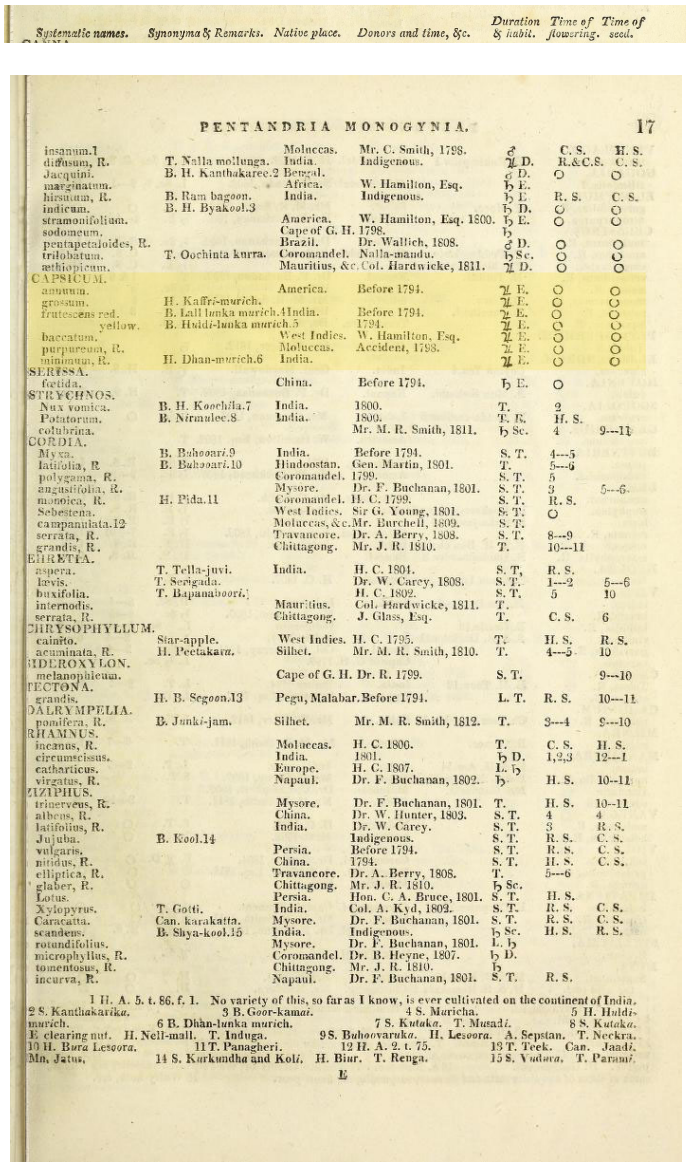
1. S. *Nux-vomica, Willd. sp.* i. 1052. *Roxb. Corom.* i. 4.

Leaves opposite, three- and five-nerved, oval, lucid. *Berries* many-seeded.

Image 53 Description of the Capsicum varieties in India by Roxburgh, 1820-24.

Source: Roxburgh, William, and N. Wallich. Flora Indica, Or, Descriptions of Indian Plants.

Printed at the Mission Press, 1820.pg 259-261.



Systematic names.	*Synonyma & Remarks.*	*Native place.*	*Donors and time, &c.*	*Duration & habit.*	*Time of flowering.*	*Time of seed.*

PENTANDRIA MONOGYNIA. 17

insanum.1		Moluccas.	Mr. C. Smith, 1798.	☿	C. S.	H. S.
diffusum, R.	T. Nalla mollunga.	India.	Indigenous.	♃ D.	R.&C.S.	C. S.
Jacquini.	B. H. Kanthakaree.2	Bengal.		☉ D.	☋	☋
marginatum.		Africa.	W. Hamilton, Esq.	♄ E.		
hirsutum, R.	B. Ram bageon.	India.	Indigenous.	♄ E.	R. S.	C. S.
indicum.	B. H. Byakool.3			♄ D.	☋	☋
stramonifolium.		America.	W. Hamilton, Esq. 1800.	♄ E.	☋	☋
sodomeum.		Cape of G. H.	1798.	♄		
pentapetaloides, R.		Brazil.	Dr. Wallich, 1808.	☿ D.	☋	☋
trilobatum.	T. Oochinta kurra.	Coromandel.	Nalla-mandu.	♄ Sc.	☋	☋
æthiopicum.		Mauritius, &c.	Col. Hardwicke, 1811.	♃ D.	☋	☋
CAPSICUM.						
annuum.		America.	Before 1794.	♃ E.	☋	☋
grossum.	H. Kaffri-murich.			♃ E.	☋	☋
frutescens red.	B. Lall lunka murich.	India.	Before 1794.	♃ E.	☋	☋
yellow.	B. Huldi-lunka murich.5		1794.	♃ E.	☋	☋
baccatum.		West Indies.	W. Hamilton, Esq.	♃ E.	☋	☋
purpureum, R.		Moluccas.	Accident, 1798.	♃ E.	☋	☋
minimum, R.	H. Dhan-murich.6	India.		♃ E.	☋	☋
SERISSA.						
fœtida.		China.	Before 1794.	♄ E.	☋	
STRYCHNOS.						
Nux vomica.	B. H. Koochila.7	India.	1800.	T.	2	
Potatorum.	B. Nirmulee.8	India.	1800.	T. E.	H. S.	
colubrina.			Mr. M. R. Smith, 1811.	♄ Sc.	4	9---11
CORDIA.						
Myxa.	B. Buhoouri.9	India.	Before 1794.	S. T.	4---5	
latifolia, R.	B. Buhoouri.10	Hindoostan.	Gen. Martin, 1801.	T.	5---6	
polygama, R.		Coromandel.	1799.	S. T.	5	
angustifolia, R.		Mysore.	Dr. F. Buchanan, 1801.	S. T.	3	5---6.
monoica, R.	H. Pida.11	Coromandel.	H. C. 1799.	S. T.	R. S.	
Sebestena.		West Indies.	Sir G. Young, 1801.	S. T.	☋	
campanulata.12		Moluccas, &c.	Mr. Burchell, 1809.	S. T.		
serrata, R.		Travancore.	Dr. A. Berry, 1808.	S. T.	8---9	
grandis, R.		Chittagong.	Mr. J. R. 1810.	T.	10---11	
EHRETIA.						
aspera.	T. Tella-juvi.	India.	H. C. 1804.	S. T.	R. S.	
lævis.	T. Seegada.		Dr. W. Carey, 1808.	S. T.	1---2	5---6
buxifolia.	T. Bapanaboori.13		H. C. 1802.	S. T.	5	10
internodis.		Mauritius.	Col. Hardwicke, 1811.	T.		
serrata, R.		Chittagong.	J. Glass, Esq.	T.	C. S.	6
CHRYSOPHYLLUM.						
cainito.	Star-apple.	West Indies.	H. C. 1795.	T.	H. S.	R. S.
acuminata, R.	H. Pectakara.	Silhet.	Mr. M. R. Smith, 1810.	T.	4---5	10
SIDEROXYLON.						
melanophleum.		Cape of G. H.	Dr. R. 1799.	S. T.		9---10
TECTONA.						
grandis.	H. B. Segoon.13	Pegu, Malabar.	Before 1794.	L. T.	R. S.	10---11
DALRYMPELIA.						
pomifera, R.	B. Junki-jam.	Silhet.	Mr. M. R. Smith, 1812.	T.	3---4	9---10
RHAMNUS.						
incanus, R.		Moluccas.	H. C. 1800.	T.	C. S.	H. S.
circumscissus.		India.	1801.	♄ D.	1,2,3	12---1
catharticus.		Europe.	H. C. 1807.	L. ♄		
virgatus, R.		Napaul.	Dr. F. Buchanan, 1802.	♄	H. S.	10--11
ZIZIPHUS.						
trinervius, R.		Mysore.	Dr. F. Buchanan, 1801.	T.	H. S.	10--11
albens, R.		China.	Dr. W. Hunter, 1803.	S. T.	4	4
latifolius, R.		India.	Dr. W. Carey.	S. T.	3	R. S.
Jujuba.	B. Kool.14		Indigenous.	S. T.	R. S.	C. S.
vulgaris.		Persia.	Before 1794.	S. T.	R. S.	C. S.
nitidus, R.		China.	1794.	S. T.	H. S.	C. S.
elliptica, R.		Travancore.	Dr. A. Berry, 1808.	T.	5---6	
glaber, R.		Chittagong.	Mr. J. R. 1810.	♄ Sc.		
Lotus.		Persia.	Hon. C. A. Bruce, 1801.	S. T.	H. S.	
Xylopyrus.	T. Gotti.	India.	Col. A. Kyd, 1802.	S. T.	R. S.	C. S.
Caracatta.	Can. karakatta.	Mysore.	Dr. F. Buchanan, 1801.	S. T.	R. S.	C. S.
scandens.	B. Shya-kool.15	India.	Indigenous.	♄ Sc.	H. S.	R. S.
rotundifolius.		Mysore.	Dr. F. Buchanan, 1801.	L. ♄		
microphyllus, R.		Coromandel.	Dr. B. Heyne, 1807.	♄ D.		
tomentosus, R.		Chittagong.	Mr. J. R. 1810.	♄		
incurva, R.		Napaul.	Dr. F. Buchanan, 1801.	S. T.	R. S.	

1 H. A. 5. t. 86. f. 1. No variety of this, so far as I know, is ever cultivated on the continent of India.
2 S. Kanthakarika. 3 B. Goor-kamai. 4 S. Maricha. 5 H. Huldi-murich. 6 B. Dhan-lunka murich. 7 S. Kutaka. T. Musadi. 8 S. Kutaka.
9 T. clearing nut. H. Nell-mall. T. Induga. 9 S. Buhoovaruka. H. Lesoora. A. Sepstan. T. Neckra.
10 H. Bura Lesoora. 11 T. Panagheri. 12 H. A. 2. t. 75. 13 T. Teek. Can. Jaadi.
Mn. Jatus. 14 S. Kurkumdha and Koli. H. Biur. T. Renga. 15 S. Vudara. T. Parumi.

E

Image 54 Varieties of the chili growing in the Calcutta Botanic garden

Source: *Royal Botanic Garden (Calcutta), William Roxburgh, and William Carey. 1814. Hortus Bengalensis: or, A catalogue of the plants growing in the ... Botanic Garden at Calcutta. https://archive.org/details/hortusbengalensi00roxb.*

Image 55 The British 'Babus'.

Source: Mukherjee,Debabrata. *Historic UK.*2013.

Private Robert George Hobbes, in his unpublished account of India (1852), writes of the breakfast enjoyed by the English at Fort William: "...and down the centre [is] a row of tables at which a batch of recruits lately arrived from Europe are taking their hazree* [*Breakfast]. What a glorious spread they seem to think that before them! See the gusto with which they devour those savoury but apparently hot curries; which while they tickle the palate, bring streams of water from their eyes! Observe how they lick their lips…" [93]

Thus, the conflation of Indian cuisine with the chili pepper is a colonial process which shaped the gastronomic identity of Post-Mughal Indian cuisine. Similarly, the chili did not become the quintessential ingredient in Indian food until Colonialism introduced the tropes of Indianness

[93] Nayanan, Divya. *Cultures of Food and Gastronomy in Mughal and post-Mughal India.* 2015 http://www.ub.uni-heidelberg.de/archiv/19906. Pg 243.

as essentially Mughal (or the other way around) and the trope of the spicy Indian curry introduced by the British '*babus'* of the East India company who emulated the Mughal way of living(Image 55). It was as an ingredient of the 'curry powder' that it then travelled back to Britain and the West. By early eighteenth-century coffee houses served curries and eventually, these places which became known for it became curry houses, akin to the coffee house culture. Once again, the chili managed to hinge on its similarities with the coffee as a stimulant and addiction, to create the Curry house culture that is widespread even today.

6 CONCLUSION

Over the four contexts, the three subjects that the thesis addresses are fiction, power and colonialism. Although narrated as distinct stories across four chapters, the themes emerge as continuous, strung by a central theme of modernity. In the Inca empire territorial expansion is forged with the rewriting of local histories and myth. The chili serves as a token of the transition from the Pre-Inca 'primeval' world to the Inca 'enlightenment'. Meanwhile similar undertakings of modernity responding to lack thereof in the project of colonialism, juxtaposes the chili's chaos of swidden agriculture in Hispaniola against the rigid classification of the pleasure gardens and *Hortus Botanicus* in Western Europe. In the story of conflict and revitalization at the Hungary-Ottoman frontier, the chili is not only the silent diplomat between two contesting polities but also the negotiator between the wave of western science from the West and south of Europe and the simultaneous formation of new cultural capital and indigenous knowledge generated around paprika cultivation. The result is the battlefield of Szeged which becomes the capital of paprika, renewed by application of existing knowledge and incorporating the ingredient into the existing food culture. The yearning for a piece of the global economic pie driven by tobacco, Szeged commercializes paprika cultivation borrowing from the ideals of mechanization and western science. The dawn of Portuguese colonialism in India and the beginning of the Mughal empire are both historical renders of the beginning of two kinds of projects. The former colonial project is not of monopoly but of exchanges for economic gain, a modern project of economic *globalization* of sorts and the latter is a project of *Cosmopolitization* generated by the making of a Central Asian home in South-Asia. British colonialism reintroduces the project of modernity through the botanic garden, this time as an instrument to control over an alien environment and as a project of *naturalization* of foreign crops for economic gain.

Resistance to the violence of modernity

The chili may seem to be caught in the whirl wind of early modernity and its transformation of spaces but it in fact the resistance of the chili to this wave of rational thinking, that is the interesting underlying cause and effect of these transformations. Examining further the historical threads and the extrapolations of the manner in which modernity attempts to contain and disseminate the chili, spatially, biologically, economically and as scientific knowledge, it seems to have taken the different route altogether, mastering the act of retribution in the clutches of modernity; but beckoning a modernity of its own.

The Inca reconstruct histories and the ancestral Inca myth to legitimize their power over the subjugated and in the process new strands of food culture emerge around the chili pepper. While storage houses, which were the locus of administration, subsumed the chili spatially and into the administrative structure, the fiction of the origin myth had to be verified through exclusive spaces, the moyas. The *Moyas* were, in a communal land-holding society of no private ownership, a non-typological space created for the growing rarities and these exotics, not for humans but for non-humans. A space for recreation, rituals, animals and doves; exclusive to the Inca, the chilies began to be grown in the high altitude of Cusco, mobilizing ecology to a place it was not acclimatized. The result was an exclusive space meant more for its symbolic meaning than for utility. The Inca condition of modernity with its vast expanding empire, adept utilization and consolidation of knowledge and systematization of food production across various micro-climates is in this way an opposition to the idea of the *Moyas.* The non-typological space is instead a space created to exude the ‘reason’ unto which the Inca led the people towards by taking over the primeval chili growers. This is a story of modernity that emphasized triumph over nature and the

end of an era, as such the story is in the landscape of the wooded forests of the Moyas, juxtaposed against the highly engineered farmlands nearby. The appropriation of the origin myths, however, contingent on the social and ecological context is very much symptomatic of Post-modernity however. Could the *Moyas* then be considered the beginning of a post-modern space, challenging the high modernity of the Inca?

The chili was mobilized across the seas from Hispaniola, to become a commodity in the mélange of exchanges that began at the beginning of the early modern period. However, the chili resists alienation, critical to commodification, and resorts to translation instead; still very much in the life worlds it was found in. The emphasis is on not just the ecological movement. It is, as Tsign writes in relation to the matsutake mushroom, the ecosystem that moves. Without meaning to, humans move other species and life-worlds and in turn create new ecosystems.[94] It was this ecosystem that travelled with the chili, and propagated so rapidly, that it was impossible to contain it to simply the formal gardens of the modern science such as Hortus Botanicus. It instead proliferated through domestic gardens in flower pots, dispersal through birds, shape shifting and adapting as rapidly as its knowledge is created and exchanged. The very purpose of the Hortus Botanicus, a spatial apparatus for the systematic creation and dissemination of objective knowledge is defeated because of the chaotic movement of the chili, the ambiguous geographic origins and its familiar characteristics of that of black pepper.

Meanwhile, it extends into the spice route and permeates networks unknowingly and naturalizes itself as a spice, at the same time eschewing commodification. Diplomacy and bio-

[94] Tsing, Anna Lowenhaupt. *The Mushroom at the End of the World : On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press, 2015.pg 235.

cultural preference, instead of established networks of modern exchange, serve as the driving forces for its spread in South Asia. This resistance to modernity can be understood as the explication and the apparent chaos of ecology that modernity yearns to restrain and control, spatially.

Under the radar of commodity history

The shape shifting chili plant produced many varieties over the years and as a consequence came to occupy variegated spaces, from mythical landscapes to colonial instruments of power; not in one continuous line but through a series of oscillating translations which continue to this day. In this process, entangled with the chili pepper,

- For the Inca, architecture was a verification of the origin myth, which used to non-human chili plant and food culture to naturalize the fiction of the natural order that would be unchanged by human actions.
- For the Taino, architecture mirrored the complexity of nature in the subsistence cultivation techniques of swidden agriculture which was in itself a very fluid space, extending from the jungle to the sea.
- For the Spanish colonizers, architecture performed as sites of pleasure, in the gardens of the aristocrats and nobility where the chili plant was appreciated for its beauty and novelty.
- For the European men of science, architecture performed as programs of modernity, first in the rigorous documentation of the 16th century herbals and later in their spatialization of the formal botanic gardens.
- At the Hungary-Ottoman border, architecture was distinctly functional and representational in the houses of the paprika farmers and peasants of Szeged.

- For the common folk in India, architecture was in the form of the domestic space of the kitchen garden, where the chili pepper grew as a substitute for black pepper at local level.
- For the Mughals, architecture was in the form of new processes of cosmopolitan design and culinary arts, which was fluid, constantly shaped by the changing foreign and eventually local influences.
- For the British Colonizers architecture performed in the production of commodified culture such as the curry culture and later on the curry house culture and as a technology of power in the botanical garden meant to be instruments of colonial reordering.

Entangled with the non-human chili architecture is a multi-faceted thing with many forms when viewed through the lens of the global history of architecture as entangled between human and non-human histories.

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CHAPTER 1

Image 56 The Inca Origin myth of the ancestral siblings.

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335 (Image from The Royal Danish Library, Copenhagen)

Image 57 Hungarians and Turks fraternizing over paprika and wine.

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15.

Image 58 British breakfasts of 'spicy curry' at Fort William.

Source: London British Library archives ,The Times.1924.

CHAPTER 2

Image 59 Huayna Capac asks Candia if they eat gold

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p. 371 (image from The Royal Danish Library, Copenhagen)

Image 60 Inca farming terraces at Pisac Valley, Peru

Source: Author

Image 61 Qollqas at Ollantaytambo, Peru

Source: Author

Image 62 Inca Empire Expansion map.

Source: Public domain CC. 12 March 2018 accessed through https://commons.wikimedia.org/wiki/File:Inca_Expansion.svg

Image 63 [Left]A khipukamayuq holding a khipu. Bottom left is an illustration of a yupana

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335 (Image from The Royal Danish Library, Copenhagen)

Image 64 [Right] Storehouses of the Inca. An administrator, identified as Poma Chaua showing a quipu, presumably with some tally of the storehouses' contents, to Topa Inca Yupanqui (1471-93)

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335 (Image from The Royal Danish Library, Copenhagen)

Image 65 Layout of Inkawasi

Source: Alejandro Chu ,2015 La plaza y el ushnu mayor de Incahuasi, Cañete, 3,Año Cuadernos del Qhapaq Ñan.

Image 66 Layout of the Qolqawasi

Source: Urton, Gary, and Alejandro Chu. "Accounting in the King's Storehouse: The Inkawasi Khipu Archive." 26, no. 4 (2015): 512-529.pg.518.

Image 67 The grids in the Qolqawasi

Source: [left]Photograph by Alejandro Chu,[right]Urton, Gary, and Alejandro Chu. "Accounting in the King's Storehouse: The Inkawasi Khipu Archive." 26, no. 4 (2015): 512-529.pg.518. pg.526.

Image 68 Cieze de Leon writes of Cusco being too cold for any fruit bearing plant except the mole

Image 69 Cieze de Leon writes of encountering “black salt wrapped in chili pepper” in Abibe mountains north of Cusco in present day Columbia.

Source: Cieza de León, Pedro de. 1922. La crónica del Perú. Madrid: Calpe.pg.115,293. Accessed via https://archive.org/details/lacrnicadelper00ciez/page/114 on 21st April 2019.

Image 70 The Inca Origin myth of the ancestral siblings.

Source: Felipe Guaman Poma de Ayala, The First New Chronicle and Good Government (or El primer nueva corónica y buen gobierno), c. 1615, p.335.

Image 71 Map showing Moya lands during the time of Topa Inca(1471-1493) and Huayna Capac(1493-1524)

Source: Niles, Susan A. ""MOYA" PLACE OR YOURS? INCA PRIVATE OWNERSHIP OF PLEASANT PLACES." Ñawpa Pacha: Journal of Andean Archaeology, no. 25/27 (1987): 189-206. http://www.jstor.org/stable/27977816.pg.200.

CHAPTER 3

Image 72 Earliest map of Hispaniola as a jungle and temporary structures.

Source: Ramusio, Giovanni. Delle Navigationi Et Viaggi. In Venetia: Appresso I Givnti, 1606.

Image 73 The Taino peoples and the Caribs.

Source: Rouse, Irving. The Tainos : Rise & Decline of the People Who Greeted Columbus. JSTOR EBA. New Haven: Yale University Press, 1992.pg 44.

Image 74 La Mañiere Et Facon De Jardiner Et Planter Des Yndiens (The Manner and Style of Gardening and Planting of the Indians),ca.1586.

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

Image 75 Patates (Sweet Potato), Pimente (Pimento/chili), Coqves (Coconut Tree) ca.1586.

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

Image 76 Swidden Cultivation of the Taino.

Source: Harris, David R. "The Ecology of Swidden Cultivation in the Upper Orinoco Rain Forest, Venezuela." Ekistics 34, no. 202 (1972): 150-54. http://www.jstor.org/stable/43618019.

Image 77 Taino Architecture.[From top] Hamaka/hammock, Caney and Bohio.

Source: Fernández De Oviedo Y Valdés, G., Amador De Los Rios, and Real Academia De La Historia. Historia General Y Natural De Las Indias, Islas Y Tierrafirme Del Mar Océano. Impr. De La Real Academia De La Historia, 1851.764

Image 78 Hagis Roges, Hagis Ianne, Hagis Vert (Red Pepper, Yellow Pepper, Green Pepper) ca. 1586

Source: Histoire naturelle des Indes : the Drake manuscript in the Pierpont Morgan Library. New York : Norton, 1996 (full-color facsimile). Pierpont Morgan Library Dept. of Literary and Historical Manuscripts accessed through https://www.themorgan.org/collection/Histoire-Naturelle-des-Indes/118# 25th May, 2019.

Image 79 Illustration of Columbus and his description of the chili. "In those islands there are also bushes like rose bushes which make a fruit as long as cinnamon full of small grains as biting as pepper; those Caribs and the Indians eat that fruit as we eat apples."

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10

Image 80 Barbacoa Smoking/drying

Source: Rouse, Irving. The Tainos : Rise & Decline of the People Who Greeted Columbus. JSTOR EBA. New Haven: Yale University Press, 1992.pg.10

CHAPTER 4

Image 81 Columbus' return to the Spanish court in 1494.

Source: Eugene Delacroix painting "The Return of Christopher Columbus", 1839.

Image 82 Capsicum annuum: (A) Oellinger 1553, Ms. 2362 folio 289. Source: (A) Erlangen, University Library (B) Aldrovandi, Il Teatro della Natura, vol. 6-1, folio 48, 16th century (2d half). Note three types of fruits.; Copyright: (Bologna, University Library.)

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 67.

Image 83 Putative Capsicum pubescens or C. baccatum. Source: Lobel 1576 b. Courtesy: Muse´e Requien, Avignon, France.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 68.

Image 84 Capsicum annuum L. [as Piper Indicum maximum longum] Basilius Bessler, Hortus Eystettensis, vol. 3: Primus ordo collectarum plantarum autumnalium, t. 326, (1620) [B. Besler]

Source: https://www.bl.uk/collection-items/hortus-eystettensis accessed on 27th May, 2019.

Image 85 György Lippay's Pozsony Gardens 166-69, outskirts of Esztergom(present-day Bratislava)

Source: https://felvidek.ma/2012/01/magyar-szlovak-egyuttmukodessel-ujjaeledhet-a-posoni-kert-genbankok-elodje/ accessed on 21st April, 2019.

Image 86 Chili pepper illustrated in the Index Stirpium as appeared in the Hortus Botanicus

Source: Koning, J. de. Drawn After Nature: The Complete Botanical Watercolours of the 16th-Century Libri Picturati. Zeist: KNNV, 2008.pg.57.

Image 87 Medium-size capsicum peppers (C. annuum): on bronze doors of Pisa cathedral, 1601. J. Janick.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 67.

Image 88 Earliest illustration of the chili mistakenly identified as siliqvastrum/cardamom, 1542

Source: Leonhart Fuchs' De historia stirpium commentarii insignes (Notable commentaries on the history of plants) published in 1542.

Image 89 (B) from the herbal Theatrum Botanicum. Source: Parkinson 1640. Courtesy: Muse´e Requien, Avignon, France.

Source: Janick, Jules. Horticultural Reviews. Volume 35. Horticultural Reviews ; v. 35. Hoboken, N.J. : Chichester: Wiley ; John Wiley [distributor], 2009.pg 68.

Image 90 The chili as an ornamental plant

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15.

Image 91 Chili reaches the Ottomans through the Spice route.

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10

Image 92 Map of Hungary-Ottoman Frontier

Máté, Zsolt. "The Medieval Social Topography of Szeged." Periodica Polytechnica Architecture 40, no. 1 (2009): 29-35.

Image 93 Szeged as a battle ground

Source: https://www.awesomestories.com/asset/view/Szeged-Freed-of-Ottoman-Rule

Image 94 Social topographic maps of Sezged, [left] showing farmer distribution, [right] showing market distribution between 1522-1546

Source: Máté, Zsolt. "The Medieval Social Topography of Szeged." Periodica Polytechnica Architecture 40, no. 1 (2009): 29-35.

Image 95 Sun-drying paprika in the porches.

Source: https://www.cnn.com/travel/article/paprika-hungary/index.html accessed on 11th April, 2019.

Image 96 Sun motif gables

Source: https://www.cnn.com/travel/article/paprika-hungary/index.html accessed on 19th April, 2019.

Image 97 Kulu hand mill, Stringing paprika for drying, the chili pepper motif in art.

Source: Halász, Zoltán. Hungarian Paprika through the Ages. Budapest: Corvina Press, 1963.pg.15, 28, 45.

CHAPTER 5

Image 98 Portuguese Goa

Source: Jan Huyghen van Linschoten, Itinerario. Voyage ofte schipvaert [...] naer Oost ofte Portugaels Indien [...]. Amsterdam: Cornelis Claesz, 1596 (Utrecht UB, MAG: T fol 133 (Rariora)).

Image 99 Colonial plantations of Portuguese Goa

Source: Jan Huyghen van Linschoten, Itinerario. Voyage ofte schipvaert [...] naer Oost ofte Portugaels Indien [...]. Amsterdam: Cornelis Claesz, 1596 (Utrecht UB, MAG: T fol 133 (Rariora)).

Image 100 Stirpium Adversaria Nova, 1571 by L'Obel, Matthias de

Source: https://archive.org/details/b30333180/page/134

Image 101 Trade routes of the 1500s.

Source: Bentley, Jerry H, Subrahmanyam, Sanjay, and Wiesner-Hanks, Merry E. "The Organization of Trade in Europe and Asia, 1400-1800." In The Cambridge World History, 160-89. Vol. 6. The Cambridge World History. Cambridge: Cambridge University Press, 2015.pg 184.

Image 102 Chili reaches India.

Source: Andrews, Jean. The Pepper Trail History & Recipes from around the World. Denton, TX: University of North Texas Press, 1999.pg 10.

Image 103 Fight at a Bazaar

Source: Babur, and W. M. Thackston. 1996. The Baburnama: memoirs of Babur, prince and emperor. Washington, D.C.: Freer Gallery of Art.

Image 104 "Business of Life"

Source: page 102b from a manuscript of Nasir-ud-Din Tusi: Akhlaq-i Nasiri (Nasirische Ethics "), Akbar period 1590/95, image: 22.3 x 11.5 cm, sheet : 23,5 x 14 cm, collection of Prince Sadruddin Aga Khan - Mughal era.

Image 105Floating gardens

Source: Nasir-ud-Din Tusi: Akhlaq-i Nasiri (Nasirische Ethics ,Agha Khan Archives.1590.

Image 106 Plan of the Calcutta Botanic garden, 1816.

Source: Axelby, Richard. "Calcutta Botanic Garden and the Colonial Re-ordering of the Indian Environment." Archives of Natural History35, no. 1 (2008): 150-63.pg 154.

Image 107 Description of the Capsicum varieties in India by Roxburgh, 1820-24.

Source: Roxburgh, William, and N. Wallich. Flora Indica, Or, Descriptions of Indian Plants. Printed at the Mission Press, 1820.pg 259-261.

Image 108 Varieties of the chili growing in the Calcutta Botanic garden

Source: Royal Botanic Garden (Calcutta), William Roxburgh, and William Carey. 1814. Hortus Bengalensis: or, A catalogue of the plants growing in the ... Botanic Garden at Calcutta. https://archive.org/details/hortusbengalensi00roxb.

Image 109 The British 'Babus'.

Source: Mukherjee,Debabrata. Historic UK.2013.