

Autoethnographic GIS: Creatively Exploring Place and Process

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Abstract

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Place does not have an easy home in GIS; it is an unstable (and embodied) concept that is often flattened by well-intentioned attempts to stabilize (and disembody) it. In an embodied effort to make sense of an exploratory GIS praxis that may approach place with further fluidity, nuance, and care, I adopt an autoethnographic orientation. This orientation takes shape through two interweaving pathways: a situated exploration of processes of doing such GIS, and an exploration of my own sense of place as it emerges through and within such doings. To facilitate explorations of both place and process of doing, three autoethnographic GIS project drafts are crafted: a written self-as-GIS dialogue, a web map of memories across place and time, and a playful web dashboard of co-inhabitants in place. The project drafts, alongside robust documentation of their construction processes, set the stage for situated examinations of these three place-based explorations and their ontological, epistemological, and methodological

insights. Building upon post-representational cartography, I delve into how an autoethnographic orientation to GIS may support nuanced—and perhaps more-than-representational—explorations and sense-makings of geographic phenomena.

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1 Introduction

What might the practice of a creative GIS otherly, with a playful desire to support care-oriented explorations of *place*, look like? Place is elusive in GIS; as a messy and uncertain concept, it gently resists representation. Yet, even as such a concept resists representation, we may still strive for GIS-based sense-makings of place. *Explorations* of place, in and through GIS, may offer more open-ended and unfixed epistemological and methodological approaches. Indeed, I adopt an exploratory approach to both place and method as I seek to make sense of the uncertain practice of a creative, place-based, care-oriented GIS. Care ethics are considered here as an orientation to space exploration that may give us pause, slow us down, ask us to be more relational, situated, reflexive, in our doings of GIS. Such an orientation may lead us away from rigid systematizations of place and toward caring, nuanced explorations deeply intertwined with the spaces and places at the heart of such work. I imagine these explorations to be playful and creative; creativity is, of course, a prerequisite for working with things that are unstable, unfixed, *embodied*. A playful disposition invites a willingness to try something new or unexpected, to experiment. What might the practice of a creative GIS otherly, with a playful desire to support care-oriented explorations of place, look like?

The exploration of such practice, I have realized, is distinctly *autoethnographic*. In the particular explorations of this research, an autoethnographic orientation took shape in two intertwined ways: through an exploration of the open-ended process of doing creative, place-based, care-oriented GIS, and through an exploration of my own sense of place as it unfolds through and within such doings. These two strands, weaving together throughout this research, came to embroider emergent landscapes of an autoethnographic GIS. Thus far, the landscapes have revealed themselves to be a group of three overlapping realms, each containing a core component

of an autoethnographic orientation to GIS. The first realm contains the *how* and *why* of a given GIS process; *how* and *why* did this geographic sense-making emerge in the way that it did? This realm is deeply concerned with choices made and unmade as we go about our doings of GIS. The second realm positions us to actively tailor our methods and designs to the nuances of geographic phenomena with which we are in relation; to carefully let such phenomena guide our representational and exploratory work and the choices therein. The third realm leads us to recognize and pursue emergent sense-makings of such phenomena throughout all stages of a project process—from the initial inkling of an idea through the final representational output(s). Put simply, autoethnographic GIS leverages mapping-as-process (Kitchin et al. 2013) and a post-representational orientation to mapping (Caquard and Cartwright 2014) in *embodied* and exploratory sense-makings of geographic phenomena and our relations to them. The exploration of place calls out for more-than-representational and emergent methods in and of GIS; an autoethnographic sensibility begins to direct us toward the fleeting sites of such more-than-representational sense-makings and emergent possibilities.

To autoethnographically explore the doing of such place-based GIS, to begin searching for an answer (merely one out of an unknowable quantity) to that stated question that vexes me so, I dabbled in the development of a creative, place-based, care-oriented GIS triptych. Thus began the construction of three open-ended creative GIS projects, each exploring my relations to and within seven spaces and emerging from in situ recollections of my experiences, memories, and observations in those places. The first project is a self-GIS dialogue, which arose as a written conversation between myself as an analyst and myself as a GIS. The second project is an exploration of memories in place and time, and took shape as a web GIS featuring written descriptions of my memories and their associated feeling(s) and time(s). The third project has

become a playfully situated web GIS dashboard that explores presences in each space through creative geovisualizations. Throughout the creation of these projects, I had documented my thought processes and observations via field notes with the intention of generating insights into the (somewhat emergent) *doing* of place-based GIS. This triptych and the process of each projects' respective creation have led not only to an initial, admittedly fuzzy, impression of what creative, place-based, care-oriented GIS might (and might not!) look like, but also to an emergent understanding of what autoethnographic GIS may be and might offer to explorations of place (and beyond).

I find that I am partial to the postphenomenological definition of a Geographic Information System (GIS) as anything that interacts with geographic information in any way and for any length of time (Zhao 2023); further, I take “geographic information” to refer, rather broadly, to information, knowledge, or experience of and within space.¹ Thus, my imaginations of what a creative GIS may be tend to align more closely with creative mappings, of any shape or form, than with more conventional, technical approaches to information systems. That said, by using the term “GIS,” rather than simply “mapping,” I hope to contribute to expansions of what doings of GIS may encompass, similar to how the practice of “mapping” has expanded greatly in scope and method (i.e. the expansive practice of deep mapping; see Bodenhamer et al. 2015).² Moreover, such creative mappings often require fewer technical skills, resources, and exhaustions. This makes them convenient sites for experimentation and exploration; creative thinking-spaces and speculative middles, if you will (Boyd 2022, Springgay and Truman 2018). Not to mention that

¹ I believe that whether something is or is not a GIS relies upon the perspectives of the beholder(s) and the creator(s). If at least one of these perspectives is ready to declare a thing to be a GIS, then, as far as I am concerned, a GIS it shall be. Of course, it would be perfectly reasonable to expect both perspectives to align in their assessment before declaring that thing to be a GIS, too.

² Further, I interpret “GIS” to refer to both tangible output and process of doing. As this text unfolds, one might notice that the term “GIS” bounces between these two meanings.

such mappings may adapt more easily to the messiness and uncertainty of the geographic phenomena of interest in this research. Yet, again, it is important to remember that the technical side of mapping has a place here too. Experimental, exploratory, and *autoethnographic* creative mappings may lead to a great deal of insights into possible adoptions of more nuanced ontologies, epistemologies, and methodologies in GIS more broadly. Indeed, I hope that the creative place-based GIS triptych that I offer here, and the autoethnographic orientation with which this triptych was conducted, begins to do just that.

In what follows, I first offer a background. Here, I examine the role of place in GIS, then expand from GIS to reach more creative and critical engagements with mappings. I bring in relational care ethics as a guiding principle to place-through care for (more-than-human) space and a relational operationalization of place—and conclude the background with a discussion of autoethnography as a reflexive and situated exploration of both place and process. This is followed by a detailed overview of the methods adopted in this research. A brief nod to reconstructed narratives of the triptych’s development processes is offered before transitioning to a discussion of these creative, place-based, care-oriented, autoethnographic projects. First, I examine the elements of place explored across these three projects, then turn to the relations to space that permeated them. Next, I trace emergent patterns found within these project processes: place-based insights beyond the data in-hand, incomplete navigations of logics, hierarchies, and relations, and the role of reflexivity. These considerations lead into a discussion of autoethnography in GIS, where I describe the three interwoven considerations noted briefly above. This is then followed by a reflection upon and within the particular context of GIScience and GeoAI. A conclusion—raising but a few of the many limitations and possible next steps—is provided.

2 Background

In this background, I invite to the stage developments and concepts influential to sense-makings of creative, place-based, care-oriented GIS. I begin by tracing the operationalization of place in GIS, recognizing the limits of platial GIS as a *spatial* and *representational* practice (as opposed to *place-based* and *exploratory*) and raising relational care ethics as an orientation to place that may guide exploratory place-based GIS ontologies. I then turn to a discussion of creative and critical GIS scholarship. Here, I point to insights and practices that inform imaginative and reflexive doings of GIS. Finally, I introduce autoethnography as an orientation to our work in GIS that brings together more-than-representational explorations of place, post-representational attunements to situated doings and emergent processes of creatively place-based GIS, and reflexive engagements with ontologies, epistemologies, and methodologies.

2.1 Place in GIS

To varying degrees, the operationalization of place in GIS is inspired by the poetic reflections upon “space” and “place” first made by humanistic geographers in the 1970s (i.e. Tuan 1977), although often lacks the nuanced and poetic nature of such reflections. Space has been conceptualized by humanistic geographers as a bounded extent of reality; there are a multitude of critiques and reimaginings of what space is and how it takes shape (i.e. the reading of space as produced or through feminist critique; Lefebvre 1991, Rose 1993, Massey 1994), yet this definition of space encapsulates the term’s operationalization in much GIS practice. Cresswell (2014), borrowing from Agnew (1987), outlines three key elements of place: location, locale, and sense of place. Place, recognized in this way, is space that carries situated (and often abstract) meaning for humans, and as one climbs the ladder from location to locale and then to sense of place, one discovers increasingly unstable rungs. There is much room for nuance and creativity

(and critical theory) in the approach to place (Cresswell 2014, Adams et al. 2001). Postqualitative geographies (Boyd 2022) may produce a rather enticing nonanthropocentric conceptualization of space, with even further complexity: if subjects are ultimately imperceptible—blending thoroughly with their environment—then spaces themselves must be dynamic entities of their own. Place, then, may perhaps be better understood as a deeply situated relationship to the dynamic, multitudinous, and more-than-human entity that is space. Regardless of the particularities in how it is understood, place is rather difficult to pin down—but for good reason. This, however, has not prevented the emergence of a platial GIS practice that seeks to absorb place into typical spatial analysis epistemologies, or epistemologies of the grid (Dixon and Jones 1998).

Platial GIS has been an emerging subfield for some time now, yet is still finding its footing within the realm of GIS praxis. Across GIScience perspectives, Goodchild’s (2011) reflections on place in GIS are of particularly potent influence. Goodchild sought to “formalize” place (and thus make it legible to the computer) in GIS, situating it within spatial GIScience ontologies and offering a few relevant spatial analysis techniques, such as areal interpolation (for analyzing specialized areas of inconsistent size, i.e. “places”) and spatial convolution (for tailoring spatial analysis to the geometric location of the individual). Soon after, Gao et al. (2013) utilized spatial analysis tools to make sense of place by creating platial buffers and joins via semantic relations. This marked a notable trend in the GISciences of fitting place to geospatial operations, but not the other way around. Many platial GIS projects operate in such epistemologies of the grid (Mocnik 2022), even if some cases may attempt to utilize a grid that is rather soft and fuzzy (i.e. projects that allow users to construct their own spatial boundaries; Huck et al. 2014).

Westerholt et al. draw from Goodchild (2015) to define place(s) as “the units utilized by humans to approach the geographic world” (Westerholt et al. 2018A, 1), belying a fundamentally

spatial approach and overlooking the poetic messiness inherent to the attempted operationalization of place. Westerholt et al. (2018B) demonstrate this approach to place through a particular platial analysis project, in which they gather user-generated geographic information from Flickr to visualize how people self-identified their location. This epitomizes the reliance on toponyms as proxies for place in platial GIS as well as the foregrounding of spatial and statistical analysis in such work, once again drawing from Goodchild's (2011) formalizing of place in GIS. More recently, Westerholt and co. have begun to reflect further upon the role of place in GIS (Westerholt et al. 2020). They misinterpret the vagueness of place as a stubborn limitation in efforts to analyze it, and espouse the persistent desire to fit place into spatial analysis epistemologies. We might recognize in their work—and in that that came before—a desire to rather aggressively force the vague nuances of place into a rigidly quantifiable and foreign realm of spatial analysis. Shaw and Sui (2019), while acknowledging the limitations of squeezing place into spatial epistemologies, similarly rely on a stable systematization of space and place (through their dimensions of absolute space, relative space, relational space, and mental space) that, while valuable, leads to reductive “spatial” analysis done through the use of social media data and smart technologies. An idea as nuanced (and poststructural) as place may be best explored beyond such limited spatial epistemologies.

Seeking to “formalize” place in GIS, Goodchild (2011) consciously overlooked the richness of the concept's roots in the humanistic geographies and opted instead to squeeze geographic place into epistemologies designed for geometric space. A reasonable, if unambitious, approach to place in the context of GIS. Yet, what if instead of fitting place to GIS, we did the opposite? Platial GIS would do well to arise first and foremost from platial—rather than spatial—concepts and epistemologies. Blaschke et al. (2018) have taken a few significant steps toward

recognizing the cultural nuances of place in the context of GIS, but they also urge us to recognize that there are many more steps yet to be taken. The need to foreground the platial, rather than spatial, is a reflexive critique shared by Mocnik (2022), who has set out on his own formalization of place in GIS—albeit with deeper consideration and reflexivity regarding the limitations of such formalization. Mocnik raises key challenges for platial GIS, including the inability to fully represent embodied experience (the catalyst for platial meaning) and thus complicating the ability to represent place in, well, the first place. He uses this as the basis for a call for further inclusion of diverse geographical perspectives in GIS, and points to the tension between lived experience and representation. Are in-place embodiments forever elusive? Here, Mocnik draws on Couclelis (2003) to refer to the vast incompleteness of geographic information, platial or otherwise.

If platial representation is doomed from the start, then we might turn to *exploration*, instead, as the key to what might then be more adequately framed as *place-based* GIS. Dixon and Jones (1998) raise *exploration* as a fitting term for poststructuralist geographies, and, while their piece suggests to us that place will never be fully compatible with the “space” in “spatial,” an exploratory approach of epistemological multitudes may facilitate a transition away from limited and hierarchical epistemologies of the grid. Perhaps not all GIS need be scientific, with the masculinist desire to prove or deduce something (Rose 1993, McKittrick 2021); instead, we might play with uncertainty, and allow such uncertainty to guide our creatively inductive explorations of place. What if geoplacial analysis is enacted not through geometric manipulation, but through the very act of exploration and thus made playful and uncertain?

Yet there are limits too in the common operationalizations of place in GIS, suggesting that an alternative orientation to the concept is necessary. If GIS consistently treats “place” simply as a subjective counterpart to “space,” then our imaginations of what place is and might be ought to

delve deeper into the complex messiness inherent to such a concept. We must strive for an orientation to place that not only requires us to explore beyond epistemologies of the grid, but also constructs an imperative to meaningfully engage with the messiness of place and all that is within it.

2.2 Relational Care Ethics and Place-based GIS

As we make sense of place in and through GIS, notions of care may guide us toward suitably nuanced explorations driven by critical attunements to our complex and situated relations to and within space. Here, I return to a postqualitative approach to space as a complex entity (Boyd 2022)—and thus place as a situated relation to and with that entity—as I raise the possibility that place-based GIS may be greatly enriched by a robust foregrounding of relational care ethics. This postqualitative approach is borrowed for its radical ambiguity, creating openings through which various relations to space may emerge.

Lawson offers that “care ethics focuses our attention on the social and how it is constructed through unequal power relationships, but it also moves us beyond critique and toward the construction of new forms of relationships, institutions, and action that enhance mutuality and well-being” (Lawson 2007, 8). This definition emphasizes the relationality of care ethics as well as the responsibility to imagine and put forth more caring and just possibilities in, through, and beyond our work. Deeply relevant to care ethics, and aligning closely with the (emerging) ethics of care-oriented place-based GIS, is the orientation of radical relationality: a deeply caring and more-than-human blend of epistemology and ontology raised by Indigenous feminist scholars (Daigle 2023). Yazzie and Risling Baldy recognize radical relationality “as a term that brings together the multiple strands of materiality, kinship, corporeality, affect, land/body connection, and multidimensional connectivity” and “provides a vision of relationality and collective political

organization that is deeply intersectional and premised on values of interdependency, reciprocity, equality, and responsibility” (Yazzie and Risling Baldy 2018, 2). Radical relationality is an ontology of being-in-relation-with, placing an emphasis on more-than-human kinship while also informing decolonial political orientations. The imagination (and creation!) of just futurities that allow all things and beings to thrive is an imperative that flows through the practice of radical relationality.

Scholars within the realms of GIS have indeed considered care ethics in their work, even if the bridge between relational care ethics and GIS may require further development. Drawing from Lawson and others, and also extending care beyond the social and toward the more-than-human, Zhao prompts us to center a perspective of “‘Care with GIS’, which emphasizes the importance of being responsible to both humans and non-humans and demonstrates care through the mediation of GIS” (Zhao 2023, 3). Through doing so, “this proposed reorientation will enable GIScience to empathize with diverse lived experiences and care for the well-being of others and ourselves” (Zhao 2023, 3). Bennett et al. (2024), while oriented toward remote sensing, might also offer to us a few key considerations for GIS at large. Geospatial technologies are in critical and tangible dialogues with the spaces which they represent; these dialogues must be approached with care for—and responsibility toward—these places and their inhabitants, human or otherwise. Exploration may be an operationalization of care, as it allows spaces to breathe—to exist on their own terms—to the extent possible, but there is still room to further consider the role of relational care ethics in place-based GIS.

Care ethics require attentiveness to the forms of relationships to and within space, as well as to institutions and actions that direct us toward the mutuality and well-being of all within and constituting that space (Lawson 2007). Care for place, then, would entail such a reflexive and

responsible approach to both the relationship (place) and the open-ended entity (space). This approach would ask us to think critically (and carefully) about our relations to spaces and our positionalities within them. To explore our complex and messy relations to space, in their entirety, we need to be mindful of the relations between ourselves as a piece of the space, the space as a dynamic entity, and all other things and beings in that space (i.e. radical relationality; Yazzie and Risling Baldy 2018). An epistemology of relational care ethics in place-based GIS, by prompting us to consider deeply our relations to spaces, may position us to recognize and explore such relations responsibly, reflexively, and fully. In other words, such an epistemology may lead us to be particularly mindful of the complex relations between ourselves and the spaces we co-inhabit, and therefore also to a GIS praxis that emerges from these relations and thus more meaningfully engages with the nuances of place—all while exploring and putting forth caring and just relations with and alongside the various beings and things that exist in space.

2.3 Creative and Critical GIS

While reimagining the ontological, epistemological, and methodological foundations of place-based GIS may be a daunting task, there is reason to be optimistic. GIS is, after all, constantly (re)imagined for more dynamic and imaginative praxis. For instance, Jung (2020) encourages us to consider critical and creative blends of geography, art, and the humanities, exploring various forms of data and representation. Kelly et al. (2023) take this strand even further, using art and experimentation to engage in creative geographic practice via the generation of nuanced, personalized insights through distinct vignettes of geographic art, such as collective sketch maps, video installations, and even bike tours. Deep mapping, defined by Bodenhamer et al. as a “finely detailed, multimedia depiction of a place and the people, animals, and objects that exist within it” that is “positioned between matter and meaning,” takes shape as another striking example of

creatively representational praxis (Bodenhamer et al. 2015, 3). We might recognize across this and similar work a desire to redirect geographic representation toward situated perspectives and creative expression; toward something more-than-representational.

And while the above examples of creative praxes are not explicitly situated within conventional GIS, similar instances are. Geo-narratives—the application of “current GIS capabilities for the analysis and interpretation of narrative materials such as oral histories, life histories, and biographies” (Kwan and Ding 2008, 443)—and cartographic storytelling (Pearce 2008) are prominent examples of outside-the-box approaches to GIS software and applications. Alt.gis, explored by Sui (2015), explicitly centers right-brain practices in GIS, through examples such as geo-narratives, mashups, and geogames, and is aligned around themes of design, story, symphony, empathy, play, and meaning. Alt.gis is positioned as an “enabling technology,” empowering diverse applications of GIS, creating space for care, and revolving around the critical, creative, and playful. Each of these praxes—and many more!—adopt a creatively critical approach to GIS, informed by a rich history of critical GIS scholarship.

In 1993, Sheppard laid out a remarkably relevant set of considerations for the geographic discipline in his commentary *Automated Geography: What Kind of Geography for What Kind of Society?* (Sheppard 1993). In this commentary, Sheppard urges us to consider the types of questions and answers that are possible through GIS practice. He calls also for a pluralism of methodologies and epistemologies, nudging us to consider “research practices and technologies which do not narrow the variety of approaches to understanding the world, and which enable all to participate in determining the future of that society” (Sheppard 1993, 460). In other words, to maintain an open mind and a personal epistemology of epistemological multitudes. A great deal

of work has gone into addressing these considerations through various praxes, but there is always more to be done.

As a blend of theory and praxis, and of external and internal reflection and critique, qualitative GIS and mixed methods follow in the footsteps of Sheppard's calls for diverse methodologies. Cope and Elwood (2009) famously explored the then-emergent practice of qualitative GIS, reflecting upon examples of such practice (including the mapping of perceptions of queer spaces, the use of an imagined grid to visualize images, and perhaps even the process of communal map creation and reflection) and thus urging us to expand the possibilities of what GIS could be. In a particularly influential piece, Kwan and Ding (2008) utilized geo-narratives as means of extending GIS toward the analysis of qualitative geographic information emerging from complex lived experience. DeLyser and Sui (2012, 2013) and Sui and DeLyser (2011) have offered generative reflections on the "qualitative and quantitative" divide, drawing upon their distinct academic backgrounds in a fascinating effort to bridge—and thus complicate—such a divide in GIS. Through their exploration of methodological pluralities, they encourage us to adopt creatively robust hybrid research methodologies as we strive to address complex contemporary challenges in geographic work. Such methodological diversity has only grown since (Font-Casaseca and Rodó-Zárate 2024).

Critical GIS has long pulled at the threads raised by Sheppard, albeit from a theoretical and often external orientation (Schuurman 2000, Schuurman and Pratt 2002). The tension between theory and praxis is explored by Leszczynski (2009), who concludes that critical GIS scholars must engage in dialogues of ontological realities—the back end of GIS—in order to meaningfully speak to the knowledges and epistemologies of GIS practitioners. Holler (2019) encourages us to learn and teach the becoming of "conflicted insiders," bridging the gap between external

(theoretical) and internal (practical) critique. Sheppard (2005) himself calls for reflexivity in critical GIS and the recognition that the critical practice is itself a form of knowledge production. Kitchin and Dodge (2007) raise similar considerations, pointing to the messiness betwixt mapping as applied knowledge and as way of knowing. Maps emerge through the process of mapping; they are not the result of some singular truth waiting to be presented. Couclelis (2003) reminds us too of forms of not knowing in GIS. The prevalence of uncertainty is not framed as a flaw, but as an inescapable feature of complex knowledges; one that must be recognized in responsible GIS practice and may even be embraced in our methodologies.

A keen sense of radical reflexivity has been picked up in more recent waves of critical GIS and geospatial scholarship, contributing further to the considerations raised by Sheppard (Elwood and Leszczynski 2018, Elwood 2021, Elwood 2022, Alderman and Inwood 2023). Indigenous scholars, too, are reclaiming mapping as Indigenous and decolonial practice and, through doing so, are putting forth alternative epistemologies and relations to space (Lucchesi 2018, Rose-Redwood et al. 2020). A spirit of reflexive reimagination is well-represented by “cartographies otherwise,” such as those explored by Oslender (2021). Pavlovskaya (2018) similarly asks us to recognize critical GIS as an opportunity to create and imagine otherwise, grounded in hope and care. Bergmann and Lally (2021), through their framework of geographical imagination systems, propose reimagining our approaches to GIS and creatively opening spaces for diverse knowledges, methodologies, and epistemologies, at and beyond the level of code. This builds from Bergmann’s (2016) earlier work prompting us to rethink the persistent hierarchies, delimitations, and relations within geographic information, including the roles of reader, researcher, data structures, observer, observed, and so forth. Lally suggests that the “doing of critical GIS takes meaningful form through experimentation, openness to the encounter, and linking with existing situated practices

and theories” (Lally 2022, 338). If maps emerge (Kitchin and Dodge 2007), so too does critical and creative GIS.

2.4 Autoethnography in Place-based GIS

GIS and mapping, as emergent processes (Kitchin and Dodge 2007, Jung et al. 2024), lead us to learn about space, and ourselves, through our doings. GIS emerges through practice (Lally 2022); challenges and uncertainties are simply opportunities to experiment and create something new, to explore. We explore and make sense of complex, more-than-human spaces, and (re)construct our own relations to such spaces, by *attempting* to represent them—and this holds true for GIS more broadly. An *autoethnographic sensibility* carefully situates us within this process as both objects and doers of GIS, and may reveal unique insights into the relations and methods that emerge from place-based work.

Broadly, autoethnography can be understood as “a form of self-narrative that places the self within a social context” (Reed-Danahay 1997, 9). Autoethnography is a critically reflexive epistemology, an orientation to research that draws attention to (and interrogates) the deeply situated nature of the storytelling that is taking place (Butz 2010). Butz explores five broad strokes of autoethnographic genres, two of which are deeply relevant to the practice of place-based GIS. The first such genre concerns “academics who reflect on their relations with research participants or the social context of their field work as a way to gain greater understanding of the social worlds they study or the epistemological characteristics of insights they take away from the field” (Butz 2010, 138-139). I dabble in this particular autoethnographic genre by exploring epistemological insights generated by my own doing of creative, place-based, care-oriented GIS. The second such genre considers “academics who study their own life circumstances intensely in order to illuminate a larger social or cultural phenomenon, and who often use experimental forms of personal narrative

writing as a way to incorporate affect and emotion into their representations” (Butz 2010, 139). By exploring relations to space *that are linked to ourselves*, and experimenting with our methods of exploration, we may better understand how sense of place might manifest through and within a GIS; we would also be well-situated to recognize successes and shortcomings in the exploration of our sense(s) of place that occurs through that GIS. Thus, I recognize the use of autoethnography in this research in two ways: through an exploration of the process of doing creative, place-based, care-oriented GIS, and through an exploration of my own sense of place as it unfolds through and within such doings.

Yet there are deeper considerations at play here, too. Relational care ethics prompt us to be accountable and reflexive in our place-based work and to recognize the situated and relational underpinnings of all research, GIS or otherwise; this aligns quite closely with autoethnographic methodologies. Through the adoption of an autoethnographic orientation, we can explicitly situate ourselves and our work within relations to spaces and the beings and things that inhabit them; we might also recognize various opportunities to engage with and put forth more just and caring relational possibilities within and beyond the spaces at the heart of our work.³ Additionally, the epistemological lens of autoethnography attunes us to the situated and ongoing processes of GIS and mapping (Kitchin and Dodge 2007, Kitchin et al. 2013). Through the adoption of an autoethnographic sensibility, we are positioned to generate situated, methodological, epistemological, and ontological insights as creative and critical GIS praxes emerge (Lally 2022). Further, an attunement to the process of doing creative and critical GIS opens a pathway for postqualitative inquiry within GIS, through a critically reflexive recognition of emergent

³ By placing autoethnographic work in conversation with relational care ethics, we might also draw attention to (and trouble!) a possible overemphasis on the knowledge-producing “self” that may occur at the expense of the underlying webs of nuanced interdependencies that bring about that “self” in space.

opportunities for speculative middles (Springgay and Truman 2018) and creative thinking-spaces (Boyd 2022). If we adopt a post-representational attunement to the process of doing (Caquard and Cartwright 2014), rather than look primarily to the insights of analytical output, open-ended possibilities and exploratory directions may emerge from our doings of place-based GIS.

GIS, as Mocnik (2022) reminds us, is unable to represent the embodied experience of place (as well as, I might add, embodied relations to space); thus, in all likelihood, place-based GIS will forever fall short. Yet an autoethnographic orientation to GIS may begin to introduce fragments of such embodiment, and the relations caught up within those fragments, through a careful attunement to situated processes. Place is not merely represented through the outputs of an autoethnographic GIS project, but actively explored and made sense of throughout the embodied (and more-than-representational) experience of developing that GIS.⁴ To further explore and represent place requires more-than-representational and emergent methods in and of GIS; an explicitly autoethnographic sensibility may begin to direct us toward the fleeting sites of such more-than-representational sense-makings and emergent possibilities.

⁴ Maddrell's (2016) work with grief mapping, in which she describes the more-than-representational sense-makings of mourners' spatialities of bereavement, offers an illustrative example of such relational, autoethnographic, and place-based mapping.

3 Methodology

Briefly put, this autoethnographic research entailed the creation of three creative and open-ended GIS project drafts and the generation of field notes documenting the emergent processes of these three projects. Once the three project processes had been experienced, I coded for particular themes and logics throughout the field notes and the project drafts. These encodings became the basis for comparisons across the three project processes and set the stage for reflexive narrations of the explorations of place that have occurred. Overall, this research was framed as an examination of three particular case studies, with autoethnographic inclinations. The ‘field’ was the practice of this creative, place-based, care-oriented GIS, with a reflexive focus upon my own participation and engagement. As I have used these case studies to critically reflect upon such GIS, it would be appropriate to frame this work also as an extended case method (Babbie 2011). The unit of analysis for this research was the very doing of this place-based GIS. The units of observation took shape as the project drafts and field notes.

My experience in this field was intended to be—and did indeed become—a key source of data, hence the autoethnographic consideration: I was, in fact, my own phenomenon (Butz 2010). In developing these three place-based GIS projects, I had constructed (and explored) autoethnographies of my relations to particular spaces. The autoethnographic layer of primary emphasis, however, took shape as a critical and post-representational (Caquard and Cartwright 2014) narrative of my attempts to explore place through these projects. Thus, there are two distinct layers of autoethnography that weave together throughout my methods: that of the sense of place that is explored through these three GIS projects, and that of the embodied process of developing these projects.

There are certainly limits to relying so deeply upon my own experiences in this work. Triangulation, or the lack thereof, is one such concern. I may have three projects, but I did not have access to parallel processes, as experienced by other participants, to examine. One might also point to the “researcher effect” on my sense of place and on my engagement with this place-based GIS. How might these doings have been influenced by the lens of *research*, as opposed to being done as an unstructured activity that emerged ‘naturally?’ This is a tension that remains unresolved. While I was well-situated to develop projects from the (unstable) foundation of my own sense of place, there are no doubt many absences and overlooked considerations that linger.

It may come as no surprise to hear that the situated nuances of this research will certainly evade replication. Yet complete replicability may not be a desirable outcome; we might look to the work of postqualitative geographers, who critically and creatively engage in methods and research that resist exact reproduction (Boyd 2022). The methods adopted in this research were not intended to systematize or define creative, place-based, care-oriented GIS, but, rather, to make sense of how one may do such GIS and to share such sense-makings.

3.1 Framing the Projects

To explore the doing of place-based GIS, I constructed a series of three playful and creative project drafts that engaged in care-oriented explorations of (my) relations to space. The places explored throughout these three projects had been clustered within a particular location that holds meaning for myself and emerged in response to an underlying theme relevant to that location. The University of Washington (UW) Seattle campus featured as this particular location, and the underlying theme was “places of (dis)comfort.” The UW Seattle campus was chosen for two key reasons: it is a space that has hosted (and continues to host) an abundance of experiences and relations, and was quite convenient to access. The theme of (dis)comfort operated primarily as a

lens through which I could identify relevant places within this location. I operationalized “places of (dis)comfort” as spaces where I generally felt comfortable, with a keen eye toward circumstances that could complicate this status; I gravitated toward seven such places. It is important to note that the adoption of this theme had limited the possible emergences of other, less comfort-inflected places.

Projects were conceptualized as open-ended explorations that revolved around—and emerged from—a guiding thematic approach to the recollection (see below) of place-based information. By remaining grounded in place-based recollections, I intended for these three projects to inch closer to development *from the place up* rather than *from the GIS down*. The three projects were, to an extent, defined prior to my explorations of and with them, but had nevertheless remained open-ended. A goal was to provide these projects with the wiggle room to become creative thinking-spaces (Boyd 2022), where unexpected directions or results could arise from place-based recollections and insights. I attempted to resist predetermined trajectories and embrace the speculative middle (Springgay and Truman 2018) as I pieced together these projects. That said, each project had been associated with an initial inkling of what may be created; this was a compromise between the desire for an executable plan and the desire for the projects to emerge ‘naturally’ from my relations to space.

The three themes that guided each of the three projects, respectively, were: 1) myself as a GIS, 2) memories across time and place, and 3) co-inhabitants in/of place. These open-ended themes influenced the *what*, *why*, and *how* of the (re)collected information explored through each project, as well as the design and implementation of the creative projects themselves. Here, I describe the developmental starting point of each project—how I had imagined each project to look—prior to engaging in this research.

The first project was intended to revolve around the concept of myself as a GIS; this was imagined as a playful dialogue between myself as the experiencer of place(s) and a heightened version of myself as an “interviewer.”⁵ This dialogue would offer a creative and playful way to expand our conceptions of what a GIS may be while also exploring a situated blend of relations and experiences in space. The second project was predicted to take shape around an exploration of place-time recollection. How do I feel in this place in the present, and how do I remember feeling at times in the past? How present are my past experiences in this place? How *could* I feel in this space, in the future? In terms of concrete outputs, the emotional strands of my relations to space were foreseen to lend themselves to narrative mapping structures. There would be room for place-based imaginaries—what *could* be—as time and place were complicated through this exploration. The third and final project was imagined to emerge from the exercise of counting co-inhabitants in each space. This was not to be mere observation, however: I would also be attuned to things that I considered to be a part of that space, even if not physically present or observed at the moment of recollection. In terms of concrete outputs, I had pondered non-cartographic comparisons of co-inhabitants in each place, such as charts or plots. A ‘map,’ perhaps non-cartographic or even non-visual, was noted as possible.

These three project themes were determined due to their distinct explorations of place as relation(s) to complex and dynamic spaces. Counting co-inhabitants provided an opportunity to explore places as dynamic collectives, through a numbers-and-beyond reflection upon the presences within them. Revisiting memories and emotions offered a means of exploring place through a reflection upon the past, present, and future of my experiences in, and relations to, space.

⁵ While the other two imagined projects were not inspired by any particular works, this self-dialogue was influenced by Dixon and Jones’ (1998) imagined dialogue between a spatial analyst and a poststructuralist.

A self-GIS presented an opportunity to reflexively explore spaces and relations to them through a personal narrative exercise. As these explorations were grounded in an operationalization of place as nuanced relation(s) to complex spaces, care—a critical reflection upon these relations, built upon the mutuality between ourselves and these spaces as well as a desire for the well-being of spaces and all within them—was positioned to guide the development of these projects (albeit to a limited extent, as will be discussed later).

3.2 Recollecting Place

At the beginning of each of the three project development processes, I embarked upon a field excursion. Doing so supported two significant elements of my research. First, I recognized that engaging with spaces in-person was an act of care. By revisiting spaces, I grounded my explorations of place in the relevant space(s) and demonstrated a desire to be present in (and accountable to) the spaces that would later be explored remotely via GIS. Second, these excursions were intended to prompt the generation of care-inflected recollections of place. These recollections became the ‘data’ that were then used to construct the following GIS projects, and had been collected and stored via participatory web mapping structures referred to as “recollection repositories.” During the first field excursion, seven spaces had emerged as places of (dis)comfort; thus each following field excursion also took me to those seven spaces in which I would recollect information.

Prior to each excursion, I had developed a unique recollection repository. Each recollection repository took the form of a basic participatory web map, where I could select a location on the basemap and open a customized form linked to that selected location’s coordinates. Each form featured explanatory context and open-ended prompts tailored to the guiding theme of each project, and the responses to these prompts were automatically stored in a spreadsheet. As I

revisited each space during the excursion, I would open the form at appropriate coordinates and take time to input emergent and in-place recollections in response to each prompt; this constituted a “recollection entry,” and one would be submitted for each of the seven spaces revisited during a field excursion.⁶

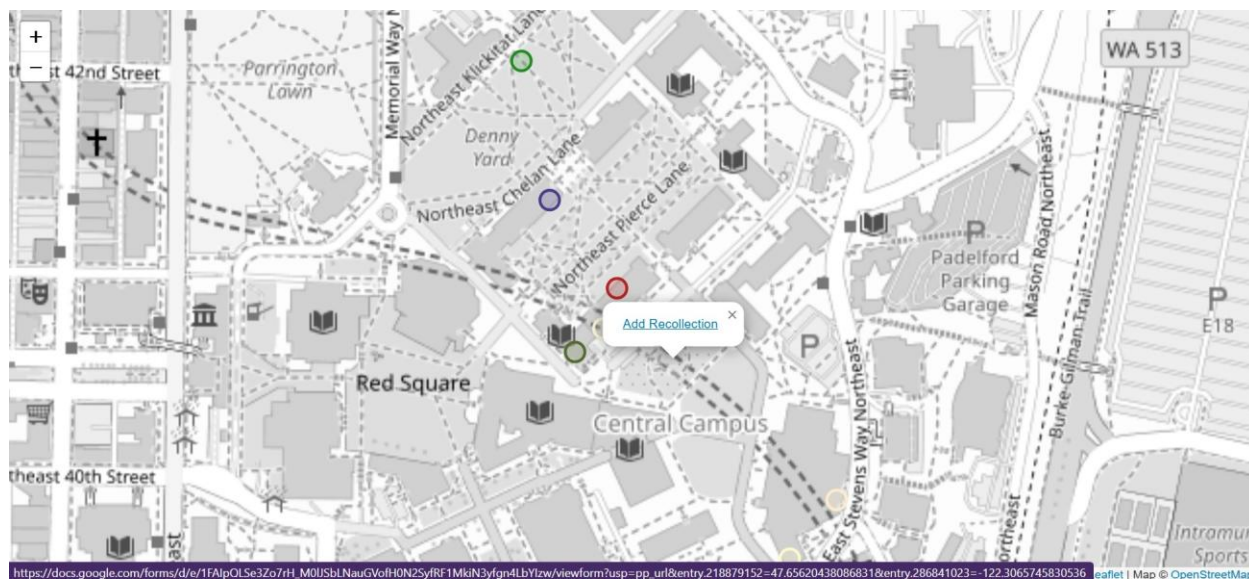


Figure 1. The recollection repository of the first project.

Once a recollection entry was submitted, a point would be added to the web map at the selected location’s coordinates. When selected, this point would offer the “place-framing” (the situated ‘name’ associated with the place) and the date of the recollection entry. The color of the point was determined by the response to a color association prompt in the form. Each excursion corresponded to one recollection repository; thus, this process resulted in three recollection repositories, each featuring seven entries. The three recollection repositories rested in a single GitHub repository. Recollections had been submitted via my personal smartphone (also used to responsibly generate photographs when considered relevant) and my personal laptop computer.

⁶ Links to the three recollection repositories can be found here:
<https://github.com/AlexKirchmeier/project-drafts>.

Unfortunately, the structure of these recollection repositories came at the expense of epistemological and ontological pluralities, as the development of the repositories constructed particular bounds within which geographic information could be solicited and submitted. Open-ended text and the open, yet underutilized, possibility of collecting media representations (i.e. images, recordings) allowed for some flexibility, but this was a stark limitation nevertheless.

3.3 The Project Drafts

The First Tea

AA: Well, I imagine that an ideal first prompt may regard the selection of these spaces, and their names. To establish a sense of “why these spaces”, right? So... What brought me to each of these spaces, and how did I go about naming them?

AA and GA take a sip of the first tea’s initial brew.

GA: That’s an excellent question, and one that may be deceptively difficult to answer. I suppose I could go through these spaces in the order that they have been logged in this recollection repository. The mellow path is a highlight of my typical journey to most spaces on campus. It’s a path that I have been traversing for quite some time now, and, true to the name that has been offered, it is indeed a space where I feel quite mellow and relaxed, more so than when in the neighboring spaces—to a rather remarkable extent...

GA takes another sip of the first tea.

AA: Perhaps you might attempt to delineate the space of this path, and offer a bit more detail...

GA: Ah, yes, of course—I’m getting there! So, if we consider the greater space of Denny Yard, you’ll notice that the naming convention is right there for me: why not consider this space to be Denny Yard? Why “mellow path”? Interestingly, it is the particular path that I take through Denny Yard that is the space of comfort. Here, I believe you have taken a picture or two of it.

Figure 2. The first project: a written self-dialogue between Analyst Alex (AA) and GIS Alex (GA).

Thus began the construction of three open-ended creative GIS projects, each exploring my sense of place across seven distinct locations within the UW Seattle campus and emerging from in situ recollections. The first project (available [here](#); see Figure 2), a self-GIS dialogue, arose as a

written conversation between myself as an analyst and myself as a GIS.⁷ The second project (available [here](#); see Figure 3), an exploration of memories in place and time, took shape as a web map that features written memory descriptions alongside associated theme(s) and time(s).⁸ The third project (available [here](#); see Figure 4) became a playfully situated web dashboard that explores presences in each space through creative visualization.⁹ These initial project drafts have been left unpolished in an effort to highlight their contributions as ongoing creative thinking-spaces. Gaps, tensions, limitations, unfinished touches, and so on, have all been preserved.

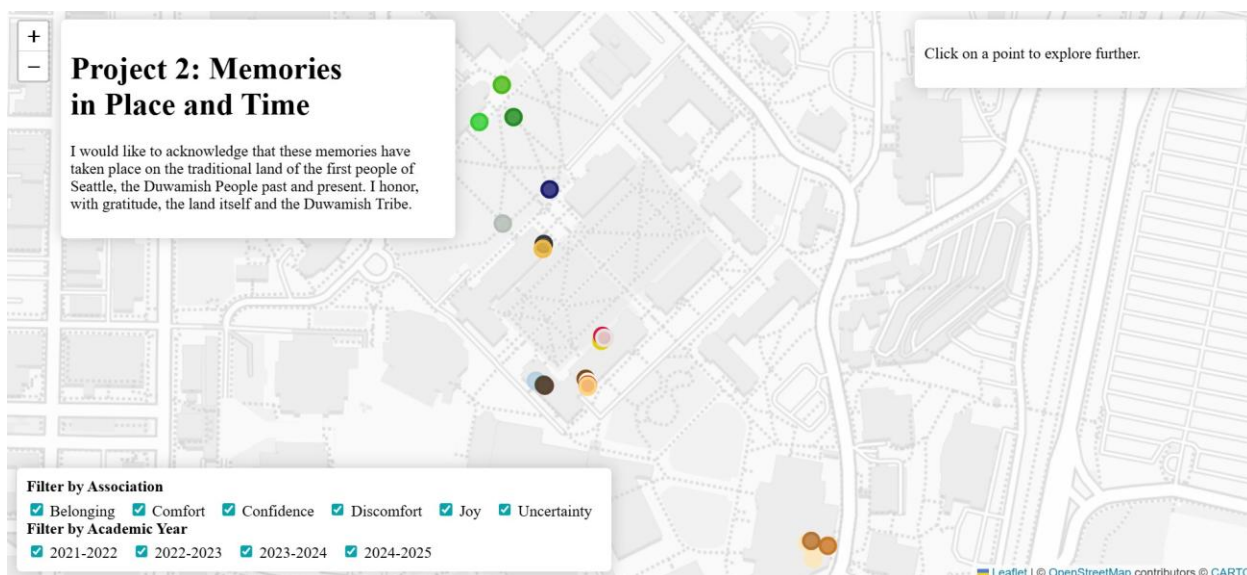


Figure 3. The second project: a web map of memories in time and place.

The broad processual strokes of each project emerged as follows: planning, constructing, and undertaking the recollection process; pondering the recollected information and brainstorming exploratory and representational possibilities; planning the design of the project; constructing a project draft. It is worth noting that the field excursion for the third project was planned and

⁷ Complete link to the first project:

<https://docs.google.com/document/d/1YpBIU1J7IK10x8Jw45sPEligsKcvu8jXpgQx8c2NY74/edit?usp=sharing>.

⁸ Complete link to the second project: <https://alexkirchmeier.github.io/project-drafts/project-2/index.html>.

⁹ Complete link to the third project: <https://alexkirchmeier.github.io/project-drafts/project-3/index.html>.

undertaken during the process of the second project. Software and applications used throughout the process of each project were entirely free and open-access, and had been accessed via my own personal devices.

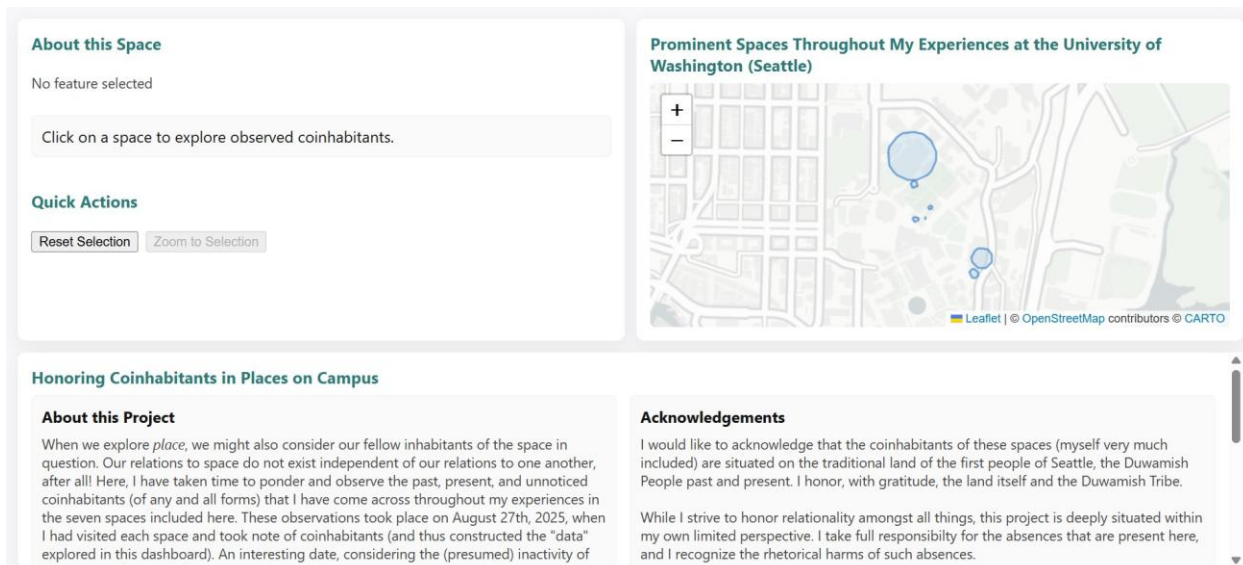


Figure 4. The third project: a web dashboard that playfully considers co-inhabitants in space.

3.4 Data Collection and Encoding

The data generated through such methods had taken two tangible forms: field notes and project drafts. Field notes, as the first source of data, had been collected in three digital research diaries; one for each project. In each research diary, I documented the steps that I did or did not take in creating the corresponding projects as well as any reflections that arose throughout the process of each project. In other words, these field notes track the choices that I made and the thought processes behind those choices, while also capturing emergent reflections upon the process of engaging in this GIS otherly. To the extent possible, the field notes supported an emic analysis and the project drafts supported an etic analysis.

Once the development of the three project drafts and their corresponding field notes had concluded, I engaged in two stages of latent coding. First, the encoding of the field notes was

completed, by hand, in the order that the project drafts had been constructed. I conducted the first, then second, stages of coding for each set of field notes. The encoding of all three field notes, once completed, was then followed by the encoding of the project drafts (once again by hand). Once this first round had concluded, I conducted a second round of coding, following the same pattern. For this second round, advantage was taken of a substantial familiarity with the particular coding styles, and the first and second stage codes were applied simultaneously.

The first stage of the coding process was focused upon the epistemological underpinnings of the project processes, and adopted concept, value, and magnitude coding styles (Miles et al. 2020). Concept codes were used to identify and categorize indicators of relevant epistemological and ontological themes, and value codes similarly explored how the data emerging from each project process suggested particular creative, critical, place-based, and care-oriented themes. Magnitude codes marked prominent concentrations of epistemological and ontological themes and values.

The second stage of the coding process revolved around the identification and evaluation of the processes of creative, place-based, care-oriented GIS, and adopted process, causation, evaluation, and dramaturgical coding styles (Miles et al. 2020). This second stage may be read as an analysis of the site of production, a consideration that is quite easily overlooked in the coding analyses of visual materials (Rose 2016). The process codes marked key steps in the design and construction of the projects. Causation codes tracked *how* and *why* projects emerged in the ways that they did by noting influential turning points in their development. Evaluation codes assessed the projects' explorations of place by pointing to successes and limitations, and dramaturgical codes playfully noted tensions and contradictions present in the data.

The encoded data were then explored via two code landscaping techniques: matrix displays and network displays (Miles et al. 2020). Matrix displays compared the first stage encodings across the three project processes, and network displays traced the processes of each project as suggested by the second stage encodings. Playful comparisons, enabled by quantitative elements of the matrix displays, allowed for numerical explorations in and of these landscapes. With encodings and their respective landscapes in place, it was possible to (re)construct narrations of my experiences with each of the three projects.

3.4.1 Exploratory Narrations of the Triptych's Emergent Processes

Narrative reconstructions of the development processes behind each of the three projects have indeed been written, although are not included here.¹⁰ My intention was to (re)create reflexive narratives of these emergent and exploratory doings of creative, place-based, care-oriented GIS. These narratives provide an autoethnographic and post-representational (Caquard and Cartwright 2014) glimpse into what the practice of a creative GIS otherly, with a playful desire to support care-oriented explorations of our relations to space, might look like. Such insights have been reconstructed from the process, causation, evaluation, and dramaturgical codes pulled from each project's respective field notes and were supported by the network display outputs constructed during the code landscaping process. Despite their length, these narratives serve as mere summaries of my field notes and thus oversimplify the processes of these projects. Notable absences include methodological possibilities that did not actively shape the development of each project but were nevertheless on the table at various points in the project processes.

¹⁰ These narrative reconstructions can instead be found here: <https://github.com/AlexKirchmeier/project-drafts>.

3.4.2 Analytical Comparisons

While the second stage of coding supported the construction of the three project narratives referred to above, the first stage of coding supported the discussion below. In this first stage, concept, value, and magnitude codes were marked in an effort to identify and trace the ontological and epistemological inclinations of the three projects. Once collected, the encodings of the project drafts and field notes were then associated with underlying themes. These associations served as the foundation for three quantitative matrix displays, in which the relative frequencies of encodings associated with each theme were compared across the three project processes. The first matrix display examined underlying themes of encodings that had emerged from the field notes. The second matrix display analyzed themes embedded within the project draft encodings, and, finally, the third matrix display compared the prominence of each theme across the combined field notes to the prominence of each theme across the combined project drafts. These three matrix displays allowed me to explore the comparative frequencies of ontological and epistemological themes across all of the field notes and project drafts; these relative comparisons serve as launchpads for further examination in the following section.

4 Discussion

In what follows, I draw upon field notes, project drafts, and encodings in a discussion of three thematic touchstones of these creative, place-based, care-oriented GIS processes. These three touchstones are: 1) explorations of place, 2) emergent patterns, and 3) autoethnographic GIS. The first two touchstones make sense of these creative, place-based, care-oriented doings of GIS; the examination of these two touchstones illuminates a path toward the third. To conclude this section, I place a few themes of this work in conversation with GIScience and GeoAI. The three project drafts referenced in this section can be accessed [here](#), [here](#), and [here](#).

4.1 The Exploration of Place

This research was framed primarily as an experimental and exploratory approach to GIS that may allow for nuanced explorations of place in and through the doing of GIS; thus, this discussion will begin by examining the contributions of these three projects and their processes to such exploration. In this section, I raise two overarching topics: elements of place, as (under)explored in this work, and relations to space, as care-inflected operationalizations of place that permeated this work. Place-based GIS is not imagined to be limited to the elements and relations described below. Rather, the below examinations are merely intended to offer insights into the place-based explorations that occurred in this research. These insights may reach beyond this work, but they barely scratch the surface of what creative, place-based, care-oriented GIS could be.

4.1.1 Elements of Place

Particularly prominent pieces of place across these three projects (and their respective field notes) are those of memory and temporality. Projects two and three address these themes rather

directly, whereas time and memory are quietly embedded within the written self-dialogue of project one. This is unsurprising; memories situated in place and the explicit recollection of past presences are both in immediate conversation with the dynamic (re)interpretations of past, present, and future experiences that shape one's sense of place. The second project, for instance, features sense-making commentary within memory descriptions, and the third project reconstructs presences across a multitude of memories in each space. The self-dialogue, on the other hand, engages with memories in a more subtle manner. Rather than featuring an outright exploration of distinct memories associated with place, the dialogue uncovers a nuanced blend of past experiences through a reflection upon myself in space. Memories are, of course, somewhat suspect. Susceptible to change, they are rarely as stable as we may wish them to be. This introduces a degree of uncertainty and instability into any GIS that attempts to explore them, and these three projects are no exception.

Temporality can be similarly messy, and carries with it a history of difficulties in geospatial representation (Font-Casaseca and Rodó-Zárate 2024). A few such limitations appear in these projects as well. The second and third projects do not offer much room for temporal specificity: the second situates memories within and across academic years, and the third simply applies memories from the past to address the gaps of the present. Yet the second project puts forth some specificity through the written descriptions of memories; further, these three projects collapse time to various degrees—lacking in precision, perhaps, but introducing avenues for nuance. The second project liberally blends memories; a few memories span years, even. The third project, while admittedly in tension with itself in this regard, was constructed with the intention of positioning all presences (past, present, or even unnoticed) as co-inhabitants beyond and across time. Alas, the very categories adopted in this project undermine such an ideal and reinforce temporal distinction.

The first project is perhaps the most conservative in terms of temporality, yet even the rote approach to past experiences in place provides the foundation for a rumination upon the present and future.

Oddly enough, delineating a given place proved to be a more intuitive task. Many such definitions adopted a certain ambiguity, allowing places to take unfixed shape. The first project describes, in writing, the physical extent of each place, although it does so rather loosely. As a written text, the dialogue is able to simultaneously define and make ambiguous various places. Some are expanded in unexpected ways; my interpretation of the boundaries of a place associated with a room, for instance, spilled out into the nearby hallway. In the second project, memories are scattered across a cartographic basemap. While some memories bring with them a greater degree of spatial precision and certainty than others, all of these memories contribute less to a rigid, exclusionary boundary of place than they do to a loose approximation. Memories are positioned on the map, but places are not. The third project offers perhaps the most playful and unfixed approach to place, rather unexpectedly so. When recollecting, I had placed no strict limits upon what I may observe to be present in each place. Possible boundaries were understood in two ways: visually, the extent to which I could see presences, and auditorily, the extent to which I could hear presences. Sounds, of course, traveled from spaces that may not have been considered to be part of the place in question, yet such sounds were indeed present in this place. To represent these places in the project draft itself, I chose to position broad circular polygons on the basemap in an effort to suggest approximation and ambiguity.

Places are also delineated through the names that I force upon them. This situates them according to my perception; some are defined by an abstract association (i.e. “mellow path”), others by activities (i.e. places related to tea, or a particular class), and others still by literal room

numbers. Doing so, while uncomfortably me-centric, offers insight into how and why I perceive a space to be a place. These place names wove their way into each project, providing a convenient reference for each place across all three project processes. The names are not restricted to any particular naming convention, allowing for some flexibility and playfulness, although there is, of course, a rather intense abstraction inherent to such a brief summation of a given place. I also found myself troubled by the tension between my respect for each space as a complex and dynamic entity, and my choice to represent each space through my own particular perspective.

The delineation and representation of place also emerged through less common means. Across these three projects, color, images, and sounds are applied in explorations of place. In the first project, colors associated with each place are unpacked in response to the first prompt. Some colors prove to carry symbolic meaning, whereas others are quite literal and direct. Significantly, colors become a launching point for a brief discussion of relations relevant to the given place. Color use in the second project revolved around individual memories: each memory is associated with a color, which is then used to visually enrich the corresponding point on the map. This adds a subtle, abstract element to the representation of each memory, albeit one that is largely uninterrogated and thus unintelligible to those who may not be familiar with the space or the memory. In both the first and second projects, color associations took shape as additional techniques for exploring and representing place. The third project differs, in that only three colors form the place-related color palette. A pastel yellow, used to represent the co-inhabitants observed at the time of recollection, also highlights selected places within the map panel. A pastel blue, corresponding to the co-inhabitants recalled in past memories, is applied to places that have not been selected. A pastel purple is adopted to represent the unnoticed, the absent, and the unknown—

or perhaps the future. In this third project, the use of color builds toward an underlying theme of temporality.

Images are incorporated into the first and second projects, although serve slightly different purposes regarding their relations to place. In the first project, photographs are utilized in two distinct ways: to visualize a given place (and, to an extent, my perspective within that place), and to launch further reflection. Images allow for some definition of each place, yet also provide the scaffolding with which I may expand, through writing, my interpretation of each place beyond these definitions. The photographs situate my audience—and myself!—and set the stage for further place-based exploration and reflection. Alas, the second project incorporates images in a less consistent fashion. Not all memories feature an associated photograph, not all photographs were taken in the place of interest, and only one of the included photographs was taken at a moment in time which I associate with a memory. Images are used as window dressing, to add visual interest to memory descriptions. Yet these images do tease associations with spaces and memories, and thus offer a sprinkling of place-related insights. It is worth noting, however, that some of these images were chosen simply because they were available. The sprinkling of place-related insights that they offer are due more to chance than intention.

While colors and images appeal primarily to visual senses, an effort was made to incorporate additional senses. A limited degree of auditory exploration was the only source of success in this regard, although possible place-based explorations through other senses were indeed pondered.¹¹ As part of the recollection process for the third project, sounds were marked as possible presences in space. The exploration of place takes auditory form, to an extent, as sounds

¹¹ Touch, smell and taste were also considered as possible senses through which an exploration of place may be conducted, although touch and taste were deemed too invasive, and my sense of smell a bit too ambiguous.

(both observed and recalled) are implicitly placed in conversation with my relations to space. “Implicitly” is the key word here, however, as sounds (and other presences) are not directly interrogated in relation to my sense of place. Sounds were indeed incorporated into the third project, but this project does not explicitly examine my sense of place beyond the observation of co-inhabitants. Nor has this project been developed with audio components, once again leaning instead upon visual forms of exploration and thus representation. Further, sound is difficult to reproduce; while the third project attempts to represent sound via text, the reduction of sound to text is at best an art of approximation. While the exploration of place through auditory means is present in this project, there is much left to grapple with.

The failure of all three project drafts to be inclusive of non-visual senses raises accessibility concerns and restricts potential avenues for place-based exploration. These projects not only rely heavily upon the visual in their representations of place (as do most doings of GIS), but also lacked accessibility measures in their development processes. The first project, as a written dialogue, arguably suffers the least in this regard, for information is captured primarily through text and thus can be represented via audio. The second and third projects, however, offer much of their meaning through visualization and the interplay between various visual components. Such meaning is not offered elsewhere. Thus, one might ask: for whom are GIS-inflected explorations of place intended? Might they be made more accessible for aspiring creators and audiences? Further, how might explorations of place develop through non-visual means? How might such explorations be enriched through touch, smell, sound, taste? Place, after all, is not strictly a term for the visual realm. An exploration of place through GIS is at least somewhat internal to the doer and *embodied*—thus transcending the visual—yet these three projects rely primarily upon the visual to communicate their explorations, regardless of how embodied such explorations may be.

4.1.2 Place as Relations to Space

Relational care ethics were proposed as a possible orientation through which GIS may more adequately and responsibly explore the messy nuances of place; thus, these project processes strove to center relations with and within space in their explorations. A noticeable disparity between the encodings for relationality within the field notes and the project drafts suggests that, while the project drafts themselves do indeed explore relations to space, relational thinking was most prominent behind the scenes, in the planning and development of the projects. Across the field notes, relational thinking was most present in the first project, at nearly twice the rate of encodings as the second and third projects, respectively. With regards to the encodings of the project drafts, the gap between relational encodings found in the first and second projects narrowed significantly, with the third project falling behind.

The first project explores relations to space through dialogical self-reflection; relational thinking offers a tangible foothold for written explorations of how I perceive each place and my position and identity within it. This tangible foothold emerges both explicitly, as a dialogue prompt, and implicitly, as an orientation to writing. I situate myself as part of a broader whole, interrogating my sense of place not just through my own experiences and associations, but through relations within each place. Further, the design of the project is itself quite relational: a dialogue between two identities, coming together to construct a narrative of place and each bringing distinct analysis and geographic information. All of these considerations, however, result from an open-ended GIS project constructed through the written word, and may not map neatly onto more conventional doings of GIS.

The second project features near-equivalent rates of relational encodings across the field notes and project draft. This is not to say that relationality was of equal prominence in both the

field notes and in the project draft, however, for relational thinking was more influential in the planning phases and writing of memory descriptions than in the broader design of the project. In the project draft, many of these encodings were associated with the individual memory descriptions; very few, in fact, had emerged from the project structure itself. While relational thinking is present in those written explorations of place, the structure of this project—the web map design—does not emphasize relationality to the same extent as the explicit prompts of the first project. However, memories, through their situated inclusion on the basemap, are still placed in implicit relation with each other, and their temporal relations are made visible through the filtering of time. Through the memory descriptions, the lens of temporality, and the memory associations, one can begin to explore the relations within and across the memories put forth by this project. This, however, requires a conscious effort, for relational thinking is not explicitly referenced nor facilitated through project design. It is the memories themselves that carry relations to and within space; the project design and layout, while not necessarily hindering the emergence of these relations, neither draws attention to nor facilitates their emergence. In other words, relationality is merely implicit in this project.

Yet these memories, as unstable ontological units perceived through a relational epistemology, do indeed offer a few considerations for the exploration of place via relational thinking—even if these considerations are a tad fuzzy at the moment. The memories are themselves relational; they blend together across time and space, (implicitly) drawing connections across distinct experiences and spaces. Further, memories contain within themselves relations to space and to others within that space; while these relations are not always explicit, they do lay a foundation for reflexive sense-making. Many of the memory descriptions, for instance, reference interactions with other beings and gesture at the role of these interactions in the emergent shaping

of that memory. Memories reach further still, as these sense-makings begin to influence ongoing and future relations to space. Case in (on-the-nose) point: one memory description recalls the influence of this very research upon an increasingly mindful sense of being in-relation-with!

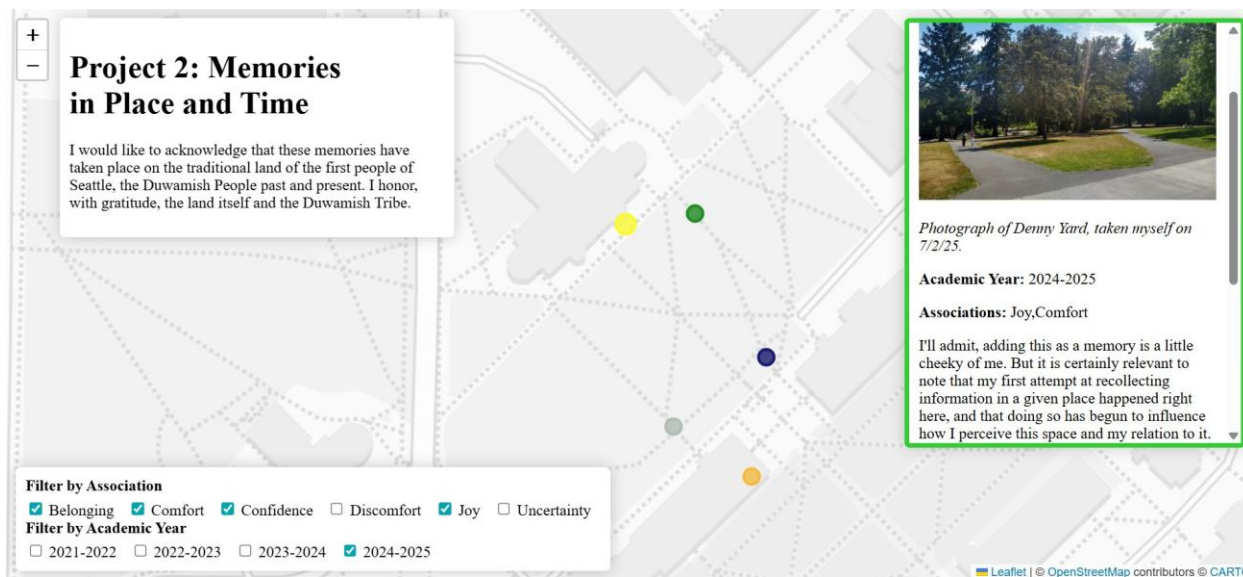


Figure 5. A memory put forth in the second project.

The third project featured the fewest relational encodings in both field notes and project draft. This project draft explicitly centers relationality in the written overview and acknowledgments of the contextual panels, suggesting once more that relationality is most conveniently incorporated through writing. And, while this project draft had featured the fewest relational encodings, it nevertheless manages to present the theme of relationality through design; the visualizations of presences in each place situate each presence in equal conversation. This relationality is, to an extent, disrupted by the use of categories, yet still suggests that spaces and places are constructed by many (more-than-human) actors. Here, relationality is emphasized not so much through innovative techniques, but through the simple choice to represent as many presences as I could observe, without hierarchy. Further, the consideration of co-inhabitants is a refreshingly straightforward avenue for a relational exploration of place. Who and what else is

present in these places? How do our relations to these co-inhabitants inform our sense(s) of place? This relational approach to presences directs our attention to the nuanced ways in which other beings and concepts contribute to places in our lives.

This relational thinking had emerged from the desire to honor relational care ethics throughout these GIS endeavors. The care-oriented inflections of these projects, however, were largely limited to the relational ponderances that took place behind the scenes. Care-related encodings were far more prominent in the field notes than in the project drafts. An attunement to relational care ethics had informed the ethos of each project, as well as their relational approaches to place; in this way, care informed the underlying values and epistemological choices made in each project. In other words, care was a guiding orientation to this work, returning time and time again throughout my field notes. Yet I struggled to transcend mere orientation; the methods and execution of each project, while care-inflected, are not care-directed. The exploration of relations to space *is* a care-oriented epistemology, but the geospatial ontologies upon which that epistemology takes flight—the methods and techniques of exploration adopted in these projects—restricts the heights it could ultimately reach. A more robust approach, one that toned down the playfulness, upped the critique, and ensured the centrality of care to each and every choice made, perhaps could have set the stage for more innovative, nuanced, and caring explorations of relations to space.

But while it was difficult to embed care into ontologies of GIS, it is worth reiterating that these three project processes do indeed strive to honor each place and the relations and beings that the projects touch. The recollection processes were recognized as acts of care and accountability: by visiting each place prior to representation, I could ground(truth) each project in experiences and recollections of being present in space. All three projects had featured encodings for co-inhabitants

in their drafts and field notes, indicating a consistent consideration of those with whom these places position me in relation with. As raised earlier, discomfort with defining spaces, borne from a desire to let spaces exist as their own entities, was also common.

The role of relational care ethics in the process of constructing these projects may be messy, incomplete, and at times in tension with itself, but an orientation of care has also foregrounded a relational approach to place, as well as reflexivity and accountability across these processes. Thus, I still recognize relational care ethics as an orientation to space and place that may nudge us toward greater nuance and depth in our explorations and representations of the places at the heart of our place-based GIS projects. Yet the precise role of relational care ethics in such GIS remains uncertain; I acknowledge many gaps where I, too, fall short. These three project processes offer merely the beginnings of a deeper engagement with care and relationality.

4.2 Emergent Patterns

Many additional patterns have emerged throughout the three project processes, some with greater intentionality driving their respective emergence than others. Here, I discuss a few such patterns that arose during the encoding process. These, too, offer fascinating insights into, and considerations for, situated doings of creative, place-based, care-oriented GIS. I begin with a discussion of the project processes' tendency to extend beyond the recollected information from which they emerged, then turn to logics, hierarchies, and relations that are at times both challenged and reinforced. I conclude this section with a reflection upon the role of reflexivity in and across these three project processes.

4.2.1 Emergent Realizations

Significantly, the first two of these three projects had not found themselves to be shackled by the 'data' of their corresponding field excursions and recollections. Not only did these two

projects (and their processes) build from and expand beyond recollected information, but new and unexpected realizations had emerged. And, as projects had developed, further place-based exploratory pathways similarly came into view. For the first project, these pathways took shape as open-ended written reflection; while Analyst Alex and GIS Alex engaged in their playful back-and-forth, pondering themes within the recollected information, new and unexpected directions were written into being. The dialogue was inductive by design and had used themes and patterns from recollected information as launchpads for further exploration. A few notable emergences had explored persistent tensions between “knowing” and embodying particular relations in and to space; these were but a handful of the 19 total realizations uncovered by the dialogue.

In the second project, exploratory pathways emerged through the (re)construction of memories. The construction of textual memory descriptions led to moments where I could dive into memories, morph them into text, and begin to (re)define them for myself with further clarity (indeed, many of the descriptions offer a degree of commentary). In other words, through writing these memory descriptions, I was exploring and making sense of these memories, and, by positioning these memories as geographic phenomena, also exploring and making sense of each memory’s relation(s) to space. I was able to expand beyond the recollected information into a fresh understanding of each memory contained within; as I did so, emergent realizations, such as feeling a stronger connection to a space after being caught outside during a storm (one of a total of eight such realizations), thrived throughout this project.

AA: Might we recognize, here, a tension between embracing the space as-is, and being made uncomfortable by certain features... Such features, in this case, being the occasional flock of geese?

GA: This might indeed be an excellent instance of contradictions and tensions embedded within my relations to outdoor spaces that warrants further interrogation. There's a limit to how "natural" or "unnatural" a space may be before it becomes uncomfortable to us, right? For me, there are certain inhabitants that are less welcome and often disrupt a positive relation to this space. Children, for starters. Even though the campus is a public space, I find the disruptive and "unnatural" presence of children to be so remarkably irksome. This isn't a space that I expect to see children, even if I know, intellectually and morally, that they are as welcome in this space as I am. The geese are similarly irksome, and, again, I *know* that they are no less welcome in this space than I—particularly when we factor in "natural" inhabitants. Yet, I find that what I *feel* and what I *know* is often at odds. I would never begrudge any entities' desire to (responsibly) be present in this space; yet I cannot help but feel irked when my own comfort in the space (often predicated upon a quiet atmosphere and robust personal space) is complicated.

GA takes another sip of the second tea.

Of course, we might also step back a bit and seek to define "natural." It's always worth troubling the nature-society divide, and I think that when I use the term "natural", I intend it to mean what is expected—or not unexpected, as it may more adequately be put. There are so many biases

Figure 6. One of many tensions explored by Analyst Alex (AA) and GIS Alex (GA) in the first project.

The encodings for emergent realizations proved far more frequent amongst the project drafts than the field notes, and the encodings for moments where expansions beyond the recollected information had occurred were also far more prominent across the project drafts. While this disparity between field notes and project drafts is at least partially due to drafts offering more tangible indicators of such emergences, it may also suggest that emergent realizations and expansions beyond recollected information occurred naturally, without much planning or predetermination. The *exploration* of place through GIS, then, may perhaps require not only an inductive orientation, but also the (ambiguous) space for such inductive exploration. The third project, for instance, featured very few encodings of these themes across both field notes and

project draft.¹² Uncoincidentally, the dashboard structure left far less space for inductive exploration once the relevant information had been recollected. The first and second projects, with relatively open-ended structures and approaches to information, had allowed for unexpected emergences, or, one might say, for the inductive exploration of place.

4.2.2 Logics, Hierarchies, Relations

Another pattern in which the third project may appear to differ from the first two is in the logics, hierarchies, and relations baked into each project's design and implementation. Each project has found moments to challenge or play with predominant logics and hierarchies, yet also perpetuates others. What follows is not intended to be an exhaustive list; it is simply an examination of a few patterns that have emerged during the encoding process.

As a dashboard, however creatively imagined, the third project is the most direct example of conventional GIS logics. Yet the others are not far behind; the second project relies on similarly well-trodden representational tropes, and the first is (perhaps unexpectedly) beholden to common GIS relations. Both the second and third projects, for instance, rely upon grid epistemologies in their efforts to situate each place via conventional cartographic web mapping. While their respective explorations of place extend beyond the grid (through the written word, for example, or noncartographic visualization techniques), these two projects, and the thinking within them, nevertheless remain tethered to it. These two projects also share a degree of reductive categorization: the second project restricts memories' possible associations to but a handful of broad concepts and times, and the third separates presences into three broad and situational categories ("past," "present," and "unnoticed"). These limited categories allow for streamlined

¹² However, one might argue that unexpected observations—such as that of a wonderfully awkward Steller's jay (incorrectly described as a blue jay)—may function similarly to emergent realizations.

representation, but—despite their carefully observed (and open-ended) emergence from recollected information—serve to reduce possible avenues for exploration. Further, the adoption of categories lends to these project drafts an illusion of ontological stability that obscures the (somewhat) arbitrary nature of category construction and assignment, directing attention away from the generative and open-ended possibilities of uncertainty.

While the first project offers a degree of uncertainty uncommon to most doings of GIS (for, in this dialogue, my relations to space are interrogated and indeed, made uncertain), it also relies heavily upon the reconstructed relationship between analyst and GIS. This was done, in part, to ensure that the dialogue took on GIS-like characteristics; yet, by centering this relation in the project structure, I reproduce assumptions of how one is to engage with a GIS. The analyst raises prompts that the GIS then addresses and offers context for. Analyst Alex is the primary driver of the dialogue, asking questions and directing the conversation. GIS Alex is often responding to questions, adding color via answers. In this basic framing, the analyst leads the GIS in the process of analysis.

In my encoding results, the frequencies of GIS logics across the field notes and the project drafts are roughly equivalent; this indicates that just as much as such logics and relations permeate these projects, they were pondered in my field notes. Yet pondering was, at times, both beginning and end; some ontologies and epistemologies proved difficult to move past, or to honor. In fact, many of the encodings of GIS logics found in my field notes were of a critical or inquisitive nature, whereas the relevant encodings of the three project drafts skewed toward the reproduction of such logics.

AA: Once again, I find myself rather flattered! Might this appreciation for being in “magical” spaces stem from my identity as a geographer?

GA: Partly—but here we find ourselves at a possible uncertainty. Does being in space instill a sense of wonder because I am a geographer, or am I a geographer because being in space instills a sense of wonder? I believe that both are true.

AA: Not to drift off course, here, but I am also a GIScientist—not exactly a profession known for embracing the nuanced wonders of real space.

GA: That is indeed a striking tension, and I am quite glad that you have brought it up. I don't know if it is one that can be resolved, here and now, but we might at least make it explicit. I may find spaces to be magical, but I also find comfort in distance. GIS offers an opportunity for both, to an extent. GIS, taken broadly and with an open mind, is an opportunity to explore the magic of space while still preserving the line between the space and the self. This line is comforting, yet it restricts our ability to work with this spatial magic.

AA: Not unlike how I quite enjoy passing through this space, yet rarely linger—and thus feel vaguely removed from the space.

GA: Quite so. So, this mellow path represents both my appreciation for the wonders of space, but also a lingering apprehension about embedding myself within space. A key tension between human geography and GIS, and one that places me on the unstable ground betwixt the two.

Figure 7. In the first project, Analyst Alex (AA) and GIS Alex (GA) complicate their respective roles.

A pinch of disruption, however, was still possible. Let us first return to the analyst-GIS dynamic of the first project and take a closer look. On the surface, Analyst Alex leads the dialogue. Yet it becomes increasingly clear that Analyst Alex, while capable of making his own geographic insights, relies upon GIS Alex to raise many of the geographic musings that they can then both unpack. Analyst Alex's control over the interaction is already in question; the analyst raises prompts, but it is GIS Alex who adds depth and further meaning to the topics explored in their dialogue. The ‘lead’ role in the dialogue is further complicated as GIS Alex meanders away from prompts or raises questions for the analyst. This nuanced dynamic—and the fact that both GIS Alex and Analyst Alex are me, and I them—blurs the roles of GIS and analyst in geospatial explorations. The doing of GIS, here, is a reciprocal relationship! While each of the three projects explore

relations to space in their own ways, this dialogue casts its gaze to the relations with and within a GIS, too. The nuanced, reciprocal relationship between GIS Alex and Analyst Alex is a playful example of using the medium of GIS to creatively interrogate and challenge our relations to space *and* the relations with and within the methods that we apply to do so.

The first project is not alone in its playful resistance to common hierarchies and relations in GIS. The second project, by exploring memories through a multiplicity of times and shared associations—which are still broad enough to be a bit fuzzy—begins to collapse time and emphasize relations across memories. The past is present, the present is shaping our sense of the past, and both begin to shape our experience of the future. A memory of belonging recognizes other memories of belonging, building networks through shared associations. Space, too, is transcended, as these memories draw connections between each other and build upon one another, resulting in the not-uncommon phenomenon of memories that blur together across space and time (the project itself places some memories at representative or summative, rather than ‘true,’ coordinates). Memories are unstable ontological things; while the second project represents each memory at a single, fixed point in my ongoing (re)interpretation, thus upholding rigid GIS logics of fixedness and stability, they are also explored and represented with enough flexibility and ambiguity to simultaneously undermine these logics.

The third project resists common hierarchies through a discomfort with anthropocentric categorical principles; this example also leads into two themes that are of particular exploratory interest: nonanthropocentrism and decolonial considerations. The extent to which each theme is represented through these projects is somewhat ambiguous, and, despite some successes, altogether rather lacking. The third project, by adopting time-based categories and inconsistent forms (sight and sound are side-by-side, for instance), rather than categorizing co-inhabitants by,

say, phyla or class, allows these presences to coexist independent of (non-temporal) categories. The lens of temporality also collapses anthropocentric hierarchies: I (and other humans, or signs of human activity) was merely one of many presences who happened to be in that place at that time. Humans are but one of many presences placed side-by-side in this project, even if the observation and interpretation of these presences is ultimately dictated by my own human perception.

This third project shares with the first an explicit consideration of the more-than-human throughout the development process. Both projects demonstrate nonanthropocentric thinking at various points in the field notes and in various elements of the project drafts. For the third project, this has been well-established. For the first project, this manifests as a conscious effort to center a relational approach to more-than-human actors in the dialogical musings. Geese, for example. I admit to myself that I may not like them, yet also that I respect their presence in the place in question. Here, I complicate my own discomfort with their presence and begin to interrogate my anthropocentric approach to geese as nuisance. The second project featured far fewer encodings for nonanthropocentrism in the corresponding field notes, but a few did emerge in the project draft itself. The eager observations of squirrels' interactions in and with space, for instance, form the basis for a memory. The recollection processes, and the emergence of information and relations following those processes, offer geographic questions, memories, and presences alongside which I begin to gesture at the more-than-human of place.

Nonanthropocentric elements of these projects are not limited to the contents of recollections or emergent dialogical thoughts; the second and third projects reach also toward nonanthropocentric map choices. The basemaps adopted in these two projects, while ultimately reliant upon the deeply anthropocentric OpenStreetMap service, lack placenames and de-

emphasize roadways. My anthropocentric names, or “place-framings,” were applied to each place, yet the basemap itself offers no such distinctions. The spaces represented in the basemaps can simply *be*, freed, somewhat, from the human-centered relations that inform our spatial naming practices. The de-emphasis of roadways, while limited and incomplete (roadways are still present, due to their prominence in our landscapes), offers a subtle step toward undoing the normalization of human-dictated mobilities within and across space and in our mappings.

The consideration of map design, however, also directs us toward the relative lack of nonanthropocentric ontology and design elsewhere in these projects. This lack is due, in part, to the fundamental tension between place and nonanthropocentrism: place is a human concept, and unless it is somehow explored by non-human entities on non-human terms, it forever will be. Yet there may be opportunities to allow for non-human actors to shape the designs of our GIS-based explorations. What if, for instance, we developed a map of a space based upon observed squirrel actions? We could explore the possibilities of squirrel ‘place,’ or position our sense of place in direct conversation with this squirrel map. Until we radically center the non-human in the development of our GIS, we will find ourselves with projects like the three here: projects that offer nods to nonanthropocentric sensibilities but do not emerge from more-than-human ways of being.

A similarly ontological and epistemological limitation lies within these three projects’ acknowledgments of decolonial relations. While decolonial considerations are found within all three project drafts and field notes, they are infrequent. All three project drafts offer land acknowledgments, yet, like many GIS endeavors, struggle to move beyond this first step.¹³ The first project unintentionally buries this land acknowledgment deep into the dialogue, although follows it with a reflexive discussion of learning on Indigenous land and honoring Indigenous

¹³ The recollection repositories lack land acknowledgments, however.

relationalities. The second and third projects offer conventional land acknowledgments, featured prominently in their respective web pages. The basemaps, lacking placenames, thus lack colonial placenames—although this means that they lack Indigenous placenames, too. Decolonial relations are raised, then fade away, back to, at best, the peripheries of these projects. Strands of decolonial relations and decolonial ways of being with space can be found—if one really squints—across these projects (i.e. elements of relational care ethics), but they are not central; nor do these projects adequately center decolonial ontologies in development, design, and content.

4.2.3 Reflexivity

While surface-level decolonial engagements, as well as other shortcomings, may suggest that the sense of reflexivity within this work has not fully addressed the flaws found across the three projects, reflexivity nevertheless emerged as a notable pattern. Across the field notes and project drafts, reflexivity was represented in three different ways: the indication or acknowledgment of a reflexive orientation, the identification of tensions and limitations, and the awareness of (some) absences.

Moments drawing attention to a reflexive orientation were quite common across the first and third project processes. In the field notes, reflexivity emerged amongst the most prominent encodings; in the project drafts, it was slightly less frequent. This slight distinction is perhaps less pronounced than would be expected; the field notes, after all, offer an ideal outlet for reflexive musings. That the project drafts did put forth and acknowledge relevant positionalities indicates a (mostly) successful translation from behind-the-scenes contemplation to tangible project elements. The first project draft, for instance, offers quite a few moments of self-situating and self-critique as the dialogue unfolds. A self-GIS is a deeply situated approach to GIS as a method; to do self-GIS, responsibly, with care, requires a reflexive orientation to be fundamental to that doing. The

third project draft offers multiple explicit nods to the limitations of my perspective in the context panels, and even goes so far as to place my person on the map (via a playful self-icon) at the position where I had crafted the recollection entry for each place. In the first and third projects, reflexivity is made explicit as a theme through surface-level acknowledgments as well as design choices.

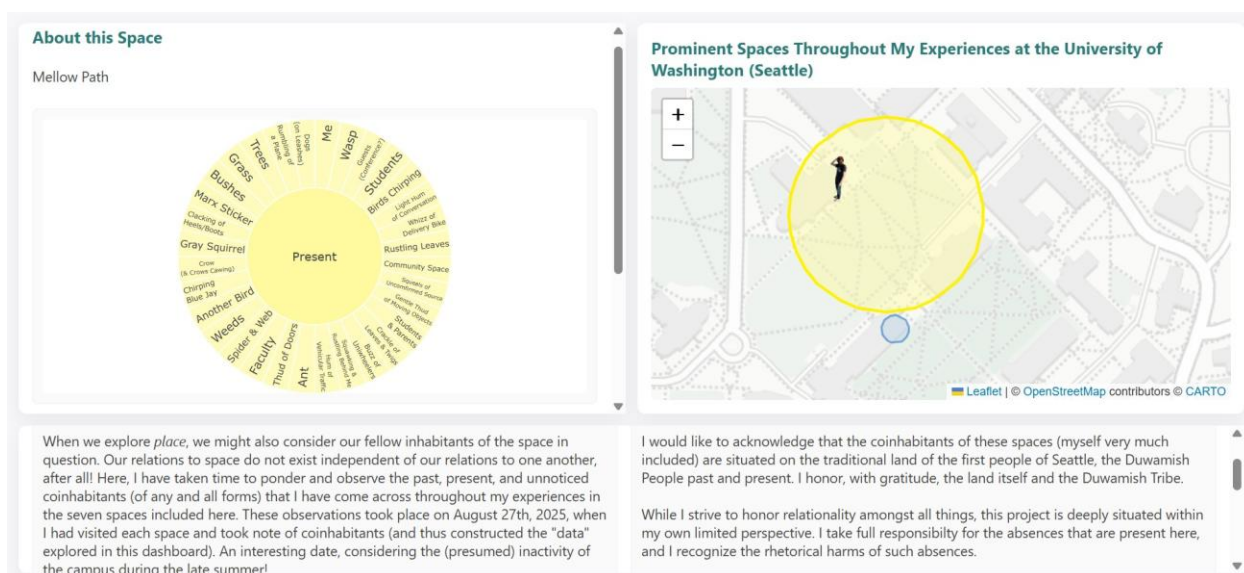


Figure 8. Self-situating in project three.

Intriguingly, the second project is somewhat lacking in reflexivity encodings across both field notes and project draft. This is for a few reasons: the lack of an explanatory panel within the project draft reduces the opportunities to draw attention to the limits and positionalities of the memories (the unreliability of memories, for instance, goes unaddressed), and, unlike the other two projects, reflexivity is not integral to the development and design of this second project. Only a single memory description interrogates itself; even then, this merely concludes with the implicit possibility that being “put on the spot” in a classroom space may not be the most meaningful piece of the memory. Reflexivity was not central to the design and development of this second project, and memories were not interrogated to the degree that the field notes had expressed a desire for.

As one has perhaps begun to recognize, tensions, compromises, and contradictions abound! While frustrating at times (i.e. I critique an overreliance upon epistemologies of the grid when exploring place in GIS, yet rely on those same epistemologies to structure my web GIS projects), these limitations also draw our attention to particular openings where we might recognize opportunities to do GIS differently. Encodings for tensions and limitations were quite common across the field notes and the project drafts; slightly more so for the project drafts. In the field notes, the encodings of tensions and limitations referred to distinct instances where such considerations were raised. For the project drafts, encodings for tensions and limitations emerged primarily from my own assessment, although a few had emerged from in-project acknowledgments of limitations (such as those raised by the context panel of the third project). The slight disparity between the relative frequency of such encodings across the field notes and project drafts points to the emergence of tensions and limitations that had not been foreseen or addressed during the planning process; yet many tensions had indeed been wrestled with as the projects emerged, too. A handful of tensions have been sprinkled throughout this discussion, illustrating my point.

Ultimately, such limitations validate this work and my autoethnographic approach to it: if we wish to make sense of doing creative, place-based, care-oriented GIS, we ought to recognize, embrace, and address shortcomings. These shortcomings, after all, direct us toward creative thinking-spaces (Boyd 2022) where new possibilities may emerge. Yet, what about the shortcomings that I am unable to recognize? This points to the limits of an autoethnographic perspective. However, the vague outline of something that was not (yet) there did, at times, catch my eye. Absences, in fact, were—rather ironically—the most prominent encoding across the three project drafts! Such encodings had lived up to their namesake to a greater extent in the field notes, yet were still relatively common. The first and third projects face these absences head-on, whereas

the second project's absences require a bit of excavation. Again, there is an obvious limit to pondering absences in these projects: where are the absences that remain illegible?

In both the first and third projects, absences are made visible in a few ways, including, but not limited to, those which I explore here. Spaces that did not emerge during the recollection process yet may have been expected, or are otherwise notable by their absence, are discussed in the first project, as well as the relations to space that such absences may indicate. Absences within images are interrogated as well, such as missing or misrepresented perspectives and the lack of my person. The self-dialogue offers quite a few opportunities to examine that which was not there, mirroring the frequent considerations of absences found in the corresponding field notes. Through the dialogue, I could directly prompt myself for absences and make those absences visible, although, in order for such absences to be raised, they must have already been somewhat legible to me in some way, shape, or form. Where are the absences that remain illegible? In the third project's contextual panel, I note the inevitability of absences and the harms therein, assuming responsibility for such harms and acknowledging that there are co-inhabitants not yet recognized (or not yet legible to me and the methods that I adopt). Further, the visualizations in this project, through the adoption of the "unnoticed" category, directly invite absences into our thinking. Absences become a lens for exploration, an opportunity to interrogate that which we do not observe.

The second project is, admittedly, less upfront about the absences hiding within; the project itself contains no clear reference to absent memories or details. The field notes, however, do hint at a few absences. A handful of entries note a lack of certain details in my recollections and memory descriptions, such as particular individuals. Not all memories that had emerged during the recollection process were represented in the project draft, for various reasons. A few memories,

for instance, were considered too “small,” or too indistinct, and lacked meaningful relevance to the descriptions of more prominent and robust memories. This particular exploration of memories struggled to explicitly address absences, although the corresponding field notes did briefly ponder that which may be made absent when place is a guiding theme.

The enforcement of absence—the withholding of information—was quite rare. In the first project, I had willingly presented all that I felt compelled to explore; no information was intentionally left off the table, redacted, or avoided. Withholding information would have run counter to the ethos of the third project, yet there may also be complexities that lead to invisibility becoming desirable. No information was withheld as part of the exploration of presences in place, but similar projects may find such a choice to be prudent in particular scenarios. However, the second project did indeed withhold some information. A particular memory of negative inflection was left absent; this was not done to spare myself, however, but to not make public the underlying critiques and frustrations—to not be unkind. Names of individuals are also withheld from memories, due to obvious privacy concerns, as are some details regarding interactions with others that would raise similar concerns. Information was minimally withheld across these three projects, and, when it was, the reasons for doing so led back to a desire to extend care toward others.

The expansion beyond recollected information, the intense grappling with logics, hierarchies, and relations embedded within—and also challenged through—these projects, the reflexivities of this work, and more, all flow into the topic of the following section: autoethnographic doings of GIS.

4.3 On Autoethnographic GIS

As an attunement to the process of doing creative, place-based, and care-oriented GIS, an autoethnographic orientation disrupts the typical objects of GIS (Ahlqvist et al. 2005). In each of

these three project processes, the primary outputs and analysis are not found in the disembodied project drafts and explorations of place within. Rather, the *autoethnographic object* of each GIS project is the embodied experience of engaging with and developing that GIS. I recognize two components to this object; the first is an exploration of the process that guided the respective development of each project. This component of the object includes the project drafts, but extends further, toward the situated experience of their construction. Of course, this is not a particularly new orientation. Recognizing and situating the process of mapping is indeed not an uncommon element of critical cartography (see Kitchin et al. 2013). Autoethnographically situating ourselves within the process of mapping—recognizing that mappings are ongoing processes of making geographic sense of our place in the world, but also reflexively positioning ourselves within the methodologies and ontologies of that process, with a careful interrogation of epistemological and technical choices made and unmade—draws attention to the complicated and messy roles we play in the development of (a) GIS and geographic information.

The autoethnographic exploration of my own sense of place in and through each project points to the remaining component of the reimagined object of GIS: the sense-making of geographic phenomena and relations that are intimately linked to the doer(s) of that autoethnographic GIS. This object is deeply intertwined with the processes of each autoethnographic GIS. The exploration of my sense of place occurred throughout the development of each project, from the initial inklings of this research direction, to the process of recollecting, to the completion of the project drafts, and beyond. The project drafts and field notes are tangible manifestations of these explorations of place, yet they do not contain within themselves the full extent of the sense of place that emerged (and continues to emerge) through this work. Insights into place, and into other geographic phenomena and relations, are explored and represented not

through tangible GIS outputs alone, but through autoethnographic—*embodied*—orientations within the processes behind such outputs. An autoethnographic doing of GIS can begin to address geographic information that is perhaps more subtle, situated, embodied, emergent, than that which conventional GIS epistemologies are able to incorporate. Autoethnographic GIS is post-representational (Caquard and Cartwright 2014) *and* more-than-representational, introducing processual experiences and geographic embodiments into the object of GIS. With this object reimagined, I recognize three initial contributions that such an autoethnographic orientation may bring to the doing of GIS.

First, an autoethnographic orientation can lead us to situated (and reflexive) insights into how geographic information, knowledge, and understanding came to be. This consideration revolves around process, and an attunement to choices made and unmade (including the rationale behind such decisions) in particular. An autoethnographic orientation draws attention to the construction of geographic information through a given GIS project and the various ontological, epistemological, and methodological inclinations that lay the foundation for that construction. The three project development narratives discussed briefly earlier are examples of a reflexive attunement to process, although such attunement may take many different forms. Further, this reflexive attunement situates us to identify methodological gaps, biases, closed doors, and so on, in both GIS practice and our own skillsets. Much of the above discussion is proof of this! I reproduce an overreliance upon the grid in my second and third projects, for instance, yet my field notes suggested an uncertain desire to apply noncartographic mappings in my representations of space. In this example, one can unearth a limit to my abilities and to conventional web GIS design.

Second, an autoethnographic orientation can deftly guide GIS projects toward situated geographic phenomena and relations. In other words, such an orientation offers a foundation for

actively tailoring methods and designs to our own uniquely situated and embodied experiences. This consideration blends together process and self, albeit with emphasis remaining on process. As we explore geographic phenomena that are intimately related to ourselves, we can apply what we (do or do not) understand about such phenomena to guide our representational and exploratory work and the choices therein. We are well-situated, after all, to notice when explorations move further away, or reach closer to, that which we seek to explore about geographic phenomena close to us. Embedding the subject—ourselves and the phenomena at play—in each and every choice made in the project requires an autoethnographic orientation; this can result in project processes that are carefully engaged with unique geographic phenomena. Across my three projects, a relational approach to place guided the choices made. Memories, co-inhabitants, and reflexive dialogue were all approached through relational thinking, and, while there are certainly limits present in the resulting project drafts, this situated each draft in conversation with particular relations to space. Yet the limits are generative, for they too can expose methodological gaps and closed doors.

Third, an autoethnographic approach to GIS can enrich efforts to learn about situated geographic phenomena. This consideration also blends process and self, although places a bit more emphasis on the self. As we piece together autoethnographic GIS projects, we not only have an opportunity to shape our ontologies, epistemologies, and methodologies to geographic phenomena of interest, but also an opportunity to learn about such geographic phenomena through the *process* of building such projects. Realizations that emerge as one grapples with representational questions, or throughout other moments in the development process, may be one such example (à la the exploration of temporal patterns across memories). Another avenue for realization may lie within a close relationship to the geographic phenomena at hand. As projects develop, we are positioned to recognize when we stumble upon unexpected (and revealing) bits of information and can pursue

these leads further (à la the tension of “knowing” vs. embodying relations in and to space). Yet the simplest rationale for this third contribution is as follows: by exploring geographic phenomena that are intimately linked to ourselves, we are well-situated to recognize and pursue emergent realizations in all stages of a project process, even if such realizations resist capture or representation (or rational understanding). An autoethnographic orientation may yet set the stage for more-than-representational sense-making in and through GIS.

An autoethnographic orientation to GIS is not perfect, certainly not any more so than those who practice it. Embedding oneself deeply in one’s own work can surely backfire—think of all the times that you, dear reader, have sighed to yourself as you watched me skip by a consideration that was *just right there*. Some decisions may go unnoticed, and some possibilities never considered. There is certainly a risk to relying so heavily upon one’s own perspectives and interpretations in this work; absences, for one, may fade even further away as we fail to take into account absolutely all relevant relations, or all possible techniques. Fortunately, a missed opportunity or glaring absence does not erase the validity of such work, for objective and generalizable truth is not the object of pursuit. The primary goal is to facilitate emergent ontological, epistemological, and methodological innovations and rich (situated) sense-makings of geographic phenomena. This does not absolve us of the responsibility for care and intellectual rigor in such fundamentally subjective work, but it does allow some room for honest stumbles and missteps. Explorations take place on unstable ground; definitive they are not, yet they can point to the most fascinating things.

4.4 A GIScience Reading of Autoethnographic Place-based GIS

What does this all mean for GIScience? While, admittedly, many quirks of this work extend beyond such a realm as it is traditionally understood, key contributions may still be of value—particularly when given a slight twist. In this section, I make an effort to situate my work in the

context of GIScience and GeoAI. This effort begins with a pragmatic reading of autoethnographic GIS and its relation to place in GIScience, followed by a reflection upon geospatial artificial intelligence (GeoAI), first in the context of the three projects, then in conversation with autoethnography and place.

What do we wish to do that we cannot do yet? This inability to do may be contingent upon particular skills (or the lack thereof) of a particular doer of GIS, the resources available to that doer, or perhaps the ontological and epistemological bounds within which the doer finds themselves. An autoethnographic orientation attunes us to these gaps, biases, and closed doors that (re)direct our doings of GIS. Why do these projects end up the way that they do? What is missing? The autoethnographic doing of GIS looks akin to prompting the self (or selves) for reflections upon choices made and the outcomes that then emerge or fade away; of doors that open, close, are already opened or closed, and why. The moments of uncertainty, when representational outcomes and possibilities begin to fade or have already faded, are moments that call for innovation or further exploration with regard to both one's personal abilities and that which is possible in and through GIScience.

An autoethnographic reflection upon our own GIS processes bases their reflexive assessment not on external criteria, but on our own intentionality. In this way, such a self-evaluation is deeply situated, reflects upon a given GIS on its own terms and intentions, and directly furthers the representational and exploratory aims of that particular GIS. Emergent gaps, biases, or closed doors, need not lead to grand innovations new to all GIScience in order to offer tangible value; perhaps one might simply realize that they, like I, struggled to adopt noncartographic basemaps in their work when doing so would offer further representational nuance. Broadly, an autoethnographic orientation to GIS allows us, on our own terms and informed

by our distinct abilities, to explore that which may be missing in today's GIScience—such as a nuanced, creative, place-based, care-oriented GIS epistemology that satisfactorily explores my own sense of place.

There is no singular way to represent or explore place or relations to space; what we are limited by is that which we, as doers of GIS, are able to represent through a GIS. What pieces of our sense(s) of place are lost when place is transformed into these representations? Why are they lost, and how might we reintroduce them? These lost pieces are perhaps made so due to gaps in personal skills and knowledges, but these pieces may also be caught in the ontological, epistemological, and methodological filters which bound doings of GIS. The exploration and representation of place, then, is an ideal opportunity for autoethnographic doings in GIScience.

As the preeminent, buzziest topic in today's GIScience, I would be remiss not to discuss GeoAI in relation to this work. The first project, the self-dialogue, did not engage with AI in any way, shape, or form, yet is in some ways reminiscent of geoprompting. Analyst Alex, after all, prompts GIS Alex in what becomes an emergent back-and-forth through which geographic information is discussed (and thus analyzed). This dialogue is, quite literally, a conversational approach to doing GIS. I geoprompt myself, engaging in what might be labeled as human-based vibe coding—or, if not quite coding, human-based vibe GIS (or, if one is loath to perceive a spatially-inclined written self-dialogue as a GIS, then perhaps vibe geography).

The other two projects, however, did indeed rely upon (Geo)AI assistance in their construction. In both cases, a coding prompt was offered to Microsoft Copilot. Each prompt featured a description of the intended project design and functionality, carefully crafted to preserve my vision. With the concept and broad layout of each project set in relative stone, Copilot's creative inputs were twofold: first, the underlying code logics for that concept and layout, and

second, the particularities in the appearance of the web pages. Once the code logics and styles were set by Copilot, I engaged in relatively few structural and stylistic adjustments. Most additions could be neatly integrated once I had familiarized myself with those logics, although stylistic changes were set aside for future revisions that have not yet come to be. For a few project features, I had enlisted Copilot's help once more in coding efforts and manually adjusted the outputs to align with my vision for the project and the existing code.

AI assistance was adopted here primarily as a means of condensing time. If I could quickly generate code that aligned with my vision for the project, I could allocate more time toward building upon that code and crafting the place-based elements and information that would go into the project structure. By adopting AI, I was able to expand my abilities in each of these two projects; yet this expansion was predicated upon both a clear underlying vision for the project and an existing web programming skillset (in order to debug and add features). Because these two projects were explicitly geographic, my interactions with Copilot *could* be classified as GeoAI. However, the geographic components of this use of AI were limited to basic web mapping features. While these features were indeed implemented competently, Copilot was not assessed on its geographic reasoning.

An autoethnographic orientation to GeoAI, or to GeoAI-enhanced methods, could be of great importance as GeoAI continues to influence GIScience. What is being chosen for us? What do we have control over? What do we not have control over? Just as we ought to be carefully attuned to the choices (un)made in our doings of GIS, we should reflexively interrogate the processes underpinning AI, and our use of it, in and beyond geographic contexts. An autoethnographic orientation also positions us to innovate further with GeoAI, much in the same way that such an orientation to GIS creates opportunities to poke at gaps, limitations, and choices

in our work. What are we (not yet) able to do, creatively and critically, through GeoAI? Where are the gaps, not just that emerge within GeoAI as a broad concept, but that emerge through our situated work, as users of GeoAI who offer various perspectives, needs, and desires?

Place, for example, may be one such gap. Is it possible for GeoAI to represent or explore place, or, if we delve deeper, to *understand* place? Lived experience is, of course, essential to our sense of place, however it may be understood. But this is something that AI lacks, as does much work in GeoAI (Zhao and Lin 2026). We can certainly apply AI toward the exploration of place; I have indeed done just that. But can GeoAI itself be a means of exploration, rather than a tool for building other means? Would that be desirable? Here, an autoethnographic orientation would serve us well as we ponder and tease out possible relations between GeoAI and place.

GIS is a medium that spans GeoAI, GIScience, critical GIS, digital geographies, and beyond; in this way, it takes shape as a common ground. An autoethnographic orientation to GIS may perhaps bring these groups closer—not to homogenize, but to foster engagement and collaboration. Expanding the limits of what is possible, be such limits ontological, epistemological, or methodological, requires all of us.

5 Conclusion

So, then: *what might the practice of a creative GIS otherly, with a playful desire to support care-oriented explorations of place, look like?* We have come a long way from this initial question, yet it remains central to all that is discussed. The simple answer is that this practice may be autoethnographic; that an autoethnographic orientation to GIS offers the beginnings of a more-than-representational, *embodied* exploration of place that may lead to enriched sense-makings and imaginative doings. The messy answer contains all which precedes this conclusion, yet also acknowledges that the entirety of the place-based sense-making described here barely scratches the surface of what may be possible.

While autoethnographic GIS, as understood here, is deeply linked with explorations of place, I imagine that it may expand further. Just as there are no one-size-fits-all GIS epistemologies, there are no systematic steps to autoethnographic doings of GIS. The three contributions that I describe are starting points, initial patterns that emerged across these explorations and relevant cartographic literature, but they are by no means set in stone. I encourage others to make sense of autoethnographic GIS in their own ways and in their own work. Where else might autoethnographic doings of GIS take us?

An as-of-yet limited understanding of autoethnographic GIS is far from the only limitation present. Relational care ethics point to quite a few creative thinking-spaces (Boyd 2022), as do many of the limitations that I have drawn attention to over the course of this text. Further, the situated processual data that emerges in such autoethnographic doings is deeply subject to the particularities of the researcher, in both the shape that it takes during collection and in the ways through which it is examined—not to mention the fundamentally situated process of doing from which this data emerges. What have I missed? Finally, place is a guiding concept that grasps onto

something, but might we push further? I do indeed fancy the term and its implications—hence why it is central to these explorations—but we may perhaps strive for something deeper, more profound, experiential, embodied, *unknowable*.

In this research, I recognize the vague outlines of postqualitative, artistic, and archivist inclinations. The three project processes described here are somewhat emergent; they are first steps, creative thinking-spaces, from which we might explore further. The methods adopted, while semi-structured, created (admittedly limited) openings for speculative and unfixed project outcomes. Might this work itself become a step toward emergent, speculative, and postqualitative methods in GIS? Artistic undercurrents are similarly underdeveloped, found more so in the streams of creativity than in the river of this autoethnographic, place-based doing of GIS. What might an orientation to autoethnographic, place-based GIS as (or through) art—or to art as such GIS—bring to the table? As for the archivist orientations: one might suggest that, in the course of this research, an archive of (attempted) creative, place-based, care-oriented autoethnographic GIS has been created. The field notes, project drafts, and this very thesis, contain insights into the doings of such GIS. Might an autoethnographic GIS archive one day emerge?

Yet, even with all of these insights now in hand, perhaps the most satisfying outcome of this research is simply the ongoing (re)imagination of my own sense of place. This autoethnographic orientation has enriched my experience of being in space, of being attuned to memories and associations, to relations, to other presences, and of feeling more present in and connected to the spaces that I find myself in. These place-based doings opened space for this attunement to blossom, and created avenues for rethinking (and re-experiencing) my sense of place. Indeed, place was explored through embodied and more-than-representational doings of this creative, place-based, care-oriented, autoethnographic GIS!

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