Sustaining Relationships through Critical Place Inquiry

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In this essay and the accompanying StoryMaps, we utilize critical place inquiry as a method and pedagogy for grappling with concerns of sustainability. These concerns are related to relationships among human and non-human actors in place-based science education. Within a Climate Justice in Education graduate course in a teacher education program, we explored such questions as: What is worth sustaining? Who benefits from sustaining and sustainability? Who is sustaining what and for whom?

The Climate Justice in Education course was framed around this guiding question: How do we heal our relationships with people and the natural world as a response to the climate crisis? This question lies at the heart of some of the fundamental root causes of the climate crisis and the impetus for climate justice. Namely, that the climate crisis has been caused by historical and current human activities that favor the development of capital and capitalistic lifestyles in developed countries, and that the pursuit of capital and these lifestyles occurs at the expense of or through the exploitation of humans and the natural world.

Climate justice involves recognizing the deep and intertwined relationships between people and their environment and the ways in which climate change disproportionately affects the most vulnerable populations on the planet. Vulnerable populations, namely historically-marginalized communities and non-human living beings (i.e. plants, animals), have typically done little to cause the climate crisis. Thus, when we question what it means to heal relationships with others and the natural world, we directly confront the cultural and material modes of production that have caused the climate crisis and we (re)imagine just transitions towards sustainability and sustainable relationships with places, people, and the natural world.

In the climate justice course, we engaged in inquiries broadly centered on the climate crisis, anchored in specific places, and critical of the deep historical, cultural, social, and political meanings of place and land. We represent these inquiries with ArcGIS StoryMaps described below. We utilize StoryMaps because they offer an inviting presentation format that can combine multimedia, text, and interactive maps.

In what follows, we first describe critical place inquiry and our framing of ethical care-centered relationships. We then describe the StoryMaps tool, introduce each StoryMap, and share how the process helped us make sense of what is worth sustaining. The StoryMap introductions are told through the voices of the StoryMap authors.

Critical Inquiry of Place

We forefronted the concept of place in our climate justice course.

Place and our relationships with places matter. The places we inhabit and navigate in our daily lives are inextricably linked to our life experiences and the life experiences of others who have relationships with those places. These relationships to places and histories within places index power relations among people and other species. Therefore, place can be considered a “site of conflict as various constituents struggle
over its meaning and identity and wrestle over tensions of transformation and preservation.”

The “throwntogetherness of place demands negotiation” as people with different priorities, purposes, and lived experiences come together to consider the meaning and value of a particular place. However, we acknowledge that not all constituents in the negotiation of place have equal agency and influence in regard to how a place is defined and used by the people who dwell there. For example, white settlers of Native territory where Native people have been displaced or subject to genocide have historically appropriated, redefined, renamed, and redesigned those places for their own benefit. Therefore, any negotiation of place also demands an interrogation of who we are in relationship to each other, attending to histories and power asymmetries, in addition to who we are in relationship to a particular place.

With these concerns in mind, we use the term “critical inquiry of place” to name processes and practices involved in learning about places from the critical perspective of social and environmental justice as well as Indigenous and feminist frameworks described below. This critical perspective guides inquiry into not only the power relations among humans who have complex relationships with particular places but also other species that inhabit and traverse those places, all of whom/which shape those places in material and ideological ways. This critical inquiry of place also demands that we account for our own positionality by acknowledging how our ideologies and ontologies shape our situated understanding of ourselves and others within particular places. This accounting of our positionality takes into consideration not only who we are as individuals but also who we represent historically as a member of a cultural group.

The students enrolled in the climate justice course conducted critical inquiries of place throughout the semester culminating in StoryMaps, some of which we highlight below. The students were tasked with identifying a particular place of interest to them and leading an investigation of that place through historical, ecological, sociological, and critical lenses. Their goal was to tell a story of the place from these perspectives with as much complexity as they could discover while considering their own positionality in relationship to the people, other species, and places they investigated.

**Relationships with the Natural World**

We draw upon Indigenous and feminist scholarship to better understand how we might heal relationships with people and the natural world.

Within the course, we engaged in re-examining our own socialization in Western, Eurocentric, and colonial spaces through Indigenous perspectives that foreground the ways in which gratitude and reciprocity must become the central framing of our interactions with the natural world. We also drew upon the perspectives of critical and politicized caring to consider our own shifts from abstract reasoning to relational reasoning.

Indigenous wisdom and land education influence us to consider our relationships with land—and likewise to consider how the people, lands, and more-than-human inhabitants of earth are constructed, positioned, neglected, and

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situated within overlapping systems of power and oppression. In the course, we read Robin Kimmerer’s *Braiding Sweetgrass* to reflectively explore Indigenous perspectives and relationships. *Braiding Sweetgrass* beautifully navigates across time, place, epistemology, and Kimmerer’s own roles as a mother and botanist to share how these identities and epistemologies can help heal our relationships with land.

As a class, we reflected on Indigenous perspectives towards land alongside our own historically-situated perspectives and relationships with land and, specifically, the places we inhabit. Speaking of the history of settler colonialism in the US and forced removal of Native peoples from their homelands, Kimmerer emphasizes the meaning of land:

> Children, language, lands: almost everything was stripped away, stolen when you weren’t looking because you were trying to stay alive. In the face of such loss, one thing our people could not surrender was the meaning of land. In the settler mind, land was property, real estate, capital, or natural resources. But to our people, it was everything: identity, the connection to our ancestors, the home of our nonhuman kinfolk, our pharmacy, our library, the source of all that sustained us. Our lands were where our responsibility to the world was enacted, sacred ground. It belonged to itself; it was a gift, not a commodity, so it could never be bought or sold.

This responsibility to the world, Kimmerer explains, can be enacted with practices of gratitude and reciprocity. She shares, “we must give back in equal measure for what we are given. Our first responsibility, the most potent offering we possess, is gratitude.” Thus, Kimmerer articulates how awakening our consciousness of ecology and our engagement with the world around us requires us to embrace our reciprocal relationship with the living world.

Our class similarly engaged with feminist perspectives to decenter abstract and distant relationships towards the natural world and its inhabitants. Feminist scholars argue we must center compassion and care as a moral ethic that

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6 Kimmerer, *Braiding Sweetgrass*.
7 Kimmerer, *Braiding Sweetgrass*, 17.
influences decision-making. Russell and Bell extend this ethic to highlight the value of empathy and relational reasoning, which is particularly significant in science due to the history of privileging abstract and unattached reasoning. Eco-feminist scholars position relational attitudes with the natural world within broader calls for justice. They push us to commit not only to the development of “non-hierarchical care-based relationships with human and nonhuman others, but . . . also . . . to the interrogation of all potential drivers of injustice and inequity.”

We drew upon this work to shift from learning about the natural world to learning with/within/from the natural world to strive towards reciprocal relationships.

Next, we share the StoryMaps as examples of critical inquiries of places that have been influenced by these frameworks.

ArcGIS StoryMaps

ArcGIS StoryMaps is a web-based digital storytelling platform developed and maintained by Esri, an international geographic information system (GIS) software company based in Redlands, CA.

The StoryMaps platform enables the creation of visually rich, interactive web pages that integrate digital maps and GIS data to present information and tell stories. The StoryMaps interface offers a block-based editing system that allows users to add, modify, and rearrange content blocks from within a web browser. Here, users have the option of adding multimedia, text, and interactive maps to build their StoryMap, and this content can be imported from a user’s personal computer or sourced from a variety of GIS data websites.

Crucially, the StoryMaps platform affords a rich blending of these media forms—a StoryMap might guide viewers through a map that presents a hiking trail containing photo pop-ups and text descriptions of points of interest determined by the StoryMap creator. Additionally, StoryMaps’ integration with other Esri software, including the popular ArcGIS Online, allows for GIS data and maps to be seamlessly imported into one’s StoryMap. Users can perform GIS functions using data within an ArcGIS Online map, for example, before presenting this data.


within a StoryMap. Users can share their StoryMaps using a custom URL that is generated by the platform upon publishing a finalized project to the web. Finally, the StoryMaps platform supports web accessibility by offering tools that permit users’ StoryMaps to adhere to Web Content Accessibility Guidelines. By default, a StoryMap supports keyboard navigation and semantic web page structure, and users can provide multimedia content with alternative text as well as suitable text and background color contrast.14

Students enrolled in the climate justice course utilized the StoryMaps platform as a tool for conducting critical place inquiries related to the climate crisis. Specifically, the mapmaking features within the platform uniquely afforded a spatial dimension to characterize each student’s inquiry and resultant climate justice story. In the StoryMaps student examples below, interactive digital maps help convey information (and, ultimately, tell a story) that traditional media forms such as text and imagery could not otherwise communicate as effectively. Throughout these projects are rich examples of integrating critical spatial inquiries with modern GIS tools afforded by StoryMaps.

Additionally, students in the present context embraced StoryMaps’ accessibility in two ways. First, because the platform runs in an internet browser and does not require high-end computer hardware as is typical with other dedicated GIS software, students were able to work on their StoryMaps with their personal computers both in the classroom and at home. Second, we found that students quickly gained comfort with the StoryMaps platform and were not burdened with an otherwise complicated interface: after just two scaffolded learning sessions—a single tutorial activity and a guided in-class working day—students were equipped to navigate the platform’s block-based editing system and build interactive, multimedia-rich accounts of their inquiries.

**What is Worth Sustaining? As Told through StoryMaps**

In what follows, we share four of the StoryMaps created by the authors (who were instructors, researchers, and learners in the course). They are introduced here by the StoryMap’s authors who each reflected on how the StoryMap is representative of how they consider sustainability and, specifically, the question: What is worth sustaining? We invite readers to explore each of the StoryMaps linked below.

Conor’s StoryMap, entitled *Land Use in the Allegheny National Forest*, explores the intersection of competing demands upon the land, which is used for recreation, for resource extraction (e.g. timber and oil), and as home and territory for the Endangered Northern Goshawk.

Conor shared:

The Allegheny National Forest is a location where sustainability efforts are competing with historical and current demands. Lands preserved for timber were taken from Indigenous people. Endangered species compete for space with oil leases and campgrounds. Managing the conflicting demands for resources through conservation

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and sustainable use practices benefits everyone. All finite resources are worth sustaining, these include the natural resources we need like timber, clean water, air, and spaces for recreation. This also extends to resources used by others, namely wildlife habitat. Cultural resources, while harder to quantify, also require sustaining. Frequently, these three categories can be sustained with the same efforts as they are deeply intertwined. Our requirements are similar to the needs of nature, and cultural knowledge is woven into these places. Future generations, diverse cultures, and complex ecosystems can only exist with deliberate sustainability efforts.

Kelly’s StoryMap, Pelham Bay Park: A Place of Refuge, Resilience, Resistance in The Climate Crisis Threat to BlackJoy & Communities of Color, shares the story of Blackjoy and community resilience in the Bronx and highlights the risk that the climate crisis poses to the Bronx and Pelham Bay Park.

Kelly reflected:

The popular yet least favored of New York City’s five boroughs—the Bronx—is the place that I call home. The Bronx is home for over 1.4 million people, yet it typically receives the least attention from city planners outside of revenue-drawing attractions like: The Bronx Zoo, The Botanical Gardens, and Yankee Stadium. Coverage of the area in the media is generally associated with negativity, including crime, death, chaos, and other problems. For residents, however, the Bronx represents a rich reality where the negative news are actually issues that stem from resource neglect and a lack of investments in the communities, housing, and schools. Our community is filled with diverse people, history, and opportunities that are often ignored and overlooked, or that are “solved” by leaving the area for a better chance of survival. In recent years Climate Change has added yet another layer of challenges to the community and to Pelham Bay Park with extreme flooding and weather. The StoryMap takes you on a journey to a place important in NYC history and located in the Bronx. The largest park in NYC, filled with playgrounds, hiking trails, fishing areas, picnic and BBQ areas, beach access among other things. Pelham Bay Park is loved and enjoyed by the Bronx community; it is worth sustaining as having value in and of itself; and it is worth sustaining because it is one of the places where residents can seek refuge in the midst of chaos.

Matt’s StoryMap, Devil’s Hole State Park and the Green Paradox, dives into the rich history of Devil’s Hole, NY, located just north of Niagara Falls.

After creating this StoryMap, Matt reflected:

We can no longer afford to forget the histories of both humans and more-than-humans that have been affected by our presence. The steady expansion of industry, commercialism, and population all too often steps on the toes of those unfortunate enough to be in the pathway of industry. What is seen as progress for the new, outweighs the future of the old. Devil’s Hole State Park, NY, and the surrounding areas are filled with natural, historical, and cultural beauty, both new and old. The meaningfulness and importance of this region manifests itself historically and in the present through its use by various peoples and beings. We can view Devil’s Hole as a reminder of Indigenous practices as an important portage route, as a place of conflict and bloodshed for early American settlers, and as a place of freedom for those escaping slavery by travelling across the Niagara River to Canada. The region also represents the home of over one thousand of the Tuscarora Nation and as a reminder of their dislocation and disruption. Finally, the region stands as homes for a plethora of wildlife and a delicate ecosystem under threat by a growing industry and population. And while
the long-term benefit and advantages that the industrialization of this area has had on developing our society cannot be understated, we must always remember where it came from and what was sacrificed. Sustaining our relationship to these histories will inform us on how to rebuild our relationship to nature and our relationships with humanity itself.

Alexa and Ryan’s StoryMap, (Re)Mapping Sustainable Ramp Foraging at Hunter’s Creek, reflects on the many relationships within a particular park named Hunter’s Creek that each of us frequents. The StoryMap introduces viewers to the various recreational uses and users of the park, including through a podcast interview of two of the mountain biking trail developers.

Alexa and Ryan shared:

Through critically examining Hunter’s Creek, we examined our own positionalities and perspectives about trail use and about foraging a wild leek, also known as a ramp. Prior to engaging in this critical inquiry, we appreciated the work that went into trail maintenance and enjoyed developing relationships with the land. However, we did not deeply consider how our own interactions might impact the trails or the ramp community. Nor did we fully understand what it might take to inhabit Hunter’s Creek sustainably with others. Although we believed that the relationships between recreators and the land and between ourselves and ramps were worth sustaining, we did not fully understand how to sustain these relationships until we engaged in the work ourselves to critically examine the many layered meanings, stories (past and present), and ways of being for humans and more-than-humans within Hunter’s Creek. This experience identified for us that our lack of deep knowledge about places and their inhabitants can reveal gaps between our intentions and sustainable actions.

**Conclusion**

Throughout and beyond the Climate Justice in Education course, we drew upon social and environmental justice foundations and Indigenous and feminist ethics to decenter and interrogate our own social positions and explore how our identities implicate and complicate past and present relationships to and within places. While this process has a focused direction moving us closer to sustainability and justice, we will not be arriving any time soon to where this work is no longer sorely needed. Therefore, our hope in sharing this essay and the StoryMaps is to outline processes, practices, and products that can be taken up in the context of teaching and learning toward the aim of sustaining particular places and repairing ecological relationships through shifts and ruptures in our cultural modes of production, living, and being.

Examining the climate crisis allows us to shed light on the deeply problematic means of production as well as exploitation of humans (including through chattel slavery) and the natural world. The climate crisis is also caused by cultural means through our problematic relationships with consuming products. However, the climate crisis is beginning to force humans to recognize that neither these exploitative relationships nor our consumerist lifestyles are sustainable. What is sustainable and what will lead to greater sustainability are reciprocal relationships between humans and between humans and the natural world. These relationships are
intertwined and are worth sustaining. Investigating the various stories that are written into the lives and land of places we inhabit allows us to deepen our perspectives on what is worth sustaining. Thus, how we sustain places (and save us from ourselves), we argue, is by deepening our knowledge about the world around us—knowledge rooted in critical Indigenous and feminist perspectives towards care, reciprocity, gratitude, and valuing all life and knowledge rooted in the complex, dynamic stories of places.

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