Critical Sensitivity in Digital Place-Craft to Unsettle Settler Sentiments of Place

Luke Meeken

The Pennsylvania State University, University Park, PA

Abstract

This paper summarizes the methods and outcomes of my dissertation inquiry, which examined the potential that critical perspectives on digital placemaking practices may hold for art teaching with digital materials. Within this study, placemaking is the (often, but not always, intentional) shaping of the material qualities of a place. The study described in this paper examined how critical sensitivity to the material qualities of digital places (i.e. the actions and sensations places invite and inhibit) and critical sensitivity to the colonial ideologies digital places often materially enact and habituate, may inform the crafting of arts curricula as places, and inform youth artists' crafting of digital places. Drawing on theories of digital materialism, curricula as digital places of learning, and critical and anticolonial framings of digital placemaking, the study summarized in this article suggests that habituating critical sensitivity to the material qualities of digital places is a viable approach to addressing ideologically-laden material qualities of the digital. The study also suggests that approaching curriculum development with critical sensitivity as an act of

placemaking is a viable and valuable approach to navigating tension between structure and open-endedness in curricular design, and to attending to the ideologically-laden material qualities of curricular places.

Introduction

It is the first day of a new week-long Digital Places camp, and I stare with anxious anticipation as the students populate the Zoom waiting room. An administrator abruptly releases the students into our shared setting, and we begin with introductions and greetings, all sharing the varied physical places we are joining from and digital places where we've recently had memorable experiences. I share my screen, with a window open to the Crafting Digital Places website developed for the camp, scrolled to a point where a video is visible, alongside the prompts:

- What activities and experiences does this digital place encourage?
- Does the game show us who lives or lived in the setting before the player showed up?
- What is the player's relationship to the inhabitants of the place? How does the player treat them?

I then maximize the video, which reiterates the three prompt questions and shows footage of someone playing, without commentary, through the first level of Super Mario 3D World. Super Mario 3D World is a recently released game directed at all ages, continuing the very popular Super Mario series of games, and as such most of the students express familiarity with it.

In the ensuing discussion, referring back to the three questions above, the students describe how Super Mario 3D World invites collecting money, gold, and stars largely by destroying parts of the environment and killing the living entities that were there before. One student pointedly notes that this digital place encourages you to "kill people who live where you want to be," and others note that the game allows you to transform into powerful new forms, and to raise your flag (the action Mario takes whenever he reaches the flagpole signifying the completion of a level). As the students verbally share their observations, and I record them on our shared Google document, I am also monitoring the unfolding Zoom text chat. Suddenly in the chat I see a comment that jumps out to me. One student, David, 1 writes:

"Mario is kinda a collinest"

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¹ All youth names in this text are pseudonyms.

I pause and reflect—have I brought the term colonialism to the table yet? No, I haven't. While the prompting questions (and my intentions with the discussion) are clearly inviting a connection to colonialism, I have not made the connection explicit. I was planning, later in our discussion, to elicit the concept of colonialism with an explicit prompt connecting our observations to real-world histories.

David, however, anticipates and obviates my heavy-handed direction of the conversation, responding to the prior invitations with his own conceptual connection. David's comment opens a floodgate of chatter in the chat. Students alternate between further connecting the invited experiences of the two discussed games to colonial histories of exploitation (David asks, rhetorically, "is mario christofer colubus[?]") and generating joking epithets for Mario that juxtapose the brightly colored cartoon character with the implications of his activities - Mario the Marauder, Mario the Conqueror, Mario the Killer.

The above vignette unfolded during my teaching of a summer camp program, *Digital Places*, as part of my dissertation research. In this paper, I summarize the methods and outcomes of this dissertation inquiry, which examined the potentials that critical perspectives on digital placemaking practices may hold for art teaching with digital materials. In the study, I critically examined the placemaking activity of youth participants in *Digital Places*, a camp focused on creating 3D digital environments. I also critically examined my own digital placemaking in the development of *Crafting Digital Places*, a website designed to accompany the camp and invite students' critically sensitive analysis and crafting of digital places.

Reflexive examination of my digital placemaking was necessary as I am white, cis male, a settler, and a citizen of the United States. I have been acculturated in a society that confers power, privilege, and entitlement on those identity markers, and I am susceptible to assumptions and biases that normalize settler entitlement to land, normalize conceptions of property that benefit white people, and normalize masculine modes of human agency in place that emphasize seizing land and policing borders (Calderon, 2014; Gaztambide-Fernández et al., 2018; Tuck & McKenzie, 2015). Operating from a critical post-structural frame that recognizes no researcher's work is positionless (Peters & Burbules, 2004), in the research and teaching described below I aimed to place my positionality in dialogue with scholars and educators occupying different positions than myself in relation to the ongoing programs of settler-colonialism.

Statement of and Background to the Problem

My main research question in this inquiry was: How might teachers' and learners' critical sensitivity to the material qualities of digital places, particularly to the ways these qualities enact or resist settler-colonial ideologies of place, impact and be impacted by the (re)crafting of curriculum as a place of learning? This summary focuses on findings related to one of my inquiry's sub-questions: How does a curriculum, critically (re)crafted as a place of learning, materially invite learners' critical sensitivities to the material qualities of digital places?

Here, *material qualities of place* are the invitations and inhibitions toward action and sensation evinced by a place (Drucker, 2013; Ellsworth, 2005; Verbeek, 2006). Materiality here is not physicality, but is performative—a product of the way materials act upon bodies—meaning that digital places just as readily possess material qualities as physical places do (Drucker, 2013; Hayles, 2004; Leonardi, 2010).

In my research question, and in my dissertation, *critical sensitivity* is an awareness of the material qualities evinced by material entities, the ways they act upon bodies, and the ideologies they perform. Digital places may materially perform an ideology imbued (intentionally or not) by a human designer, necessitating deliberate modes of sensitizing inquiry (Ahmed, 2010; Calderon, 2014; Latour, 1992/2008; Latour, 2005; Verbeek, 2006). Critical sensitivity complements the critical *literacy* focused on in visual culture (VCAE) frameworks that articulate cultural artifacts as *texts* demanding critical *readings* of their *meanings* (Eisner, 2002; Freedman, 2003). Instead, critical sensitivity recognizes digital artifacts as *materials* demanding critical *awareness* of their *doings*.

In the context of this study, *placemaking* is the (often, but not always, intentional) shaping of the material qualities of a place. Placemaking does not occur *ex nihilo* and is always contextualized in (a) place (Casey, 1996; Massey, 2005; Tuck & McKenzie, 2015). Placemaking may involve re-shaping the material agency of an extant place (e.g., changing the policies, furniture arrangements, or video chat security settings of a learning context), or demarcating a 'new' place within an extant place (e.g., opening up a video chat room in which to hold a class, sitting around a circle in the corner of an art room, or crafting a 3D virtual setting on a classroom computer).

In my study, I turned my attention to *Crafting Digital Places*, a digital curricular website I co-developed and used in camp programs alongside coteacher Oscar Keyes over three summers, from 2019 to 2021. As illustrated in

figure 1, different animating concerns directed the iterative development of *Crafting Digital Places* each year. In 2019, curricular crafting focused on how to make digital placemaking tools accessible to youth and, broadly, how to encourage sensitive and reflective placemaking. In 2020, when refiguring the program for teaching during quarantine, Keyes and I focused on equitable access to placemaking tools while teaching across physical distance, and on sensory strategies for creating community in our shared digital places of learning. In 2021, we focused on new animating questions, addressing critical concerns beyond access, namely material relationships between colonialism and digital placemaking, and how critically sensitive placemaking may address those relationships. In my dissertation study, I examined the outcomes of my most recent revisions to the *Crafting Digital Places* site, made with attention to ways digital places materially perform ideologies rooted in colonizing relations to place. Specific new provocations introduced into the curriculum included:

- critical analyses of digital places from popular culture with attention to the colonizing place sentiments and activities they habituate
- encounters with curated works of counter-placemaking by Indigenous and other marginalized artists
- and youths' fabulation of place histories for places the youth both encounter and create.

In the following sections, I will summarize the three threads of the theoretical framework that informed my changes to the *Crafting Digital Places* site, informed my animating questions for my dissertation inquiry, and informed the analyses I undertook in that inquiry.

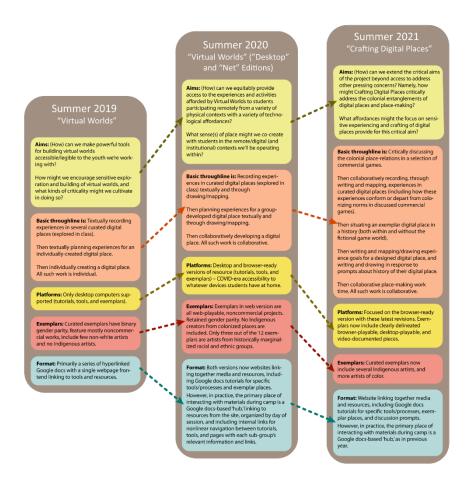


FIGURE 1: ITERATION OF THE CRAFTING DIGITAL PLACES SITE

Note: A diagram mapping changes in intention, structure, and content of the *Crafting Digital Places* site over three iterations.

Theoretical Framework, Thread 1: Digital Materialisms

My theoretical frame for my dissertation work wove together three threads. The first thread was a digital materialism which, as described above, encompassed the performed materiality of digital materials through the invitations and inhibitions they exert on bodies (Drucker, 2013; Leonardi, 2010; Verbeek, 2006). The term digital materialism also encompasses and acknowledges the

sociomaterial entanglements of the digital (Callaway, 2017; Fuchs, 2014; Potter & McDougal, 2017; Schniederjans & Hales, 2016). The first of these two digital materialisms, focusing on the micro-political agentic doings of digital things within complex relational contexts, is indebted to new materialist thought. The second digital materialism, focusing on macro-political ways digital systems participate in historic and present power relations with material consequences for laborers and the environment, is indebted to a historical materialism with neo-Marxist antecedents. As such, these two strains can feel politically and ontologically at odds with each other (Casemajor, 2015). New materialist-leaning strains of digital materialism critique critical strains for being too social-constructivist and anthropocentric, and for focusing exclusively on human agencies in complex, multistable digital systems (Casemajor, 2015). Conversely, critical Marxist-rooted strains of digital materialism critique new materialist strains as depoliticizing and minimizing the culpability of human actors in inequitable distributions of material power via digital systems (Casemajor, 2015).

However, several materialist scholars, including Jane Bennett (2010), Sarah Ahmed (2010), and Jason Edwards (2010) have articulated how macro- and micro-political materialisms may operate in concert rather than in tension, attending to the continuity between these two registers. In particular, decolonial scholar Neetu Khanna's (2020) notion of the *visceral* highlights a way that the sensing body may act as a hinge-point joining macro- and micro-political material concerns. Khanna's conception of the visceral attends to the "materiality of the colonized body" (p. 22), observing how bodies (both colonizer and colonized) accrue habits of sensing and doing within sociomaterial contexts impacted by varied forms of colonization. Furthermore, for Khanna, understanding the visceral dimensions of colonialism is essential to combating contemporary colonizing and anti-democratic political movements that resist textual criticism, argument, and rhetoric, and persist through embodied habit and sentiment.

Art educators Injeong Yoon-Ramirez and Benjamin Ramirez (Ojibwe) (2021), drawing on Khanna, argued further that arts experiences, and art education pedagogy that frames and facilitates them, may interrupt, disrupt, or even change habituated settler sentiments toward place, accomplishing tangible anticolonial work. However, I do not characterize my work as literally decolonizing by repatriating stolen land, recognizing the assertion of Eve Tuck (Unangax) and K. Wayne Yang (2015) that decolonization is not a metaphor.

Theoretical Framework, Thread 2: Digital Places of Learning

The second thread of this study's theoretical framework developed a conception of digital places of learning. I drew on Doreen Massey's (2005) sense of relational place, and its invocation in discussions of place in digital and mediated contexts (e.g., Ek, 2012; Richardson & Wilken, 2012; Sutherland, 2012). Relational place contests the focus on the geographically proximal present in much place-based scholarship (e.g. Gruenewald, 2003) and creates the potential for place-making in networked, digital settings.

I also informed this study's conception of curriculum with Elizabeth Ellsworth's (2005) concept of places of learning, framing curriculum design as the crafting of agentic contexts that transform over time through coparticipation of students, teachers, and non-human participants (Beudert & McClure, 2015). Places teach bodies by habituating sensations and actions through their invitations and inhibitions. As such, *colonized* places may habituate colonizing place norms (Khanna, 2020; Rifkin, 2014; Yoon-Ramirez & Ramirez, 2021). Digital places are just as able to materially impart colonizing curricula of place (Byrd, 2016; Loban & Apperly, 2019; Nakamura & Chow-White, 2012). And, in turn, digital places of learning might un-settle embodied, habituated settler-colonial place norms, functioning materially as anticolonial curricula.

Within art education, scholars Lynn Beudert and Marissa McClure (2015) articulated a conception of curriculum and curricular design that likewise conceives of curriculum in terms of place, and curriculum development as an architectural, placemaking endeavor. However, the resulting curriculum is not an inert edifice but an agentic context that transforms over time through coparticipation of students and teachers. In curricula-as-places teachers may anticipate experiences but not determine them. Beudert and McClure's curricular approach is rooted in the architectural concept of wayfinding, and curriculum design for them involves the anticipation and documentation of learning, framed as varied experiences in and journeys through curriculum as place.

Theoretical Framework, Thread 3: Anticolonial Framings of Digital Places

The third thread of this study's theoretical framework problematizes white settler place-making practices, attending to decolonizing and Indigenous conceptions of place and land. This includes sensitivity toward histories of digital and physical place that frustrate settler entitlement and myths of *terra nullius* (blank land without people or history, waiting for colonial occupation to fill it) (Bang et al., 2014; Hunt & Stevenson, 2017; Tuck & McKenzie, 2015). Scholars and technologists have traditionally framed digital places with a color-evasive² conception that articulates digital places as blank slates, divorced from the racialized histories of the material world (Mills & Godley, 2018; Nakamura & Chow-White, 2012). Artists use a variety of strategies to counter the colonizer senses of (a)history materialized in, and habituated by, digital places encountered in daily life. Such strategies can include, for example, critical counter-mapping to surface the pre-colonial layers of place history elided in ubiquitous digital mapping systems (Hunt & Stevenson, 2017), or modifying the code and assets of Eurocentric digital strategy games to include the presence of Indigenous peoples on lands previously coded as *terra nullius* (Loban & Apperley, 2019).

In addition to history, Indigenous futurity in digital places is manifested in digital archival practices that prioritize Indigenous data sovereignty over opendata norms (Christen, 2005; GIDA, 2019; Soriano, 2012; Tuiskula, 2017), and in the work of Indigenous artists who use digital tools to fabulate uncolonized and decolonized place-futures (Brown et al., 2020; Shepherd et al., 2018). Such artists include Meagan Byrne (Métis), whose piece *Hill Agency* creates a future set in a North American Indigenous sovereign nation, and Elizabeth LaPensée (Anishinaabe) who frames her game-making practice as an act of survivance perpetuating Indigenous cultural production and critical technology use into the future (Brown et al., 2020; LaPensée, 2014).

Critical attention to qualities of colonized place and land can also defamiliarize settler place norms in physical and digital places. Examples of such critical attention include sensitization to settler naming conventions on digital maps (Bang et al., 2014; Calderon, 2014; Hunt & Stevenson, 2017), or sensitization to the normalization of clearing, claiming, and conquering place-relations in commercial video games (Bezio, 2018; Hemmann, 2018; Leonard, 2003; Mills & Godley, 2018; Shaw, 2014). Megan Bang (Ojibwe) et al. (2014)

² Annamma et al. (2017) have advanced the concept of *color-evasiveness* to describe the ahistorical worldview often labeled *colorblindness*, without using terminology beholden to ableist norms that cast blindness and colorblindness as physical or moral deficiencies. The term color-evasive will be used in this document.

emphasized the sociocultural nature of attentional habits, recognizing that what students notice and do not notice about place is rooted less in the place itself than in the acculturated habits of attention they have developed. Bang et al. (2014) noted that place recedes as it becomes familiar, and that the teacher's job of "making visible the impacts of settler colonial constructions" (p. 39) necessitates defamiliarizing colonized places.

In my dissertation, I drew together these three threads—digital materialisms, places of learning, and decolonizing framings of place and landto articulate a conception of critical sensitivity central to my inquiry. Critical sensitivity intersects the concerns of several materialist and decolonial scholars, all of whom discuss an insensible register at which the material status quo operates, necessitating sensitizing and defamiliarizing modes of critical inquiry. Latour (2005, p. 81) and Ahmed (2010, p. 237) called this register the "background," Rifkin (2014, p. xvi) called it "settler common sense," and Khanna (2020, p. 8) called it the "unrecognized." Critical sensitivity acknowledges that attending to sensory experiences of sensing bodies in digital places is necessary for critically recognizing and responding to the material qualities of those places. It also recognizes the post-phenomenological assertion that what is sensed is itself a political issue, that habits of sensing are culturally habituated, and that pedagogy can play a part in determining whether colonial histories and realities of place are noticed and unsettled or are merely "relegated to the background" (Ahmed, 2010, p. 237). This theoretical framework, and this conception of critical sensitivity, informed my methodological choices for the study described in this article, which I will summarize in the following section.

Methodology and Methods of Inquiry

In my investigation, I deployed an action-research methodology. Action research accommodated my research goals of attending to emplaced and embodied digital material realities (Delacruz, 2013; May, 1993) and critically analyzing pedagogical practice to inform its iterative and ethical transformation (Carson, 1990; Delacruz, 2013; Keifer-Boyd, 2013; May, 1993; McCutcheon & Jung, 1990). My perspective on action research was also inflected through a materialist lens, as not only was I attending to and transforming *my* agency and practice as a teacher, but the pedagogical agency of the *Crafting Digital Places* site as a place of learning comprising digital materials.

As discussed above, I have crafted and re-crafted multiple iterations of the *Crafting Digital Places* website (Figure 1), and co-created multiple instances of curricula as places of learning in which the website was an agentic participant. Action research as a methodology is open to research realities that do not have clear pre- and post- conditions. This was the case as I found myself on the third turn around an iterative spiral, nonetheless hoping to attend to, and theoretically reframe, my work in new ways that could open pathways to new and necessary modes of praxis.

In an effort to attend to the material qualities of digital places of learning, I drew on Sarah Pink's (2015) sensory methods, collecting a variety of textual and non-textual data. Such data included student mapping of experiences (Powell, 2016) in teacher-curated exemplar digital places, student mapping of sensory and historiographic intention in their placemaking, video recordings of studenthosted "walking tours" of digital places they crafted, and my own reflexive journaling of my sensory experiences while teaching, including my white settler discomfort (Zembylas, 2018) when addressing colonial histories in my pedagogy.

Findings

Analyzing my collected data, I encountered a number of findings that addressed my main and secondary research questions. Here I will briefly summarize observations and analyses of participating students' place-crafting which specifically address the sub-question: How does a curriculum, critically (re)crafted as a place of learning, materially invite learners' critical sensitivities to the material qualities of digital places?

Qualities of Place Attended to in Student-led "Walking Tours"

Examining data collected in 2021 alongside data collected in 2020, prior to the introduction of the new critical provocations to the curriculum, highlighted significant differences in students' digital placemaking between the two years. A quantitative measure of this difference is the length of the video-recorded, student-hosted "walking tours" of crafted digital places on the final day of each camp session.

The walking tours from 2021 were consistently at least twice as long as those from 2020, reflecting students spending more time relating the diegetic histories materialized in their digital places, and how those histories impacted the present material conditions of the places. Students' walking tours in 2020 spoke in the present tense, briefly describing objects present in the places, and occasionally describing the affective experiences students intended for their place to elicit. Students' walking tours in 2021, conversely, used both present and past tense to situate the crafted place within a diegetic history of power, often connected to real-world histories of colonization. Students more often called out specific material details and qualities of the places they had crafted, describing how they were shaped by, and continued to participate in, historic and present diegetic material conditions. Students who engaged with the revised *Digital Places* curriculum approached and described their digital placemaking in noticeably different ways than students in prior years.

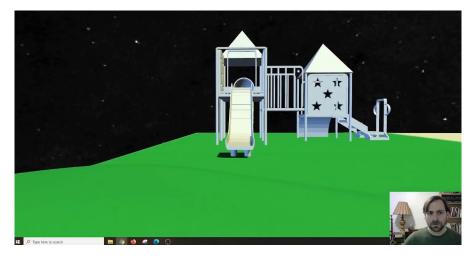


FIGURE 1: PLAYGROUND IN PLACE CRAFTED BY "HAMILTON"

Note: A playground structure in the digital place crafted by "Hamilton's" group, intended to represent a child's dream centered on the emotion of joy.

Varied Learner Strategies of Critical (Dis)Engagement

While I observed broad shifts in the quality and quantity of students' descriptions of their placemaking from 2020 to 2021, juxtaposing the placemaking of multiple students in the 2021 camp revealed a variety of student

strategies for addressing the curricular prompt to craft a place that "encourage[s] other types of activities and experiences besides colonizing, conquering, and violent ones." One group, for example, pursued a strategy that avoided engagement with colonial histories. They developed a sensorially-rich dreamscape (Figure 2) that operated on a metaphorical and emotional level without intentionally acknowledging any politics or histories of place, and which group member "Hamilton" described as meeting the demands of the prompt by not allowing any violent actions. This group's focus on scrubbing violence from the place they were co-crafting, rather than engaging with colonial qualities and histories of place, may stem from familiarity with the proscriptions of violence in student artwork that are endemic to school settings (Cinquemani, 2014). Perhaps fixating on the term "violent" in the prompt allowed them to not engage with the more uncomfortable terms "colonizing" and "conquering," with which they had less experience. It is also possible that my inclusion of the less-specific term "violent" in the prompt reflected my settler anxiety regarding an exclusive focus on colonization, resulting in a curricular quality of place that invited an avoidant response. Despite creating a metaphorical dreamscape depicting the abstract emotion of joy in an attempt to leave behind colonial histories, the group's crafted place nonetheless contains and embodies colonial histories of place. Notably, this group represented their place of joy by depicting a public park, a playground, and a beach resort; all ways that colonized land is repurposed for settlers' recreational use.

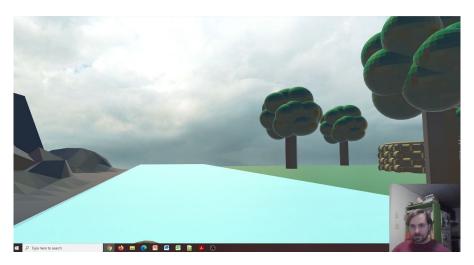


FIGURE 3: SCREENSHOT OF PLACE CO-CRAFTED BY "PETER"

A second group followed a different strategy than the above-described group, engaging in a complex process of historying in their placemaking, and drawing on pop culture narratives of place and power to inform diegetic histories in the place that they crafted (Figure 3). Their placemaking process involved navigating, and imperfectly resisting, tendencies toward settler innocence (Tuck & Yang, 2012) through dialogue within their collaborative group. The group's conception of the place that they were co-crafting changed several times. The conception first materialized as an essentialist juxtaposition of an intrinsically "good" and "bad" place on either bank of a river, inspired by the "light side" and "dark side" of Star Wars. The group then shifted to developing a diegetic history involving the exploitation and extraction of wealth from one place to another, inspired by the class-based narrative of *The Hunger Games*. Eventually, the group included a natural disaster (a flood) and a response to it that reflected real-world stories of climate refugees from colonized places being turned away by industrialized colonizer nations that contribute to climate change. The place this group crafted materializes the rich and layered histories they developed. However, the virtual body of the visitor to this place seems intangible, passing unbounded through surfaces, distancing the visitor from the histories embodied by the place. The place functions as a diorama presenting the outcomes of an inequitable past, without including a material present in which the visitor participates as a material agent.

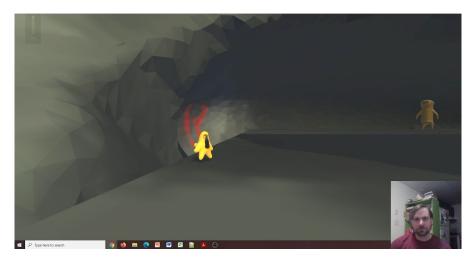


FIGURE 4: INSIDE THE CAVE THAT "DAVID" CRAFTED

Yet a third participant group likewise developed a complex history of exploitation and displacement which they materialized in their placemaking (Figure 4). Beyond materializing a diegetic history, their place also addressed the visitor as a material entity, and as a participant in the place's ongoing history, with solid surfaces that push back on the visitor's virtual body, and inhabitants that audibly recognize and resist the visitor's presence as a representative of a colonizer culture. This group developed a place peopled with residents who were refugees displaced by Earth's colonial expansion to their planet, and whose ship had been shot down by Earth military forces. These extraterrestrial persons were residing in a remote (to humans) area of Earth which had since gained a reputation among humans as a location for spotting cryptozoological creatures, due to humans' misapprehension of the alien persons as semi-mythic monsters, reflecting the regular reduction of colonized subjects to non-persons by colonizers (Pratt, 1992; Tuck & McKenzie, 2015). In addition to establishing an antecedent history detailing the colonial histories of place and power shaping the present qualities of the place, this group established a specific role for the visitor to their place: that of a human photographer entering the place to photograph cryptozoological creatures. The residents of the place resent and resist the presence of a representative of the people who colonized them, particularly one seeking to capture them with a camera. The residents emit loud, aggressive sounds when the visitor approaches them. Unlike in the avoidant strategy of the first group described above, this place materially reflects its crafters' exploration of the ways colonial histories impact colonized peoples and places, and its material qualities reflect the diegetic place history they developed. Unlike in the strategy of the second group described above, in this work the visitor exists as an entity in the place, not solely as an incorporeal observer, but as a representative of a colonizer culture whose presence the residents actively resist.

Together, these three student-crafted places reflect different strategies students used to explore and express a critical sensitivity to the ideologically-charged material agency of digital places. Some sought to elide the colonial violence endemic to popular commercial video games, and some endeavored to fabulate histories reflecting the ways colonizing forces materially shape colonized places over time. Yet others attempted to reflect the reality that colonialism, particularly settler colonialism, is an ongoing present project rather than a past historical event (Wolfe, 2006) by developing places where the human visitor to the digital place existed in relation to the diegetic place-histories still unfolding, and where the place responded to their presence. The students'

diverse responses to the invitations of the *Digital Places* curriculum reflect the complex ways in which a curriculum attending to critical sensitivities to material qualities of digital places may play a co-crafting role in students' placemaking. I feel the conception of this curriculum *as a place* inviting varied traversals encouraged this range of responses, each attending differently to the colonial norms materially habituated by digital places.

In this section, I discussed findings related to how critically considering the material qualities of digital places informed the placemaking of student participants in the *Digital Places* camp. Other findings discussed in the unexpurgated dissertation include: impacts on my own curricular placemaking, the impact of sensitivity to the colonial history of our program's hosting museum place, the complex distributed agencies of students and teachers as cocreators of curricular places, the utility of mapping as an analytical tool enabled by critical sensitivity to digital place, students' invocation of popular culture in crafting place histories, and the role of textual historying in a sensory and materialist critical curriculum of place.

Conclusion

Reflecting on Mark Zuckerberg's recent announcement of his proposed Metaverse (Meta, 2021), I am prompted to consider the relevance of this research. I developed this project while considering the contemporary curricula unfolding in digital places such as teleconferencing rooms, learning management systems, video games, and social media sites. However, it is now clear that critical research regarding digital place must address potential futures where learning and laboring may be circumscribed and surveilled by sensorially-rich digital Metaverse environments that materially enact their ideological curricula across an even wider range of modalities. I feel the concept of critical sensitivity elaborated in this research, and enacted in the Digital Places camp curriculum, generates resistant pedagogical potentialities for addressing digital places now, and those to come, in ways that the critical literacies endemic to much scholarship and teaching with digital materials may not. Sensitivity to the diegetic and extradiegetic histories of digital places may help resist the ways digital environments reinforce the myth of terra nullius—by sensitizing students to the fact that a new project in *Unity* or *Photoshop* is not truly a blank canvas to fill with intentions, nor is the unfolding landscape of *Minecraft*, nor was the mythic frontier that allowed settlers to reframe their theft as expansion.

Sensitivity to the present material doings of digital places may help students recognize the ideologically-laden curricula that places are always teaching their bodies, through material qualities which habituate norms of sensibility and action. Such critical sensitivities, when brought to bear on students' crafting of place, may inflect their placemaking with an awareness of the ways places created in colonial contexts can reflect, materialize, habituate, and perpetuate colonial realities. Critical sensitivity can impact student place-craft, whether students are forming communities in *Minecraft*, co-crafting a *Zoom* classroom with classmates and teacher, modeling a 3D environment in a digital arts camp, or, ultimately, participating in civic and democratic processes that co-create communities on larger scales.

These far-reaching suppositions are just that: suppositions. Further research is needed to examine the impact of curricula that are critically sensitive to material qualities of place on the placemaking of students beyond the limited context of this study. My hope is that the dissertation inquiry documented in this summary, and this dissertation inquiry's conception of critical sensitivity drawing upon digital materialisms, relational place, and critical and anticolonial conceptions of place and land, may prompt such research.

References

- Ahmed, S. (2010). Orientations matter. In D. Coole & S. Frost (Eds.), New materialisms: Ontology, agency, and politics (pp. 234-257). Duke University Press.
- Annamma, S. A., Jackson, D. D., & Morrison, D. (2017). Conceptualizing colorevasiveness: Using dis/ability critical race theory to expand a color-blind racial ideology in education and society. *Race, Ethnicity and Education, 20*(2), 147-162. https://doi.org/10.1080/13613324.2016.1248837
- Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich, E. S., & Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, 20(1), 37-55. https://doi.org/10.1080/13504622.2013.865113
- Bennett, J. (2010). Vibrant matter: A political ecology of things. Duke University Press.
- Beudert, L. & McClure, M.. (2015). Curriculum inquiry and design for school- and community-based art education. National Art Education Association.

- Bezio, K. (2018). The perpetual crusade: Rise of the tomb raider, religious extremism, and the problem of empire. In K. L. Gray & D. J. Leonard (Eds.) *Woke gaming* (pp. 119-138).
- Brown, M. L., Lapensée, B., Nihoniho, M., Byrne, M., Brey, B. (2020, July 8). (Re)coding survivance: Sovereign video games. *First Person Scholar*. http://www.firstpersonscholar.com/survivance-special-issue/
- Buolamwini, J. & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. *Proceedings of Machine Learning Research*, 81, 1-15. http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf
- Byrd, J. A. (2016). 'Do they not have rational souls?': Consolidation and sovereignty in digital new worlds. *Settler Colonial Studies*, *6*(4), 423-437. https://doi.org/10.1080/2201473X.2015.1090635
- Calderon, D. (2014). Speaking back to manifest destinies: A land education-based approach to critical curriculum inquiry. *Environmental Education Research*, 20(1), 24-36. https://doi.org/10.1080/13504622.2013.865114
- Callaway, A. (2017). Demand the supply: Ranking consumer electronics and jewelry retail companies on their efforts to develop conflict-free minerals supply chains from Congo. https://enoughproject.org/wp-content/uploads/2017/11/
 DemandTheSupply EnoughProject 2017Rankings final.pdf
- Carson, T. (1990). What kind of knowing is critical action research? *Theory into Practice*, *29*(3), 167-173. https://doi.org/10.1080/00405849009543450
- Casemajor, N. (2015). Digital materialisms: Frameworks for digital media studies. *Westminster Papers in Communication and Culture, 10*(1), 4-17.
- Casey, E. S. (1996). How to get from space to place in a fairly short stretch of time: Phenomenological prolegomena. In S. Feld and K. H. Basso (Eds.), *Senses of place* (pp. 13–52). School of American Research Press.
- Christen, K. (2005). Gone digital: Aboriginal remix and the cultural commons. International Journal of Cultural Property, 12(3), 315-345. https://doi.org/10.1017/S0940739105050186
- Cinquemani, S. (2014). "I look cool; he's dead now": Reconsidering children's violent play art. *Art Education*, *67*(3), 13-18.

- Delacruz, E. M. (2013). Acts of engagement. In M. L. Buffington & S. Wilson McKay (Eds.), Practice theory: Seeing the power of art teacher researchers (pp. 261-265). National Art Education Association.
- Drucker, J. (2013). Performative materiality and theoretical approaches to interface. *Digital Humanities Quarterly*, 7(1). http://www.digitalhumanities.org/dhq/vol/7/1/000143/000143.html
- Edwards, J. (2010). The materialism of historical materialism. In D. Coole & S. Frost (Eds.), *New materialisms: Ontology, agency, and politics* (pp. 281–298). Duke University Press.
- Eisner, E. W. (2002). The arts and the creation of mind. Yale University Press.
- Ek, R. (2012). Topologies of human-mobile assemblages. In R. Wilken & G. Goggin (Eds.), *Mobile technology and place* (pp. 39-55). Routledge.
- Ellsworth, E. (2005). *Places of learning: Media, architecture, pedagogy.* Routledge Falmer.
- Freedman, K. J. (2003). *Teaching visual culture: Curriculum, aesthetics and the social life of art.* Teachers College Press.
- Fuchs, C. (2014). Digital Labour and Karl Marx. Routledge.
- Gaztambide-Fernández, R., Kraehe, A. M., & Carpenter, B. S., II. (2018). The arts as white property: An introduction to race, racism, and the arts in education. In A. M. Kraehe, R. Gaztambide-Fernández, & B. S. Carpenter, II (Eds.), *The Palgrave handbook of race and the arts in education* (pp. 1-32). Palgrave Macmillan.
- Global Indigenous Data Alliance. (2019, September 12). CARE principles for indigenous data governance. https://www.gida-global.org/care
- Hayles, N. K. (2004). Print is flat, code is deep: The importance of media-specific analysis. *Poetics Today*, 25(1), 67-90. https://doi.org/10.1215/03335372-25-1-67
- Hemmann, K. (2018). The legends of Zelda: Fan challenges to dominant video game narratives. In K. L. Gray & D. J. Leonard (Eds.) *Woke gaming* (pp. 213-230). University of Washington Press.
- Hunt, D., & Stevenson, S.A. (2016). Decolonizing geographies of power: Indigenous digital counter-mapping practices on Turtle Island. *Settler*

- Colonial Studies, 7, 372 392. https://doi.org/10.1080/2201473X.2016.1186311
- Keifer-Boyd, K. (2013). Critical action research activism: Social structure and human agency. In M. L. Buffington & S. Wilson McKay (Eds.), *Practice theory: Seeing the power of art teacher researchers* (pp. 246-252). National Art Education Association.
- Khanna, N. (2020). The visceral logics of decolonization. Duke University Press.
- LaPensée, E. (2014). Indigenously-determined games of the future. *Kimiwan Zine*, 8.
- Latour, B. (2005). Reassembling the social: An introduction to actor-network-theory. Oxford University Press.
- Latour, B. (2008). Where are the missing masses? The sociology of a few mundane artifacts. In D.J. Johnson and J. M. Wetmore (Eds.), *Technology and society, building our sociotechnical future* (pp. 151-180). MIT Press. (Original work published 1992).
- Leonard, D. (2003). 'Live in your world, play in ours': Race, video games, and consuming the other. *Studies in Media & Information Literacy Education*, *3*(4), 1-9. https://doi.org/10.3138/sim.3.4.002
- Leonardi, P. M. (2010). Digital materiality? How artifacts without matter, matter. *First Monday*, 15(6). http://firstmonday.org/article/view/3036/2567
- Loban, R. & Apperley, Y. (2019). Eurocentric values at play: Modding the colonial from the Indigenous perspective. In P. Penix-Tadsen (Ed.) Video games and the global south (pp. 87-100). ETC Press.
- Lu, L. L. (2005). Pre-service art teacher negative attitudes and perceptions of computer-generated art imagery: Recommendations for pre-service art education programs. *Visual Arts Research*, *31*(60), 89-102.
- Massey, D. (2005). For space. Sage Publications.
- May, W. T. (1993). "Teachers-as-researchers" or action research: What is it, and what good is it for art education? *Studies in Art Education*, *34*(2), 114-126. https://doi.org/10.2307/1320448
- McCutcheon, G., & Jung, B. (1990). Alternative perspectives on action research. *Theory into Practice, 29*(3), 144-151. https://doi.org/10.1080/00405849009543447

- Meta. (2021, October 28). The Metaverse and How We'll Build It Together -- Connect 2021 [Video]. YouTube. https://www.youtube.com/watch?v=Uvufun6xer8
- Mills, K. A. & Godley, A. (2018). Race and racism in digital media: What can critical race theory contribute to research on techno-cultures? In K. A. Mills, A. Stornaiuolo, A. Smith, & J. Z. Pandya (Eds.), *Handbook of writing, literacies, and education in digital cultures* (pp. 111-122). Routledge.
- Nakamura, L. & Chow-White, P. A. (2012). Race and digital technology: Code, the color line, and the information society. In L. Nakamura & P. A. Chow-White (Eds.), *Race after the internet* (pp. 1-18). Routledge.
- Peters, M., & Burbules, N. C. (2004). *Poststructuralism and educational research*. Rowman & Littlefield Publishers.
- Pink, S. (2015). *Doing sensory ethnography* (2nd ed.). Sage Publications.
- Potter, J., & McDougall, J. (2017). *Digital media, culture and education: Theorising third space literacies*. Palgrave Macmillan UK.
- Powell, K. (2016). Multimodal Mapmaking: Working Toward an Entangled Methodology of Place. *Anthropology & Education Quarterly*, 47(4), 402-420.
- Pratt, M. L. (1992). Imperial eyes: Travel writing and transculturation. Routledge.
- Richardson, I. & Wilken, R. (2012). Parerga of the third screen: Mobile media, place, and presence. In R. Wilken & G. Goggin (Eds.), *Mobile technology and place* (pp. 181-197). Routledge.
- Rifkin, M. (2014). Settler common sense: Queerness and everyday colonialism in the American Renaissance. University of Minnesota Press.
- Shaw, A. (2014). *Gaming at the edge: Sexuality and gender at the margins of gamer culture.*University of Minnesota Press.
- Stokrocki, M. (2014). New digital literacy investigations of virtual worlds for art education. In M. Stokrocki (Ed.), Exploration in virtual worlds: New digital multi-media literacy investigations for art education (pp. 3-8). National Art Education Association.
- Sutherland, I. (2012). Connection and inspiration: Phenomenology, mobile communications, place. In R. Wilken & G. Goggin (Eds.), *Mobile technology and place* (pp. 157-171). Routledge.

- Tuck, E., & McKenzie, M. (2015). *Place in research: Theory, methodology, and methods*. Routledge.
- Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education and Society, 1*(1), 1-40.
- Tuiskula, L. (2017, January 20). Decolonizing the digital: How to bring Indigeneity to online spaces. *Intercontinental Cry*. https://intercontinentalcry.org/decolonizing-digital-bring-indigeneity-online-spaces/
- Schniederjans, D. G., & Hales, D. N. (2016). Cloud computing and its impact on economic and environmental performance: A transaction cost economics perspective. *Decision Support Systems*, 86, 73-82. https://doi.org/10.1016/j.dss.2016.03.009
- Shepherd, M., Merry, S., Lambie, I., & Thompson, A. (2018). Indigenous adolescents' perception of an eMental health program (SPARX): Exploratory qualitative assessment. *JMIR Serious Games*, 6(3). https://europepmc.org/article/med/29980495
- Verbeek, P.P. (2006). Materializing Morality: Design ethics and technological mediation. *Science, Technology and Human Values, 31*(3), 361-380. https://doi.org/10.1177/0162243905285847
- Wolfe, P. (2006). Settler colonialism and the elimination of the native. *Journal of Genocide Research*, 8(4), 387-409. https://doi.org/10.1080/14623520601056240
- Yoon-Ramirez, I., & Ramirez, B. W. (2021). Unsettling settler colonial feelings through contemporary Indigenous art practice. *Studies in Art Education*, 62(2), 114-129. https://doi.org/10.1080/00393541.2021.1896416