

# Intangible Territories

## The Island of Salty Dreams

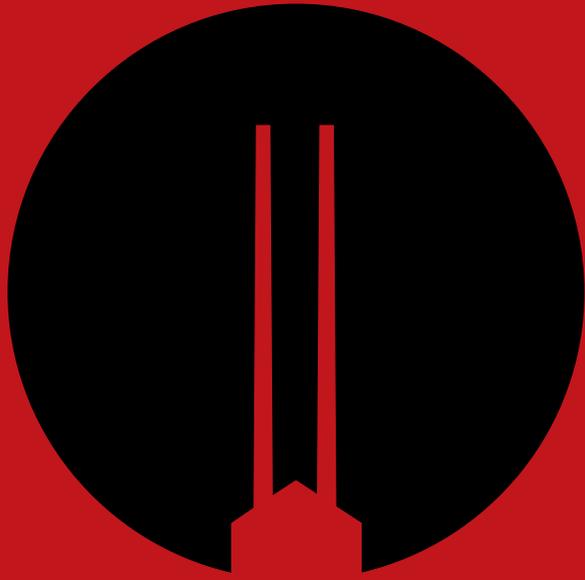
by  
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# Abstract

This project will tell the story of a site by making a videogame.

Exploring the boundaries of the tangible, this project tells the story of a place, Cusheon Cove on Salt Spring Island, British Columbia. It aims to explore the intersection between digital representation in architecture and in videogames, while considering narrative structures that bring together memories of place and imaginary space through the production of digital storytelling.

What is now known as Salt Spring Island is notorious for its alternative culture; but historically, the place had a different character defined by groups of people whose experience was grounded in diversity amid the struggle for subsistence. What transpired on the site of Cusheon Cove is relatively unknown but stands as a microcosm for events which transformed British Columbia throughout the early 20th century. This includes stories of the settlement of Saanich First Nations land, the development of resource industries, world war two Japanese-Canadian internment, mass international immigration, and environmental conservation. Though most of the site's buildings are gone, artifacts remain which illustrate the stories of the diverse groups who lived there. These stories describe influential events that include accomplishments and missteps at risk of being forgotten, and through the impact of storytelling the hope is that these stories will continue to be retold and contribute to a historical culture.

The project takes the position that architecture as a technical and cultural practice, must welcome new technologies while at the same time recognizing that culture needs to bring the past along for future development. Furthermore, in recent years the use of digital technologies for heritage recording has expanded along with a recognition that it is necessary to conserve both tangible and intangible qualities of cultural heritage. However questions remain as to how this burgeoning digital archive can be disseminated. This project proposes one possible answer through the use of a 'game engine' as a medium for interactive storytelling built around the recording and documentation of a real place.

By examining a real site through virtual methods, this project questions the status of 'tangible heritage' and asks for a re-definition of the term. It also seeks to emphasize a balance between 'technique' and 'content.' The project will follow a methodology of 'twinning' as a mode of inquiry and design. Finally, it recognizes an opportunity to expand the practice of architecture into new interdisciplinary territory and proposes new applications for the knowledge of an architect. Considering all this, the project will pursue the following question:

How can digital storytelling make the hidden qualities of a place tangible?

# Acknowledgements

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# Proposition

## An Introduction to Salty Dreams

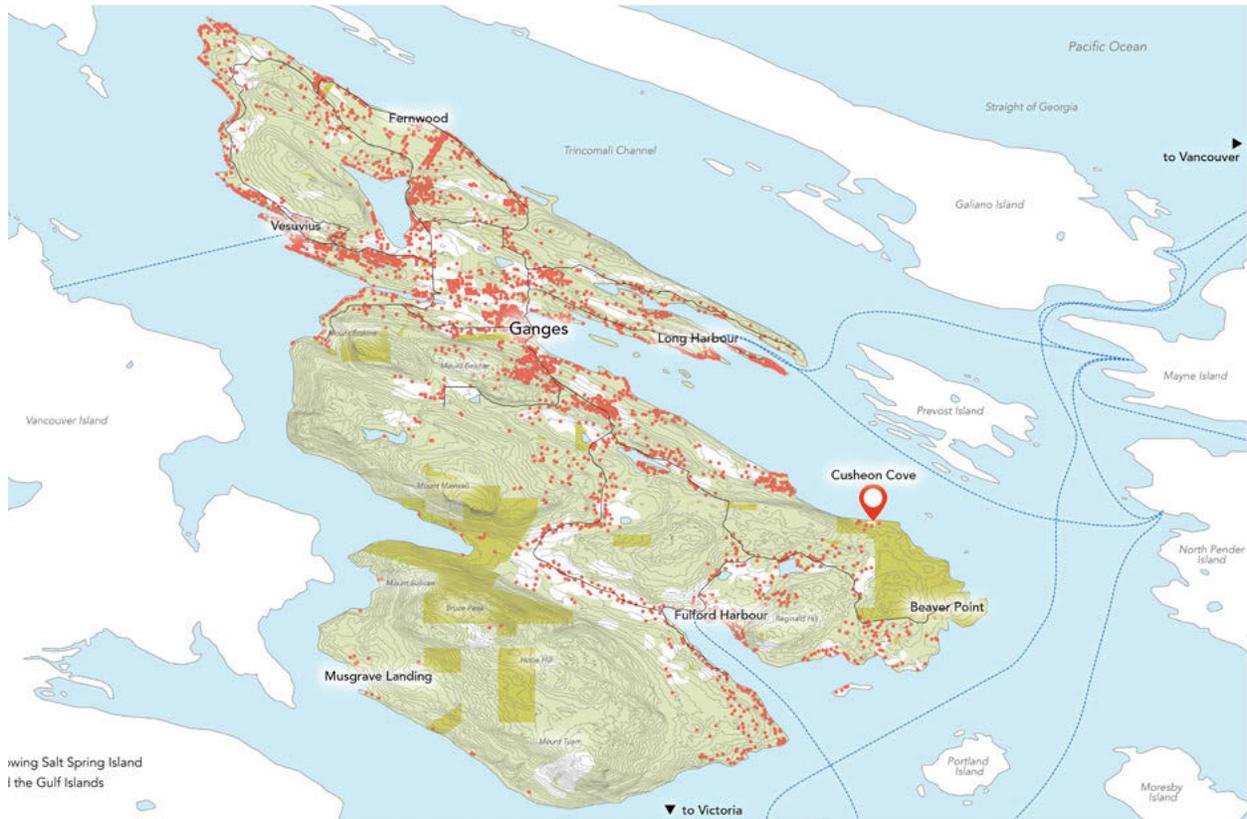
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There seems to be something special about the idea of being isolated on an island, distanced from the beat of Western civilization. Most people are not ‘from’ Salt Spring Island but have ‘come’ there in pursuit of some personal aspiration for a better life. The place has a reputation for collecting unusual individuals—hippies, artisans and anti-government types—and although there is a certain accuracy in these stereotypes, the island has indeed been home to diverse and transient communities for thousands of years.

Salt Spring Island is located among the Gulf Islands of British Columbia, Canada, between the major cities of Vancouver, Victoria, and Seattle. About ten thousand people live in 185 square kilometers of valleys and mountains, isolated from other communities by the Pacific Ocean and infrequent ferry service. It is an undeniably beautiful place.

*Fig. 1.* Salt Spring Island is only accessible by ferry.





*Fig. 2.* Map of Salt Spring Island showing locations of existing dwellings, ferry routes, and Cusheon Cove.

Salt Spring Island is full of dreamers. It is practically a prerequisite to be a dreamer in order to live on the island given the scarcity of conventional employment, and it requires a particular creativity to make a living. For example, islanders produce their own food, start their own businesses, or barter goods and services with their neighbours. The unconventional nature of the dreamers is well illustrated through the reputation the island has acquired in the press.<sup>1</sup> In pursuing their dreams many of the dreamers produce tangible artifacts that manifest as objects, spatial organizations, and buildings that are clearly recognizable to others. Some dreams are more

1 Tara Henley. "Salt Spring Island Is a Hot Destination – but That Won't Change Its Folksy Charm and Rustic Magic." *The Globe And Mail*, November 12, 2017. <https://www.theglobeandmail.com/life/travel/destinations/salt-spring-island-is-a-hot-destination-but-that-wont-change-its-folksy-charm-and-rusticmagic/article28243989/>.

difficult to perceive, and although they have had an impact on the island's way of life, they have left intangible artifacts which remain largely unseen.

But these dreams are Salty Dreams. And by that I mean that they also possess antithetical qualities, an unintended side, demonstrating a tension between aspirations and consequences. Notably, once established on the island, many of these dreamers make it difficult for newcomers to come and pursue their own dreams. They fear that too many people will change the island and ruin its authenticity, its character—ruin the very thing that made the community desirable for the dreamers to seek it out in the first place. This attitude is clearly illustrated in a local song printed in Charles Kahn's history of the island called 'Please Don't Come.'<sup>2</sup>

If you love the islands, please don't come.  
There's no more room for anyone.  
You can come for a visit or pass on through,  
Spend all your money like the tourists do.  
But if you're thinking of settling down,  
Do it off, not on the island.

While this inhospitable attitude might be called cantankerous, resentful, selfish, unfair, unjust, protective, or cynical—I prefer to describe it as the island's 'salty' character.

Even if dreams that arise out of this salty character often remain unfulfilled, the pursuit of those dreams still has real and salty consequences. To illustrate this let's examine the island's colonial-given name:<sup>3</sup> "Salt Spring Island" was named by British governor James Douglas who surveyed

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<sup>2</sup> Kahn, Charles. *Salt Spring: The Story of an Island*. First paperback edition copyright 2001 Charles Kahn edition. Madeira Park, BC: Harbour, 2001, 314.

<sup>3</sup> I say the 'colonial-given name' because it was already known as *Cúan* (chu-ayn) by the Saanich First Nation long before it was named Salt Spring Island by British Colonists. Guiled, Brenda. *Ruckle's World: A History of South-East Salt Spring Island*. Salt Spring Island, BC: Kimae Books, 2017, 12.

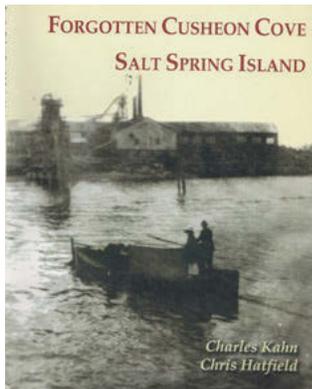


Fig. 3. Book which recounts the history of Cusheon Cove as told through artifacts.

much of coastal BC by canoe in the mid-19th century. Around 1853, he found salt springs on the north end of the island<sup>4</sup> and named the island after them because he believed they would “...be of the greatest importance and become a wealth to the country.”<sup>5</sup> They didn’t. Yet we still call it “Salt Spring Island” instead of *Cúán*—its Saanich name.

Like the story of its name, by looking carefully at specific artifacts that can be found on Salt Spring Island, one gains not only an understanding of the character of the place, but also an insight into the nature of its aspirations, its dreams. And where those aspirational dreams play out as events they leave behind stories. This is the point of departure for this thesis—it seeks to gain an understanding of some stories of ‘Salty Dreams’ through an examination of specific artifacts and to propose a retelling of those stories. To call Salt Spring Island *The Island of Salty Dreams* reflects my understanding of the character of the island. The specific site chosen for this proposal is Cusheon Cove. I came to know it through a book prepared by one of the coves inhabitants, Chris Hatfield. The book recounts the history of a forgotten logging mill which he uncovered. The book is framed by artifacts he found on the site and paints a picture of the different people who lived on the site and their diverse experiences. This remarkable story piqued my curiosity and my suspicion is, to quote James Joyce, that to some extent at Cusheon Cove “...in the particular is contained the universal...”<sup>6</sup> and though this story is relatively unknown, it stands as a microcosm of the events that transformed British Columbia in the early 20th century.

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4 A salt spring, also known as a brine spring, is a water source with a high salinity whose water can be boiled down to produce commercial salt.

5 Kahn. *Salt Spring*, 11.

6 Power, Arthur. *From the Old Waterford House*. Carthage Press, 1940. 68-69.

*Fig. 4.* By the early 20th century the descendents of the various immigrant and first nation groups made for a small but distinctly unique community.



This project considers hidden narratives—the Salty Dreams of Cusheon Cove—through the interactive experience of a videogame, in an effort to render the Salty Dreams tangible.

### The Case for Storytelling

Though most of the buildings on Cusheon Cove are gone, artifacts remain that tell the stories of the diverse groups who lived there. These stories describe accomplishments as well as missteps which I believe are important to remember, for several reasons.

Why does Salt Spring Island need its story told? I argue that the island is forgetting its history, particularly in cases where the historical record is contentious. Brenda Guiled recounts how the pre-colonial presence of indigenous communities on Salt Spring is disputed.<sup>7</sup> This facilitates a convenient narrative for some islanders—that they are entitled to a clear conscience for their land ownership because they believe it was never taken from anyone. In many ways, although contrary to historical evidence, this

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<sup>7</sup> Guiled, Brenda. *Ruckle's World: A History of South-East Salt Spring Island*. Salt Spring Island, BC: Kimae Books, 2017, 2.



*Fig. 5. The Lost Fleet*, the name given to the fishing boats owned by Japanese-Canadians which were confiscated by the Canadian government during World War Two.

is consistent with much of Canada's unofficial attitude to the land claims of indigenous peoples.

Furthermore, the social trauma caused by World War Two Japanese-Canadian internment on Salt Spring Island is still felt today. This is evident in the resentment felt between influential local families; families whose ancestors betrayed each other.<sup>8</sup> Considering this in light of recent events in Canada and the United States, I hardly feel confident that our society is mature enough to no longer be reminded of its xenophobic past.<sup>9, 10</sup> These local stories—entwined in the greater narrative threads of Canada's dark histories—are at particular risk of being forgotten. Local community groups like Salt Spring's volunteer historical society have only a limited capacity

<sup>8</sup> Murakami, Rose. *Ganbaru: The Murakami Family of Salt Spring Island*. Salt Spring Island, BC: The Japanese Garden Society of Salt Spring Island, 2016, 12.

<sup>9</sup> Spencer, Hawes, and Sheryl Gay Stolberg. "White Nationalists March on University of Virginia." *The New York Times*, August 11, 2017, sec. U.S.

<sup>10</sup> Keating, Bob. "B.C. Sees a Major Spike in Hate Crimes in 2016." *CBC News*, November 28, 2017.

to collect, preserve, and retell them to future generations. It is imperative that we continue to write the stories of our history and in doing so, in the words of Joan Scott, “open the readers’ imaginations.”<sup>11</sup>

So I turn to the notion of storytelling as described by Walter Benjamin as a potent method for preserving history. In his essay *The Storyteller* Benjamin argues how storytelling is a superior form of knowledge to information. He writes that in storytelling,

“...the psychological connection of the events is not forced on the reader. It is left up to him to interpret things the way he understands them, and thus the narrative achieves an amplitude that information lacks.”<sup>12</sup>

Storytelling, therefore, actively engages the listener by arousing them subjectively and psychologically, making a story unforgettable. In this way, **history**—as **story**—is perpetuated not only within books but also as a collective memory. Storytelling is powerful because a good story is always retold.

*Key Terms*, see history and story on page 87 and page 85.

Benjamin describes “psychological amplitude,” or what we might more commonly understand as being ‘moved’ by a story, as the **affect** of withholding an explanation and encouraging ambiguity. The reader fills in the gaps through their own subjective understanding of the world and the meaning of the story contingent on the participation of the listener. Benjamin gives an example of this potent storytelling through an anecdote of an Egyptian King as retold by the classical Greek historian Herodotus:

*Key Term*, see affect on page 100.

“When the Egyptian king Psammenitus had been beaten and captured by the Persian king Cambyses, Cambyses was bent on humbling his prisoner. He gave orders to place Psammenitus on the road along which

11 Scott, Joan W. “Storytelling.” *History and Theory* 50, no. 2 (May 1, 2011): 203–9. <https://doi.org/10.1111/j.1468-2303.2011.00577.x>.

12 Benjamin, Walter. “The Storyteller.” In *Illuminations: Essays and Reflections*. New York: Schocken, 1969, 89.



Fig. 6. The Greek historians Herodotus and Thucydides.

the Persian triumphal procession was to pass. And he further arranged that the prisoner should see his daughter pass by as a maid going to the well with her pitcher. While all the Egyptians were lamenting and bewailing this spectacle, Psammenitus stood alone, mute and motionless, his eyes fixed on the ground; and when presently he saw his son, who was being taken along in the procession to be executed, he likewise remained unmoved. But when afterwards he recognized one of his servants, an old, impoverished man, in the ranks of the prisoners, he beat his fists against his head and gave all the signs of deepest mourning.”<sup>13</sup>

After reading this fascinating story we can only speculate why the king mourns—no objective reason is provided. Benjamin asserts that it is precisely because Herodotus offers no explanation of the event that the story still has the power to move us thousands of years later. The deliberate incompleteness of the account is a provocation to the reader which encourages them to enter into the story and form their own interpretation of what happened.

For Benjamin the importance of “retelling” is paramount to the strength of storytelling and even more important to historical truth. He considers the high point of storytelling in western culture to be prior to the invention of the printing press, when societies propagated oral histories. The proliferation of the printing press and other technologies created a specialized class of storytellers and removed the need for everyday people to be proficient in the skill. From this observation Benjamin makes two notable points. First, an oral storyteller colours a story with their own personal experience and in so doing makes the retelling an experience for the listener. Through this transmission, in the words of Benjamin, “the traces of the storyteller cling

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13 Benjamin. *The Storyteller*, 90.

*Key Term*, see interpretation on page 87.

to the story the way the handprints of the potter cling to the clay vessel.”<sup>14</sup> The story acquires layers of wisdom from each teller’s experience. In this way, an oral storyteller incorporates a broader set of perspectives compared to the singular **interpretation** of the novelist.<sup>15</sup> While the accuracy of the details in an oral history might be questioned, the story is comprised of layers of voices, like many painters leaving their marks on a single work or a palimpsest. Furthermore a storyteller often begins a story with an account of how they came to know it, making the subjectivity of the retelling and its distance from the truth apparent to the listener.

Another benefit of retelling is that storytellers make excellent listeners. In a culture of storytellers, the listener is internalizing the story, assimilating it with their own experience, and thinking about how they will later retell the story.<sup>16</sup> In comparison to history communicated through conventionally accepted analytical texts, although storytelling methods may seem less objective, it’s important to recognize, as has been done in historiographical practice by the likes of White<sup>17</sup> and Denning,<sup>18</sup> that the writing of history has always propagated the subjective preconceptions of the author, propagated their agenda in the present to a greater or lesser extent, and included fictions to facilitate their narratives. According to White there really is no fully objective and correct historical account,<sup>19</sup> there are simply those that are more or less credible than the next with regards to how they

*Fig. 7. The Storyteller (Der Erzähler) by Georg Bergmann.*



14 Benjamin. *The Storyteller*, 92.

15 Benjamin. *The Storyteller*, 87.

16 Benjamin. *The Storyteller*, 91.

17 White, Hayden V. *The Content of the Form*. Johns Hopkins, 1987.

18 Denning Greg. “Performing on the Beaches of the Mind: An Essay.” *History and Theory* 41, no. 1 (December 17, 2002): 1–24. <https://doi.org/10.1111/1468-2303.00188>.

19 White, Hayden. “Introduction: Historical Fiction, Fictional History, and Historical Reality.” *Rethinking History* 9, no. 2–3 (June 1, 2005): 147–57.

relate to the evidence the history is built upon. In comparing the two, the subjectivity of the storyteller is evident compared to the hidden subjectivity in the analytical text, and the listener of the storyteller understands the interpretive character of the text immediately.

Throughout his essay, Benjamin returns to the idea that effective storytelling accounts for the subjectivity of both the storyteller and the listener and makes the retelling an experience for each of them. Benjamin's observation is insightful in that it allows for a retelling of the experience of others without assuming their voice. For example, in this thesis, "I" as the storyteller can always be situated as myself, describing how I came to know this story and what I think about it. In this way the storyteller is an obvious interpreter, and doesn't claim authority on the experience of others. Not claiming objectivity or the self-appropriation of those stories is essential in the process of storytelling. My own voice must be clearly outlined as I will retell difficult stories which do not belong to me. The hope is that this will allow me to tell difficult stories that I have only peripheral experience of, for example the story of Japanese-Canadian internment.

Furthermore the work of White has opened up the possibility that more fictive mediums than the analytical text can be used to communicate legitimate history, so long as the interpretation follows a **historical method** which can provide it with credibility. It is the view of historian and filmmaker Bruno Ramirez that although historical films are made first to entertain and not to educate, the historical information communicated in a film contributes to **historical culture**—the general historical awareness of a society.



*Fig. 8.* Sayanatsalo Town Hall by Alvar and Aino Aalto. Frampton advocated for an approach to modern architecture which would respond more critically to local contexts.

*Key Term,* see historical method on page 89.

*Key Term,* see historical culture on page 89.

I propose to consider videogames as a storytelling medium that has a unique capacity to convey Benjamin's "psychological amplitude" because they are perhaps the most affective way of experiencing a visual narrative. The listener-as-player propels the story through their own agency within the game world, observing, interacting with, and even reenacting a story. There are an incredibly diverse array of methods for communicating the themes of a story available within the medium, allowing for a range of possibilities for subjectively engaging with history and leaving space for personal contemplation. Though the game does not claim to replace the analytical text as historiography, it does have the potential to reach a wider audience, and it therefore aims to contribute to a historical culture and assist in the preservation of memory.

### The Case for a Digital Heritage Videogame

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In considering a videogame as a storytelling medium, the project takes the position that architecture as a cultural-technical practice should welcome new technologies while at the same time be critical to bring the best of what already exists along for future development—an idea derived from the writings of Kenneth Frampton.

"If architecture is to be sustained today as a critical practice it must assume an arrière-garde position to cultivate a resistant identity-giving culture while at the same time having a recourse to universal technique".<sup>20</sup>

For architectural practice to be relevant it must situate itself in a tenuous position between propagating both existing and new knowledge. It, must critically mediate between local cultures with their traditional techniques

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20 Frampton, Kenneth. "Towards a Critical Regionalism: Six Points for an Architecture of Resistance." In *Labour, Work and Architecture: Collected Essays on Architecture and Design*. London & New York: Phaidon Press, 1985.

as well as ‘global’ ideas that offer new technologies and alternate economies. Frampton’s statement comes from the post-modern context of the 80’s Unites States—an attempt to reconcile the universalizing ambitions of the modernist project with a recognized need of greater respect for local contexts—but this tension between global and local values can be actively observed today in the discussion surrounding cultural heritage.

*Key Term*, see cultural heritage on page 93.

**Cultural heritage** had conventionally been defined by UNESCO as culturally significant monuments, groups of buildings, and sites of “outstanding universal value.”<sup>21</sup> The notion is place-based and seeks to protect things which are material and immovable, that which we might distinguish as **tangible**. More recently the definition of cultural heritage has grown to consider intangible culture, heritage which includes subjects like folklore, music, and craftsmanship.<sup>22</sup> The documentation of cultural heritage using digital media is called **digital recording** of heritage.

*Key Term*, see tangible on page 94.

*Key Term*, see digital recording on page 98.

Surveying techniques such as relatively affordable terrestrial laser scanning and unmanned aerial systems (UAVS or drones) and automated photogrammetric software have accelerated the documentation of culturally significant architecture. This, coupled with affordable and powerful desktop computing, has resulted in a proliferation of highly accurate 3D digital models and related assets, since 2008.<sup>23</sup> The adoption of these techniques is widespread, with various governments and heritage organizations spending

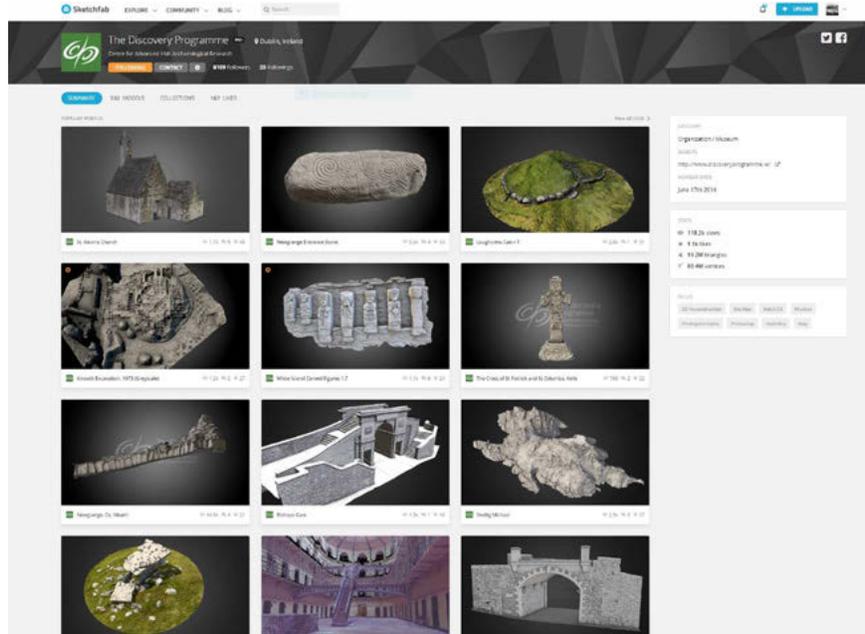
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21 UNESCO. “Convention Concerning the Protection of the World Cultural and Natural Heritage,” 1972, art. 1.

22 UNESCO. “What Is Intangible Cultural Heritage?” UNESCO Intangible Cultural Heritage. Accessed August 27, 2017. <https://ich.unesco.org/en/what-is-intangible-heritage-00003>.

23 Fai, Stephen, Katie Graham, Todd Duckworth, Nevil Wood, and Ramtin Attar. “Building information modelling and heritage documentation.” In Proceedings of the 23rd International Symposium, International Scientific Committee for Documentation of Cultural Heritage (CIPA), Prague, Czech Republic, pp. 12-16. 2011.

Fig. 9. Much of the Discovery Programme's digital heritage documentation can be viewed on their Sketchfab webpage.



large sums of money to digitize artifacts and places of significance. But in the enthusiasm to adopt new techniques for recording and modelling, there are still large questions regarding the use of this digital recording data.

The archaeological sites of Ireland are a good example. Ireland and the EU have invested millions of euros to have its many historic sites digitally recorded.<sup>24</sup> Unfortunately the data, for the most part, currently sits in archive servers—too large and complex to be manageable to anyone but an expert and is therefore impractical for dissemination. Although some institutions have successfully made their data available online, it is typically only in a limited capacity, accessible as simplified virtual tours or 3D models.

What can digital records be used for after their collection? This project proposes an answer through “digital storytelling,” using digital records as “game assets” in order to create an experience of a real place that produces affect. In short, digital records will be used for digital storytelling.

24 The Discovery Programme Centre for Archeology and Innovation Ireland. “Launch of the Cherish Project,” March 23, 2017. <http://www.discoveryprogramme.ie>

Along with the emergence digital recording for heritage conservation and valorization, heritage organizations have formally recognized the values associated with artifacts of culture beyond the traditional categories of physical objects.<sup>25</sup> This has led to an ongoing international discourse on the nature of **tangible and intangible heritage**.

*Key Terms*, see tangible and intangible heritage on page 95 and page 97.

“Cultural heritage does not end at monuments and collections of objects. It also includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts. While fragile, intangible cultural heritage is an important factor in maintaining cultural diversity in the face of growing globalization.”<sup>26</sup>

An acknowledgement of intangible heritage is complementary to Frampton’s position that architecture should “...cultivate a resistant identity-giving culture.”<sup>27</sup> As mentioned earlier, some of the Salty Dreams become manifest in visible artifacts on the island, but other dreams remain invisible even though they might have had a significant impact on the history of the island. Broadly speaking, I consider the ideas of intangible heritage, hidden dreams, and unseen artifacts to be analogous. A central objective of this thesis is therefore to give representation to these **intangible** aspects of culture through digital means.

*Key Terms*, see intangible on page 95.

At the same time that there is a growing understanding of what constitutes heritage information, there is a growing need for methods of storing and accessing this information. Currently there is much discussion about using

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25 Physical objects whose emphasis is a clear demonstration of a bias to western material values.

26 UNESCO. “What Is Intangible Cultural Heritage?” UNESCO Intangible Cultural Heritage. Accessed August 27, 2017. <https://ich.unesco.org>.

27 Frampton, Kenneth. “Towards a Critical Regionalism: Six Points for an Architecture of Resistance.” In *Labour, Work and Architecture: Collected Essays on Architecture and Design*. London I; New York: Phaidon Press, 1985.

Fig. 10. Hospital training simulation made with architectural models and game engine software.



game engines for non-game purposes, creating so-called “serious games,”<sup>28</sup> and more specifically there is discussion for leveraging game engines as a method for interacting with complex digital recording information.<sup>29</sup> Although game engines are developed for the videogame industry, they can be thought of more generally as platforms for real-time 3D representation.

There is a surprising amount of scholarship in using game engine technology for inter-disciplinary purposes. Examples can be found in medical, automotive, architectural, entertainment, educational, and cultural heritage domains. A paper that demonstrates a particularly convincing case for the use of game engines is “Serious Games as a Virtual Training Ground for Relocation to a New Healthcare Facility” by Merschbrock, Lassen, and Tollness.<sup>30</sup> It describes how in an effort to prepare staff for a relocation to a new healthcare facility, a team of researchers took the completed 3D model of the architecture project and brought it into a game engine. They then

28 Michael, David R., and Sandra L. Chen. *Serious Games: Games That Educate, Train, and Inform*. Muska & Lipman/Premier-Trade, 2005.

29 Pauwels, Pieter, Rens Bod, Danilo Di Mascio, and Ronald De Meyer. Integrating Building Information Modelling and Semantic Web Technologies for the Management of Built Heritage Information. Accessed April 1, 2018.

30 Merschbrock, Christoph; Lassen, Ann Karina; Tollnes, Tor; and Munkvold, Bjørn Erik. “Serious Games as a Virtual Training Ground for Relocation to a New Healthcare Facility.” *Facilities* 34, no. 13/14 (October 3, 2016): 788–808.

built a game-like training program and used it to train the healthcare staff on how to do their tasks in the new environment. This example provided several revelatory insights, that in this case a ‘game’ could be a ‘training program’, and that the program was built using existing architectural assets. It highlights the significance of using game engines for real-world purposes and I think it also highlights how using architecture in a game engine can be very effective if a clear purpose is defined.

*Key Terms*, see videogame on page 90.

Considering the above, this thesis can be understood as an attempt to make a serious architectural videogame in which the program is storytelling using digital recording assets. I also acknowledge that the term **videogame** is loaded with preconceptions for those that don’t know the medium well. I could choose to call this project an ‘interactive digital heritage story’ instead of a videogame, but I prefer to work with this term which is loaded with both positive and negative meanings, and take the opportunity to dispel some of the negative while promoting the positive assumptions about videogames.

To begin, since 2008 there has been an explosion of alternative games which use the medium creatively and give expression to underrepresented voices, creating a range of “gamer”<sup>31</sup> demographics to cater to beyond the stereotypical young male. It also marks the start of a period where architects and architecture have started to play a greater role in game environments. My own exposure to this movement was through María Elisa Navarro, an architectural historian and instructor who worked to create the digital environment of a historically accurate renaissance Venice for the game

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31 One who plays videogames.

*Fig. 11.* Assassin's Creed II involved architecture consultants for historical research.



Assassins Creed II.<sup>32</sup> However I will limit my discussion to a type of game called a 'walking simulator.'

A walking simulator is a game which is focused on narrative experience rather than goal-oriented mechanics like solving puzzles or confronting enemies. Usually there isn't much to obstruct the player's progress in the narrative other than finding items and making some basic choices which may determine the outcome of the narrative. The genre tends to be more contemplative than others and is also more accessible to people who are new to videogames because of its simple controls. Although minimal, the genre has been described by narrative designer Cara Ellison as, "the genre that is now most capable of surprises,"<sup>33</sup> and some examples will follow. It will also be the format of this project.

One noteworthy walking simulator is *The Witness*,<sup>34</sup> an influential puzzle game developed between 2008-16 where architect Deanna Van Buren was

32 Saga, Manuel. "What It's Like to Be an Architectural Consultant: Interview with María Elisa Navarro," October 7, 2015. <http://www.archdaily.com>.

33 Ellison, Cara. "The Warning of Edith Finch: What We Love Is Killing Us." Polygon, January 8, 2018. <https://www.polygon.com>.

34 Webber, Jordan Erica. "The Witness Review – an Incredibly Impressive Collection of Puzzles." The Guardian, January 26, 2016, sec. Games. <http://www.theguardian.com>.



Fig. 12. Top, in *The Witness* players solve puzzles while exploring an abandoned island.

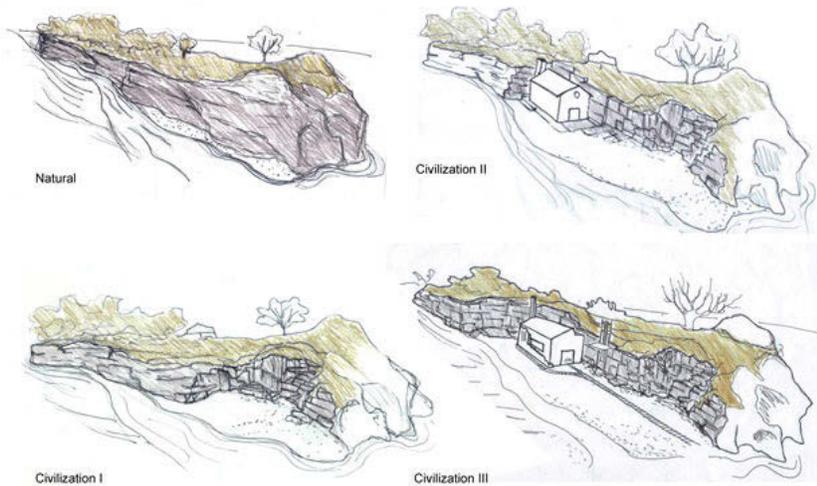


Fig. 13. Right, Van Buren proposed that environmental details would reveal information about *The Witness*' history.

hired to provide designs for the game's environment. In the game, played from a first-person perspective, the player explores an island while solving puzzles to reveal its secrets. Buildings and artifacts are spread across the island, but the player meets no other characters, it is only through studying the details in the environment and solving puzzles that the player discerns how the island came to be. Van Buren's most significant contribution was to give the environment a history. Three historical periods of construction are evident on the island, and most of the buildings in the game would be



*Fig. 14.* Top, in *What Remains of Edith Finch* details in game's house characterize its inhabitants.



*Fig. 15.* Right, the house leads to magical-realist vignettes in other spaces which reinterpret stories of the characters' deaths.

considered as adaptive reuse projects.<sup>35</sup> This history is told in fragments and only exists through the interpretation of the many fans of the game on the internet. One can find thousands of posts of fan discussion on the meaning of *The Witness*, proof that the developers succeeded in creating a contemplative experience.

35 Van Buren, Deanna. "Architecture in Video Games: Designing for Impact." *Gamasutra (blog)*, October 12, 2015. <http://www.gamasutra.com>.

What Remains of Edith Finch is another walking simulator where the player explores the family home of the character Edith Finch to learn stories about her deceased family members. These stories play out as whimsical vignettes that break from reality and defy all expectation of how the stories might have unfolded. Finch uses a more explicit narrative structure than *The Witness*, with text and voiceover, but provides incredible depth to the personality of the characters through small details placed around the house. One might realize that their player character is actually a pregnant seventeen-year-old girl, but only by carefully looking down at your own body. That this very memorable discovery can only be made as a result of the player's own agency, a desire to test unexplained possibilities, demonstrates a link between learning, memory, affect and **play**. Unmade beds, family photographs, and favourite comic books give depth to the characterization and events of the story and suggest an interpretation of events different than those revealed solely from the narrator's perspective. The game never claims that its stories of eventful deaths are true, and so provokes the player to question if certain details could be dramatizations of otherwise mundane everyday situations. Finch has earned numerous distinctions for its storytelling and design<sup>36</sup> and is, in my opinion, the current high-water mark in interactive storytelling.

*Key Terms*, see play on page 92.

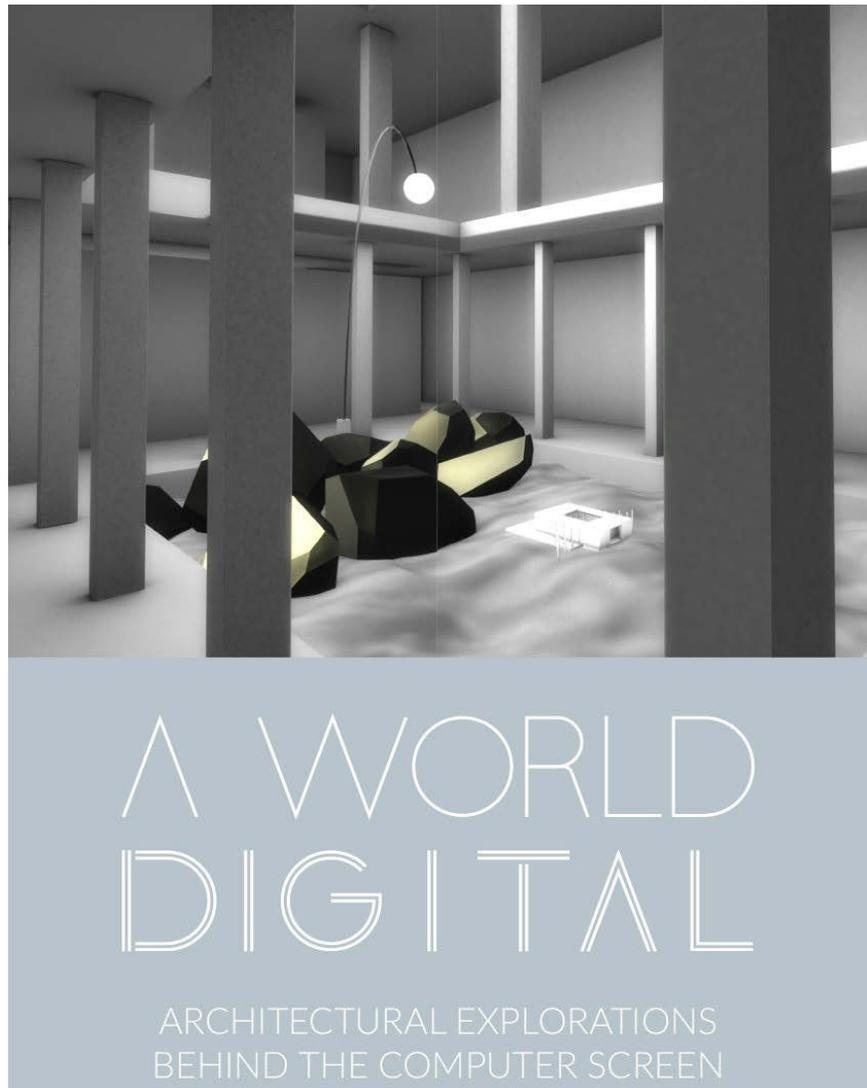
Finally I must give credit to an architectural videogame project called *A World Digital* completed by my colleague Maxime Duval-Stojanović which I hold as the main precedent for this thesis.<sup>37</sup> The project was created in the software Unity3D and featured five explorable architectural environments

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36 Ramanan, Chella. "What Remains of Edith Finch Review: Magical Ode to the Joy of Storytelling." *The Guardian*, April 26, 2017, sec. Games. <http://www.theguardian.com>.

37 Duval-Stojanović, Maxime. "A World Digital." Master's Thesis, McGill University, 2015.

*Fig. 16.* An architectural thesis project as a videogame.



connected by a central hub. The project sought to explore how architectural concepts could be explored in virtual space and succeeded in doing so in many interesting ways. However, my critique is that the project lacked a grounding in a real site. Each environment stood on its own as a brilliant experiment created from the researcher's imagination, but they were not generated with reference to a real place. This thesis attempts to iterate on the work of Duval-Stojanović, but adds a physical site as a core subject to be explored along with architecture, storytelling, and game design.

*Fig. 17.* The mill of Cusheon Cove, shortly after it was irreparably damaged by fire in 1931.



### Thesis Question

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We have seen two premises for this project. First, as storytelling and secondly, as a means to use digitally recorded heritage information. I want to emphasize the project seeks a balance between these two subjects through emphasizing content and technique. By examining artifacts from the site of Cusheon Cove which speak of past events, this project attempts questions the status of the ‘tangible’ and offers a redefinition of the term.

Digital storytelling will be the method for drawing these subjects together, creating an interactive experience to describe the site, illustrate several stories which transpired there, and speculate on architectural futures. The project contains both a conceptual framework describing the

techniques, methodology, and process of the project; and the content of the project as a collection of stories interpreted into an architectural videogame. Together the technique and the content constitute the digital story. This thesis will attempt to synthesize these questions of local qualities and virtual techniques into a discourse of the 'tangible.' It asks the question:

How can digital storytelling make the hidden qualities of a place tangible?

# Response

## An Encounter with the Site

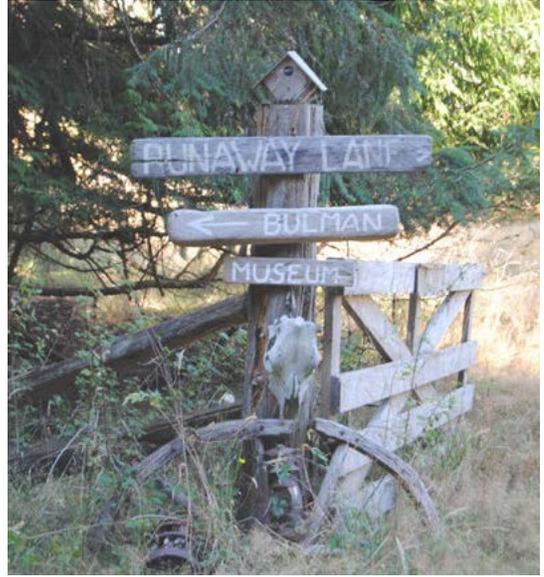
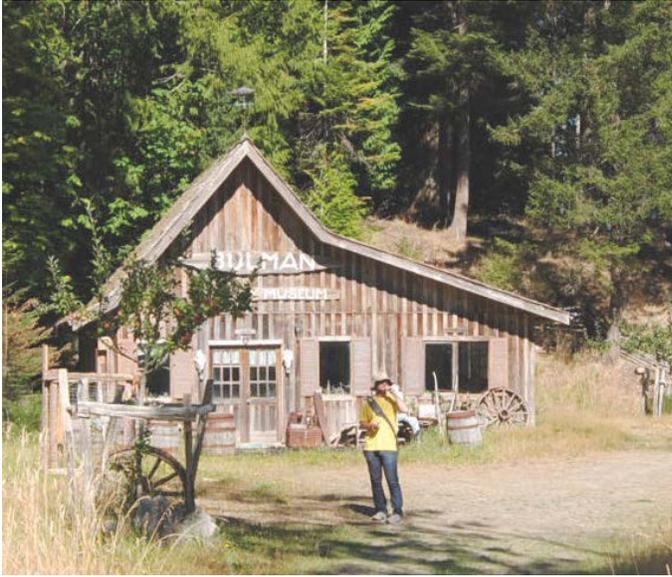
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Cusheon Cove is a beautiful site where a forested mountain levels out before the Pacific Ocean facing north. A small river empties to a bay, which the tide turns into a rocky plane, the Cusheon Cove. Indeed it's features have made it an attractive place for human dwelling for thousands of years.

In examining its past, the seemingly most spectacular detail is a large timber milling operation that lasted for 23 years. People from all over the world found themselves working here and Chris Hatfield has found proof of people from Scandinavia, China, Japan, United States, as well as Britain and the rest of Canada. The activity on the site reached such a scale that a bunkhouse of 150 people was built, establishing Cusheon Cove as a small village. But the mill is only the point of entry into the narrative of understanding how diverse people have used the site. The first inhabitants included the Salish Indigenous Community since time immemorial, but after the arrival of European settlers in the 19th century the site was occupied by a logging company, a sheep farm, a hippie commune in the 70's, and Hatfield's own aquafarm activities.

Hatfield, now retired, was a marine biologist and environmental consultant. He acquired the property in 1985, first as a vacation retreat, then to live full-time and run an aquafarm. In 2002, he was astonished

INTANGIBLE TERRITORIES



*Fig. 18.* Site photos taken during visits in August 2016 and September 2017. On previous page, a sign greets visitors at the entrance. Hatfield's museum of foundartifacts. The Cove empty with the tide out. The Cove at high tide. On current page, view from former agriculture field towards the Pacific Ocean. Gravel road towards main residence with stacked-log fence. The original house of the Bulman family.





*Fig. 19.* Photos gathered by Hatfield. Clockwise from top right, an early version of the mill. Several inhabited shacks. Gathering outside the cookhouse after a wedding. The original Bulman family house. The Bulman family walking to Beaver Point School. Bulman in his office. On the next page, an intermediate version of the mill and the 150 bed bunkhouse.



INTANGIBLE TERRITORIES



to find various Asian ceramics buried on the property and this led to his discovery of the story of the mill. Over the next few years he found hundreds of artifacts that led to the research for this book in 2007.<sup>1</sup> He made a museum for all his findings and local school groups come for tours a few times per year.

I have had two opportunities to visit the site over several days in the summers of 2016 and 2017. What quickly becomes apparent in studying the site is how much is missing. Old photographs show a lumber mill with a community of people that don't exist anymore. Local oral history tells of how dangerous the working conditions were at the mill. Broken bottles found buried in different locations allude to the origins of the diverse group of people who worked there. A midden of clam shells describes patterns of indigenous inhabitation. While the earth is still there and bears the marks of disruption, the truth of what happened is contained only in fragments of evidence and stories. Although it would be impractical or irresponsible to try and reconstruct these conditions on site, a virtual interpretation has the potential of reconstitution. Hatfield allowed me to keep several artifacts from my last visit, some he let me borrow from his museum, others I gathered from the site. For certain artifacts I felt were important but couldn't bring, I used photogrammetry to make 3D models<sup>2</sup> and I have twenty-five subjects I photographed from the site.

The artifacts speak about remarkable change that occurred on the site, particularly over the last 100 years. Aerials photographs further demonstrate

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1 Kahn, Charles, and C. T. Hatfield. *Forgotten Cusheon Cove, Salt Spring Island. Salt Spring Island, BC: Salt Spring Press, 2007.*

2 Photogrammetry is a digital heritage documentation technique, where many photographs are taken of a subject and then processed in specialized software to be reconstituted into photo accurate 3D models.

Fig. 20. Inside the *Bulman Museum* Hatfield has laid out the findings of his excavations and research. The museum is visited by tourists and schoolchildren.



Fig. 21. Hatfield paintstaking reassembled dozens of pieces of Japanese ceramic bowls from buried fragments.



Fig. 22. Several artifacts were digitized through photogrammetry and are viewable on SketchFab.com.

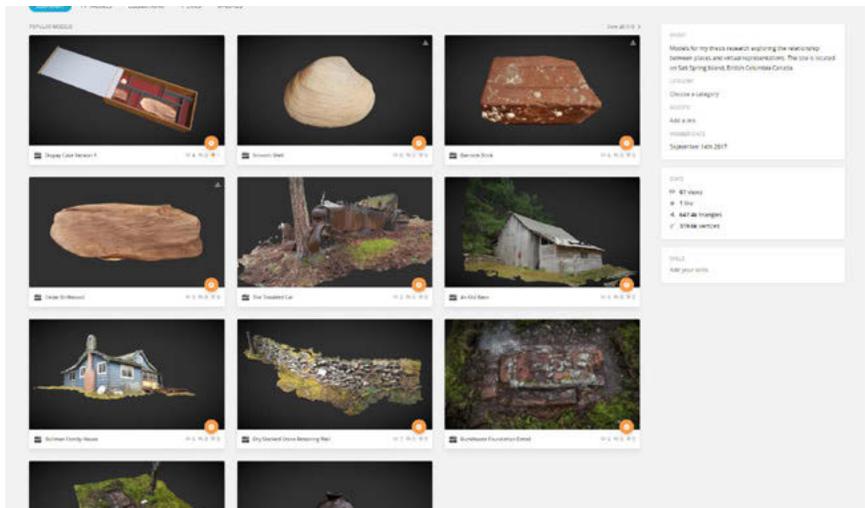
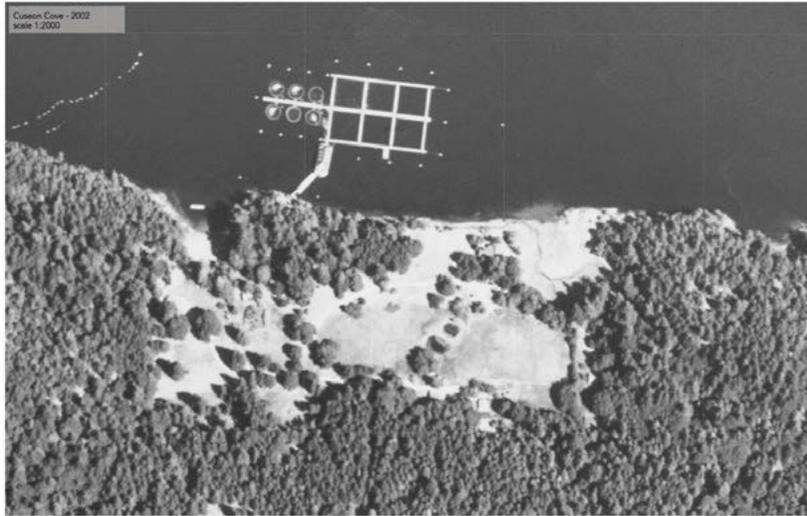


Fig. 23. Following page, comparison of historic aerial photos of Cusheon Cove from the National Air Photo Library.

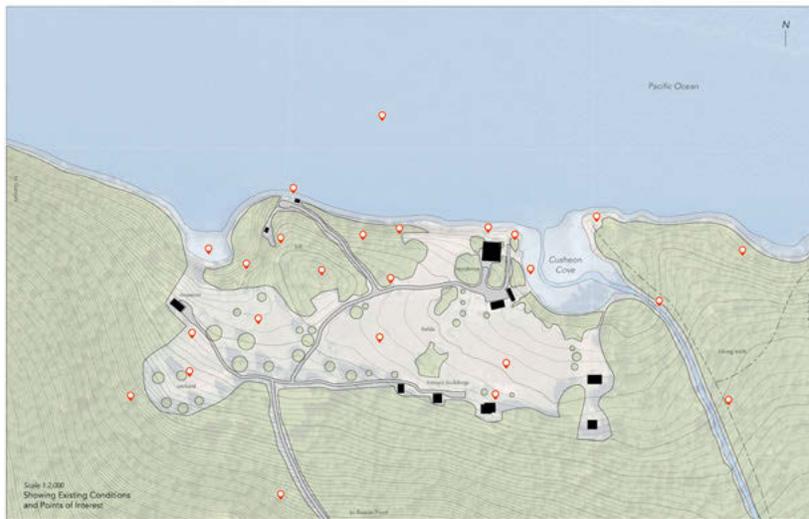
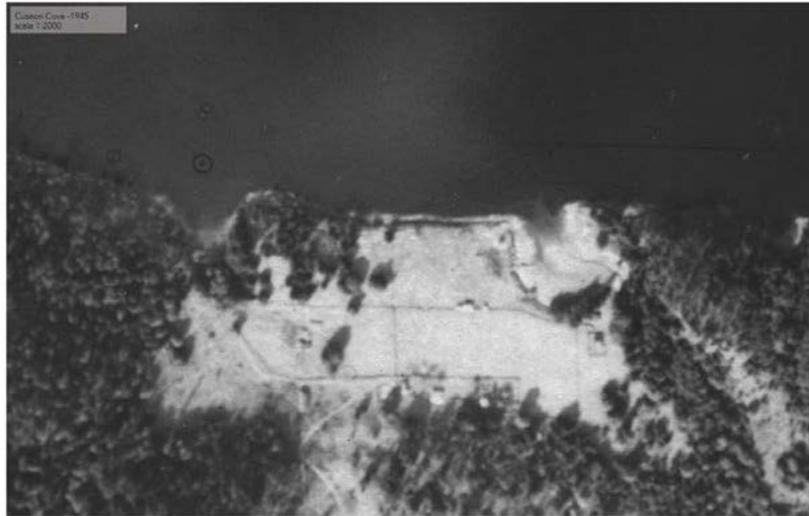
INTANGIBLE TERRITORIES

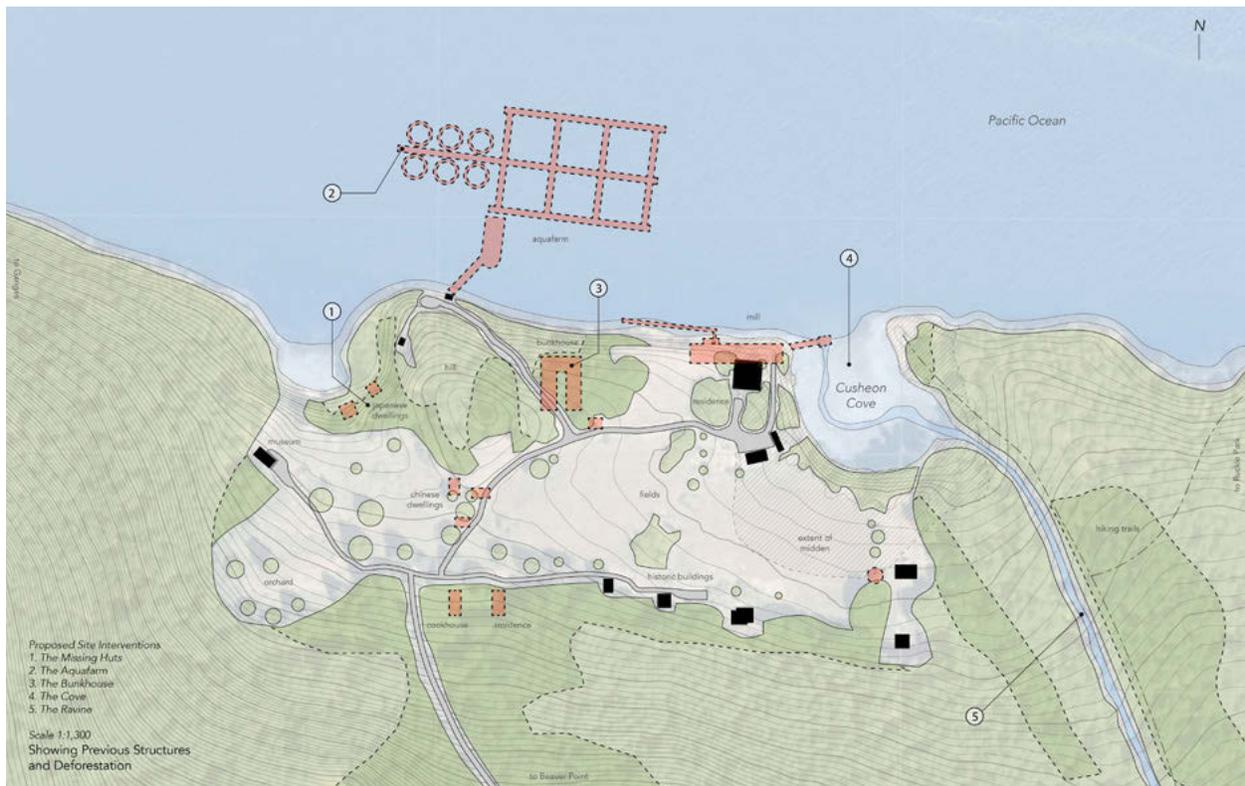


INTANGIBLE TERRITORIES



INTANGIBLE TERRITORIES





*Fig. 24.* Map showing previous structures and notable features of Cusheon Cove. Five places of interest have been identified.

this change and the oldest I have from the National Air Photo Library clearly indicates the position of the bunkhouse and several other buildings and suggests the location of the mill. More recent aerials show the extent of reforestation, the extent of Hatfield’s aquafarm operation and the location of his home. It’s also clear the site is in one of the most isolated parts of the island, down a long private access road and beside a provincial park.

From these photographs, walking the site and through historic research I identified a number of places of interest. They indicate locations where something had been or unique geography. I gathered all the previous historic structures onto a single map and selected five points of interest which would form the basis of the project’s digital story. The number five was chosen because I know from Duval-Stojanović’s project that it was feasible to design five different experiences in the time of a thesis, and I wanted to give

justice to the layering of occupations and different contentious narratives that inhabit the place. The points were selected to highlight different topographical conditions and because I believed the artifacts which were found there could be linked to stories or themes discussed in the various history books of Salt Spring Island in general. Therefore each point of interest could represent a story illustrated by a specific condition. Finally, I chose stories which I felt had a more contentious character because, as I mentioned earlier, it is this ‘saltiness’ of the island’s stories, the desire to ignore undesirable information, which I think is at risk of being forgotten. It is these five stories with ‘unseen’ implications that I will attempt to render more tangible through the use of digital storytelling. These stories highlight the following topics:

1. World War Two Japanese-Canadian internment
2. The development of resource industries
3. Mass international immigration
4. The settlement of *Saanich First Nations land*
5. Environmental conservation.

### **Making the Unseen Tangible: Twinning the Project**

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I propose a methodology that I will call ‘twinning’ as a response to how to make the hidden qualities of Cusheon Cove tangible. Twinning is derived from the notion of the uncanny double, or *doppelgänger*, an idea that can be traced throughout the length of western history. More specifically, I use Milica Živković’s definition of the double as a representation of what is repressed, or unseen, by a culture.<sup>3</sup> The project will consist of two parts:

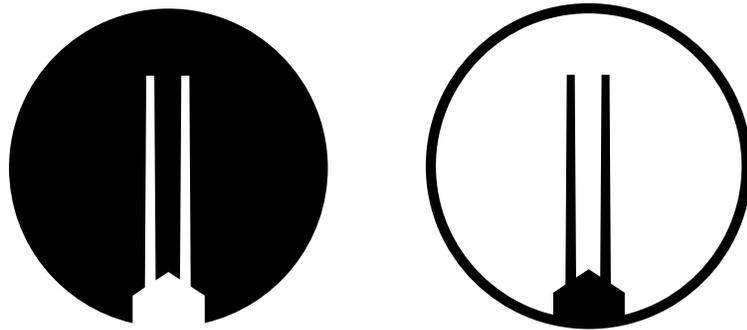
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3 Živković, Milica. “The Double As The ‘Unseen’ Of Culture: Toward A Definition Of *Doppelgänger*.” *Facta Universitatis* 7, no. 2 (2000): 121–128.

'Twin A:' a buildable architectural proposal, and 'Twin B:' a virtual story. These will stand as two contrasting architectural responses to the site.

The digital story will not be another representation of the same project but a twin possessing its own nature—which will, like a shadow describes an object, transform the themes of the buildable proposal through the spatial and narrative potentials of game techniques. Both the 'tangible' and the 'intangible' twins will explore regional and poetic qualities of the island's geography, history, and community; creating contrasting interpretations of

*Fig. 25.* The project is developed as two complementary doubles.



place and architectural program. As halves, each will inform and require the other to constitute a whole.

Why structure the project through these two twins? In order to play them off each other by establishing a dialectical condition where physical and virtual, seen and unseen, or tangible and intangible, are compared and contrasted. The aim is that this contrast will push the manifestation of these qualities to extremes, and in so doing, give a clearer understanding of their character. I also acknowledge that the categories to which I assign ideas will be imperfect, and the hope is that this will actually demonstrate the limitations of organizing ideas into a duality. I would also argue that, for better or worse, organizing a story into discernable parts, like chapters



*Fig. 26.* Top, Santa Maria dei Miracoli and Santa Maria in Montesanto Churches in Piazza del Popolo in Rome. Often referred to as 'twins,' their internal organization is different compared to their similar exterior.



*Fig. 27.* Right, Luke Skywalker attempts to confront his greatest fears and discovers they are his own 'dark' tendencies.

in a story, acts in a play, or levels in a videogame, is a tried and true convention for producing memorable storytelling. In terms of architectural practice, the intent of this dialectic is also to try and clearly demonstrate what architecture can contribute to game design and vice versa.

In the context of Salt Spring Island, the idea of the doppelgänger is the notion of the 'unseen.' Quoting psychologist C.G. Jung, Živković states that for an individual the double is a manifestation of repression, that certain

desires or qualities which aren't tolerated by society become externalized as a double. The most well-known example in popular culture is likely the 'evil twin' depicted in the story of Dr. Jekyll and Mr. Hyde, where Hyde exhibits all the evil and murderous behaviours that would alienate Jekyll from society.<sup>4</sup>

"It is the identification, the naming of otherness, which is a telling index of a society's deepest beliefs. Any social structure tends to exclude as "evil" anything radically different from itself or which threatens it with destruction, and this naming of difference as evil, is a significant ideological gesture... The double is defined as evil precisely because of its difference and a possible disturbance to the familiar and the known."<sup>5</sup>

The double is that which is literally 'unseen' by society. It is not identical or evil, but it is perceived as strange because we don't understand it. In considering an individual, a doppelgänger is a manifestation which challenges one's assumptions about oneself. It demonstrates a division of the unity which is perhaps most commonly taken for granted the unity

*Fig. 28.* Typical playing cards. Like the twin churches in Rome, illustrations of the notion of 'doubling' are ubiquitous in the cultural products of western civilization.



4 Stevenson, Robert Louis. *Strange Case of Dr. Jekyll and Mr. Hyde*. C. Scribner's Sons, 1886.

5 Zivkovic. "The Double As The 'Unseen' Of Culture." 126.

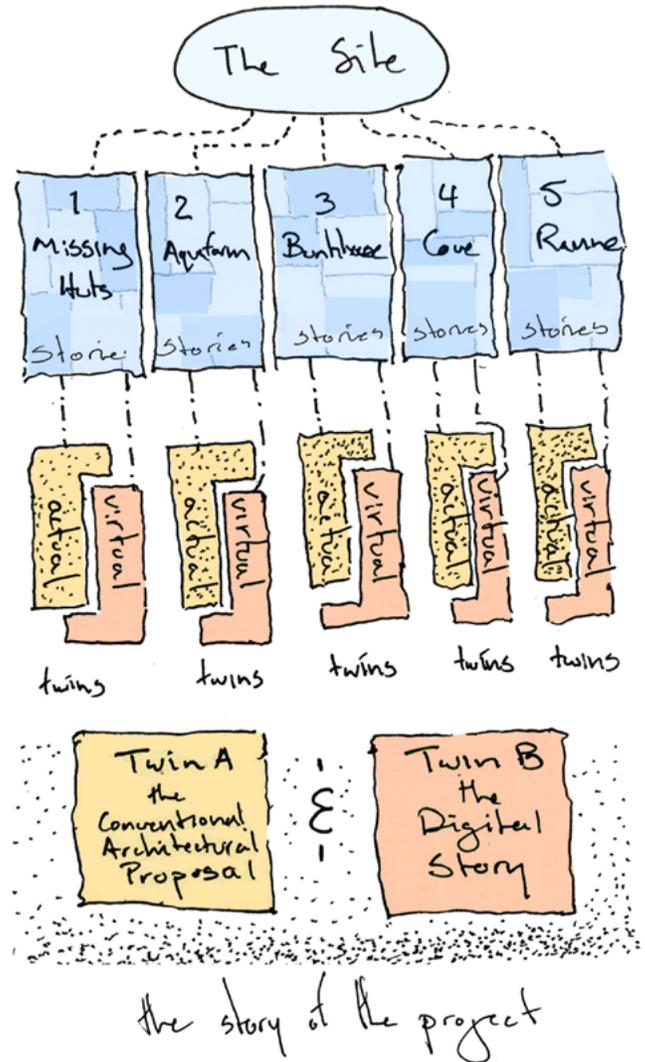
*Fig. 29. The Forum Arena in Vancouver BC 1942, it briefly served as an 'evacuation' station for men of Japanese heritage before they were relocated east of the Rocky Mountains. The Forum is a hockey arena, the original home of the Vancouver Canucks.*



of the self. In actuality the uncanny double reveals how the self was never complete to begin with, because part of the self was repressed.

This notion of the double has interesting correspondence to the project because Cusheon Cove contains stories which are repressed. The dreamers don't want to talk about abusive stories of dislocation as consequences of the Japanese-Canadian internment or the colonization of indigenous land because it is at least embarrassing, if not horrifying, to confront the fact that they have benefitted from injustices. So the virtual twin, the digital story, allows the manifestation of things that aren't allowed to be. They can reveal the saltiness of the dreams and reveal what is unseen. One cannot underestimate how the idea of the double has the power to undermine seemingly stable assumptions and stimulate a questioning. In storytelling if some idea or truth seems too assured and confident, a double can be manufactured to disrupt its meaning, for example reframing the relationship between artifacts found on the site and their context.

Fig. 30. Diagram describing intended project structure.



The following diagram describes the development process the project follows. The project begins with the site, five stories were identified which correspond to specific locations on the site, each of the five points of interests are associated with a story which become like different chapters in a videogame. The stories are developed into architectural spaces which are told through environmental storytelling; whose program is generally ‘storytelling,’ ‘remembering,’ and ‘provoking contemplation.’ This intention allows for an ongoing inhabitation of the site as well as the education of the players. The realization of each story-program becomes ‘twinned’ between

a 'buildable design' and a 'virtual story.' Overall these five stories in two sets constitute Twin A and Twin B as complementary halves.

In the digital story, Twin B, the player will be able to choose the order of the stories they play. It will be possible to 'finish' the game by skipping stories altogether, allowing for the kind of ambiguity and opportunity for interpretation that Benjamin considers vital for memorable storytelling. The player could, for example, have what they think is a full understanding of the site's history, while being completely ignorant of Japanese-Canadian internment—very much like real life. Indeed it may be even more accurate to describe this digital story as a 'choose your own history game.' To be clear, this is intended as a critique of how individuals often develop their own understanding of history, prioritizing what is familiar while excluding the unknown, and assuming one understands the whole picture. The game will be designed to report back to the player how much of the story they missed once they complete the game, to make them aware that their perception is incomplete.

### **Thesis Statement**

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Exploring the boundaries of the tangible, this project tells the story of a place, Cusheon Cove on Salt Spring Island, British Columbia, by making a videogame. It aims to explore the intersection between digital techniques in architecture and videogames, while exploring narrative structures to speculate on the imaginary associated to places, producing a digital story.

## Five Stories

### Story One: Missing Cabins

---

The bowls found on the site demonstrate that people of Japanese heritage were among the first settlers on the island, having lived there since the late 1800's. The bowls demonstrate an absence, since all the Japanese-Canadians had to leave Salt Spring Island shortly after these bowls were left at Cusheon Cove.

In 1941 there were 77 Japanese-Canadians in 11 families living on Salt Spring Island. They owned 1040 acres of land and ran some of the island's most prosperous farms and businesses. After the attack on Pearl Harbour in 1942, the Murakami family was arrested and relocated, forced to spend years of their lives in filthy, cold, and crowded prison camps. Their bank accounts were frozen. Their land and possessions were seized and sold without their consent for a tiny fraction of their value by their former friends and neighbors. The proceeds were used to pay the costs of their incarceration. Many of these families fished for their livelihood, and their boats were promptly confiscated by the government after the Pearl Harbour attack. Everyone from along the coast was brought to improvised prisons in Vancouver before being placed in camps east of the Rockies. The Murakami finally returned to Salt Spring Island in 1954.

*Fig. 31.* Kimiko Murakami, bottom left, with her family on Salt Spring Island in 1908.



The Murakami's are the only Japanese Canadian family to return to the Gulf Islands to start over and stay. They documented enduring prejudice from community members and government officials until as recently as 1996, and this event still marks the community. The only evidence of the cabins which once housed these people are buried piles of broken bowls, and a few blurry photographs.

### Story Two: To Till the Earth and Sea

---

The first settlers on Salt Spring Island were often poor. They had only their labour and wits to earn a living. The government gave them free land so it could say the land was part of a new country. But living off the land was backbreaking work. Acres of mountainous forest were cleared by hand, with stumps slowly torn from the ground by Oxen, if the settler could afford one. Gradually enough land was cleared and there would be a space made, like a carpet laid out across a hole in the forest. Eventually the settler could take more from the earth than it would naturally give. Bullman was fortunate to be a businessman at this time, so he was able to buy Cusheon Cove without having to settle it himself. But he felt an attachment to this place he had

*Fig. 32.* Sheep were also raised in the fields of Cusheon Cove.



formed, and lived above it in a small shack long after he had sold it and spent all his money.

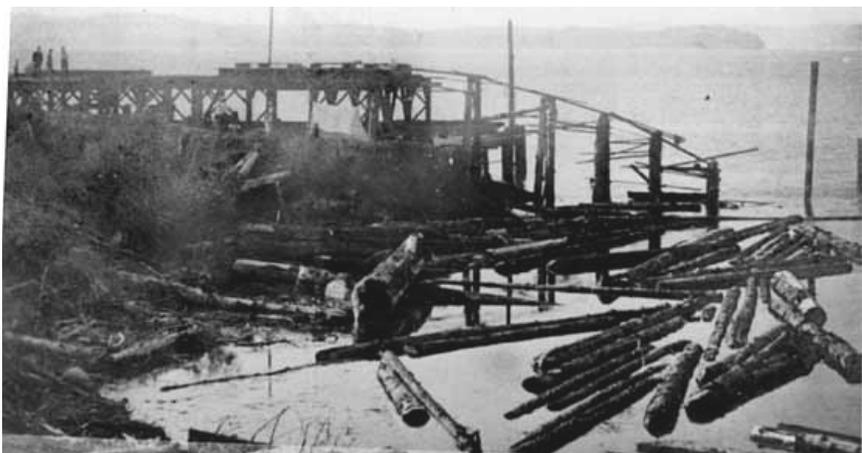
By digging trenches along the shore one can collect clams; by clearing space one can bring sheep; by putting foreign seeds in the ground one can have a valuable crop; by diverting a creek one can have water for their lumber mill, and by putting cages in the sea one can raise many fish. Human cleverness finds ways to get more from the land. Cultivation began with a need to have enough. Enough to survive, enough for security, enough for comfort, enough to have time to dream. But perhaps this moment ends when the need for enough becomes the desire for as much as possible.

### Story Three: The Bunkhouse

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It's now the fourth owner. We're wondering if it will change again. Each time before it failed. But they keep the mill running, even at night. I know because I can hear it, a stone's throw outside my window. I can see its glow from my bed. I can feel the great saw shaking the earth and the bunkhouse foundations. I can't sleep, but at least it feels like the mill will still be running tomorrow.

*Fig. 33.* Several labourers work at the mill.



They came for the easy money, at least that we all have in common. It seems like they've come from everywhere to be squeezed in this bunkhouse with our ideas. I can hear their odd voices through the floors and the boarded walls. Some I know and some I don't, but the ones hardest to understand, they don't let them in. They have their own cabins. They're happy enough keeping to themselves anyways right?

We keep memories hanging above our heads, suspended from the beds. There are coins and photographs, bits of things on strings. I keep my few books beside my bed. Some show carpentry, how to join wood together. For now I just push logs onto the conveyor, but one day I'll be using the timber coming off the other end in my own carpentry shop. And everyone will want my wares. But I'm still far away from that, I just need the mill to keep running for a while longer.

#### **Story Four: Those Who Watch The Cove**

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On the northwest shore of Cusheon Cove Chris built his house between the foundations where William once built his mill, in the soil where the *Saanich* left their shells. This spot has been watched for thousands of years.

Here a forested mountain flattens out before the ocean, exposing its gentle slope to neighbouring islands, lit by northern light. And in the cove, retreating tides reveal the pool to be covering a stony garden. It is a place both alluring and generous.

Surrounding the cove is a buried shell bed, a midden, meters deep from the clams that were harvested here by generations of *Saanich* people who don't come here anymore. William's mill drew logs up from the cove's protected shallow water, but eventually its dock, overloaded with timbre,

*Fig. 34.* Posing for a photo on the wharf of Cusheon Cove. Not long after the wharf would collapse due to overloading from lumber, and the mill would never recover from the financial loss.



collapsed under its own weight, and its smokestacks burnt down one after the other. Chris wanted to live in a peaceful way with his family by the sea and so built a log house and started an aquafarm. Now family and farm are gone, Chris rents the basement of his old house, and tends to his apple trees.

The cove inspires ambitious plans, a great expending of energy. But in the enthusiasm sometimes circumstances arise, missteps are too great, inertia is lost, aspirations are tempered, and then fade. But the dreamers linger long after, watching the waters come and go from Cusheon Cove.

### Story Five: Pictures of the Ravine

In the ravine on the east edge of Cusheon Cove there is a trail in the forest. It goes to a pullout beside a public road. Before there was a road the trail used to go all the way to the Beaver Point School and the few children that lived on the cove would take this path. You might think that's scary for a child but in those days much of the forest was logged and it let the light in. Only around the ravine where the terrain became too steep was there much of a forest, a snake of water and pine up and over the hill south of the cove,

*Fig. 35.* Taking a break. The area around Cusheon Cove was extensively logged while the mill was in operation. The forest has since regrown.



on either side the land bare. At school they would learn the names of places where their parents were from and to find them on a map.

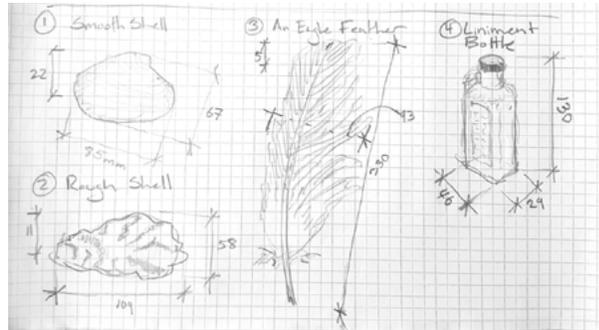
Now when people use the path they go in the other direction. The tourists come with their cars here, they park them in the pullout so they can go down into the forest and see the beach. This part of the forest is protected by Ruckle Park, so it won't change again.

The dreamers love their island so much of the land is like Ruckle Park, protected. Nature is rarely sullied by an unsightly building, nevermind a milling operation, and it's left largely available for the enjoyment of future generations. Many of the beaches are public. Many of the mountains have lookouts. So long as you can drive, just pick up a map in town, it will tell you where to find all the parking to see the sites, guiding you along the roads which snake through the forest.

## PART FOUR

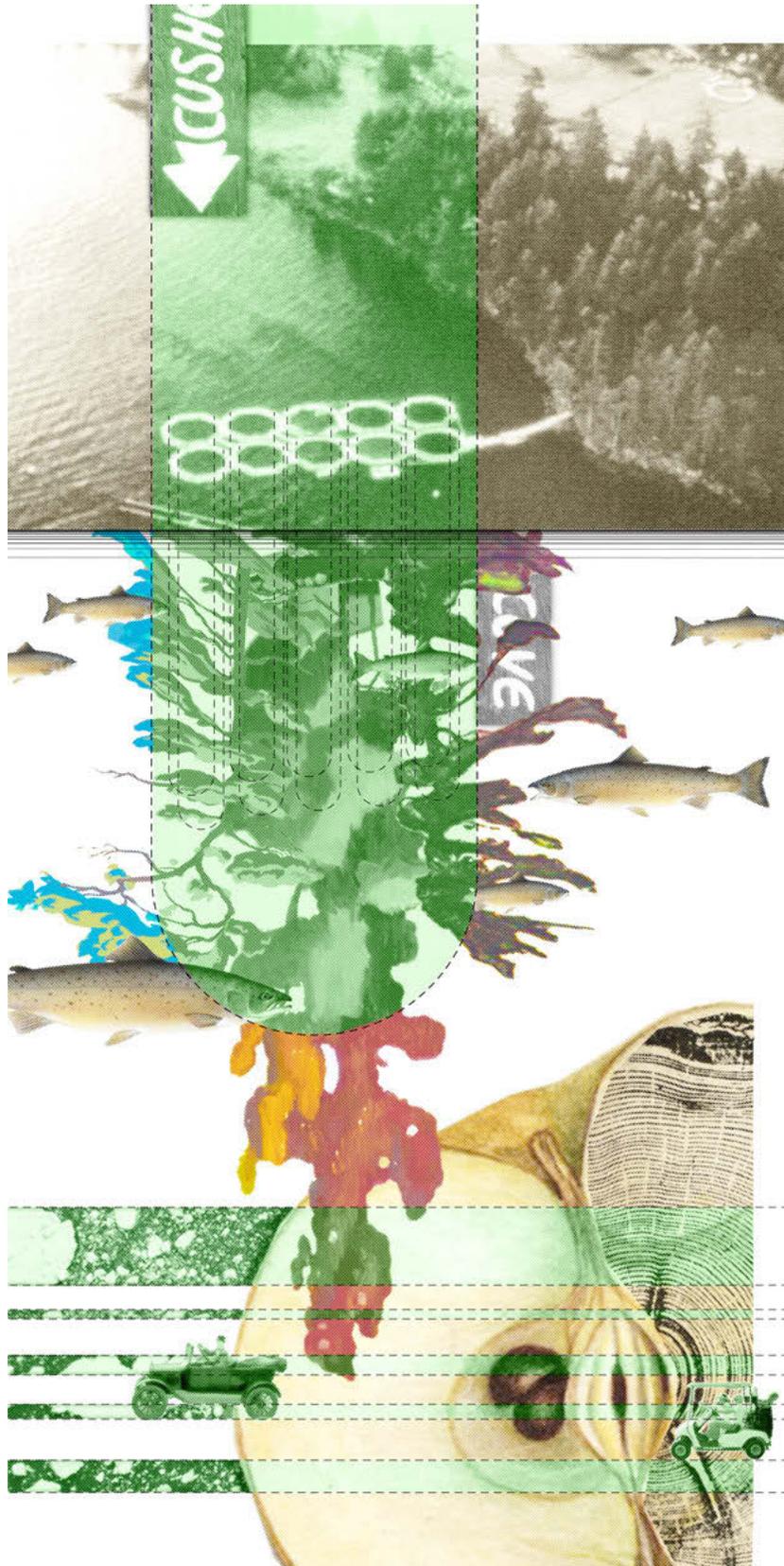
# Process

*Fig. 36.* From top to bottom, several artifacts were collected from the site, and installed in a custom designed display case.

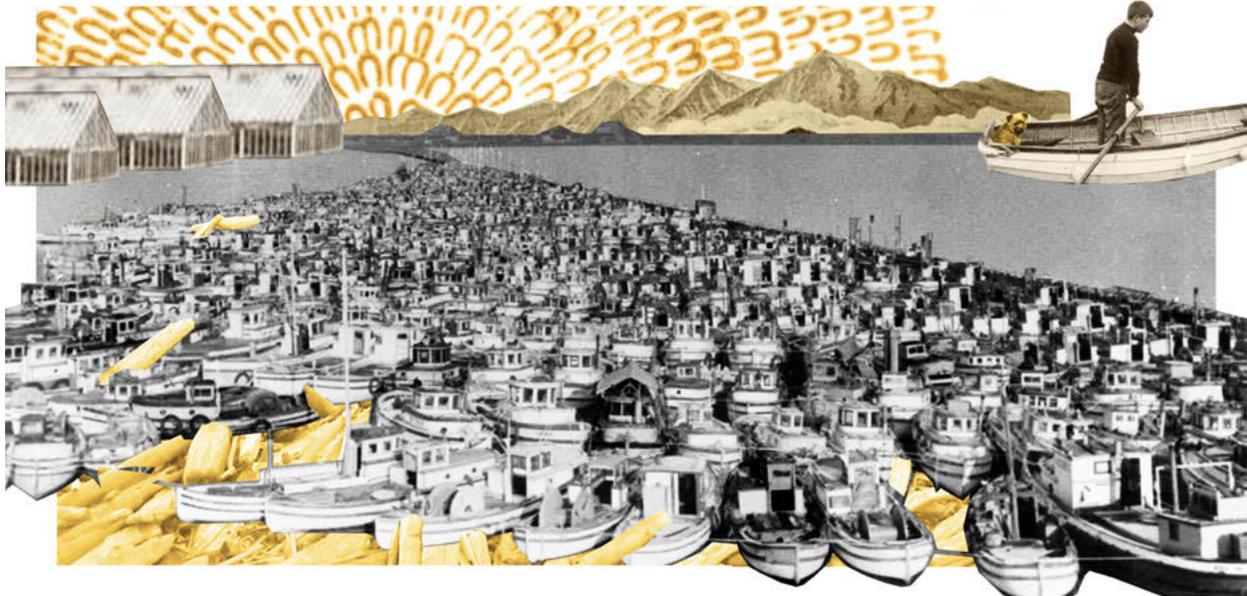


*Fig. 37.* Below, although the artifacts are protected and untouchable in the display case, photogrammetric models were made allowing for duplication and manipulation in the digital story.









*Fig. 38.* Previous page from left to right and above, collages which interpret Story Two, Story Three, and Story One. Collage serves as a method for understanding and recomposing historic information, and for exploring potential spatial relationships.

*Fig. 39.* Following two pages, found objects are arranged in 'Cornell Boxes' representing the five stories of the Digital Story. The boxes allow for the introduction of new associations derived from the storyteller's subjective response to the stories, and further explore potential spatial ideas.



INTANGIBLE TERRITORIES



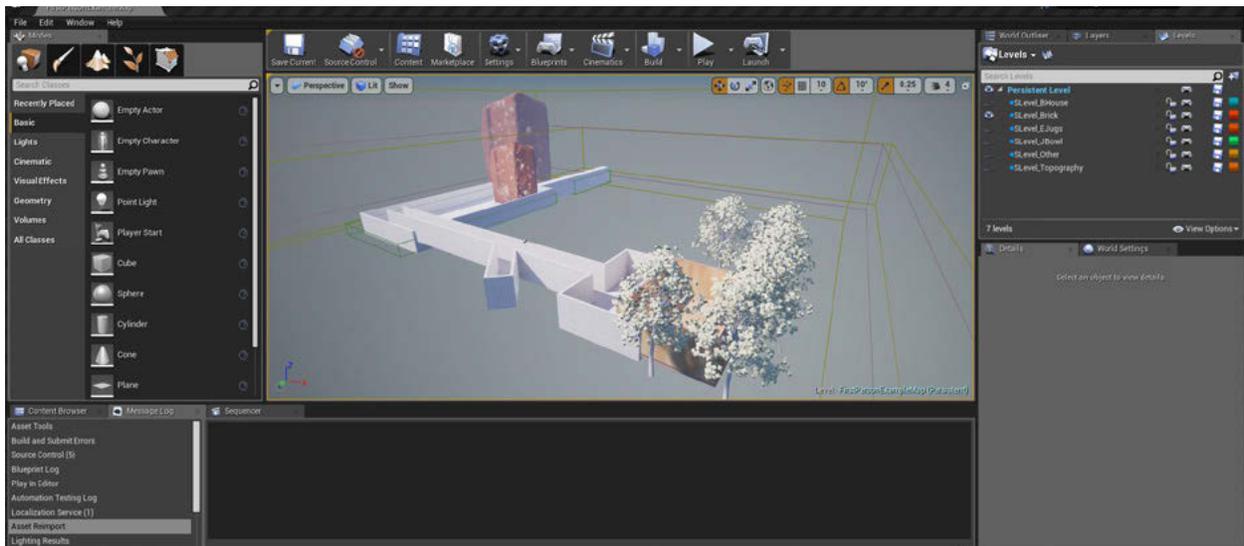
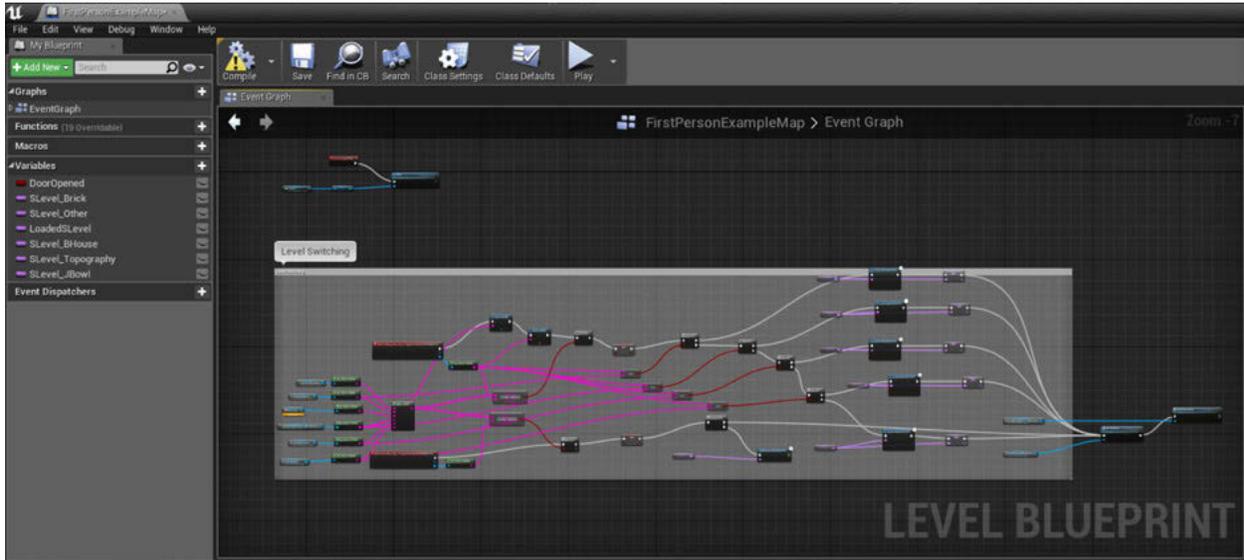
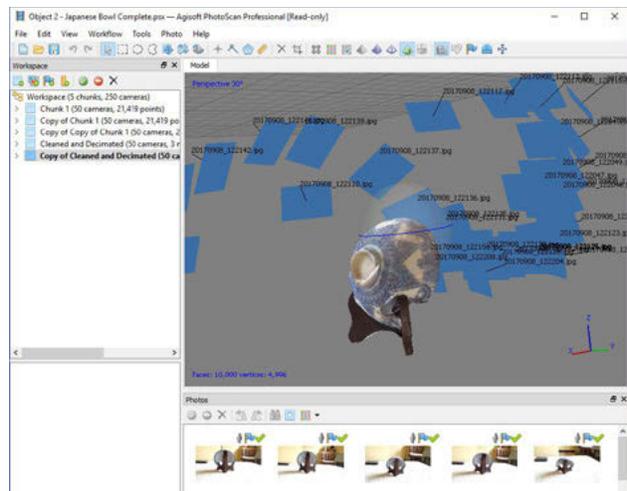
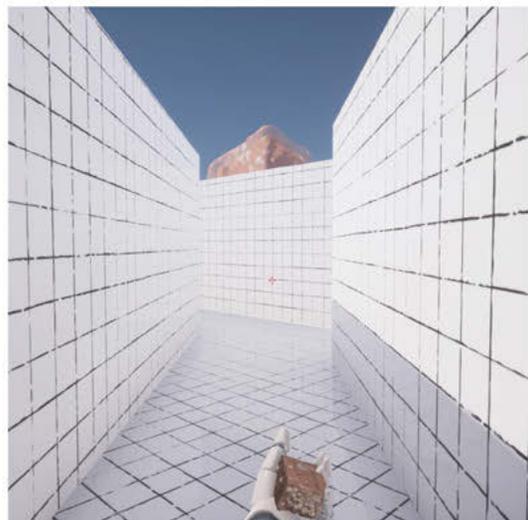
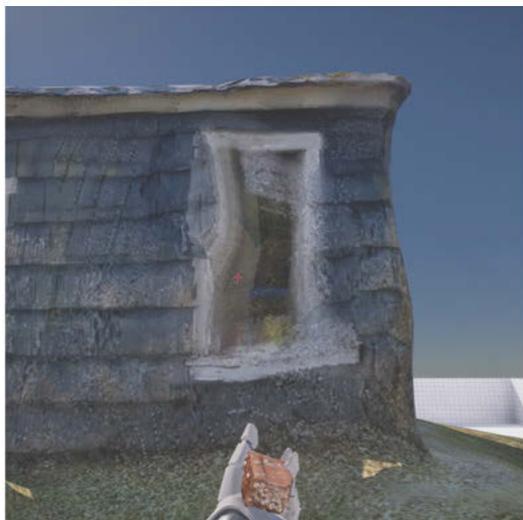
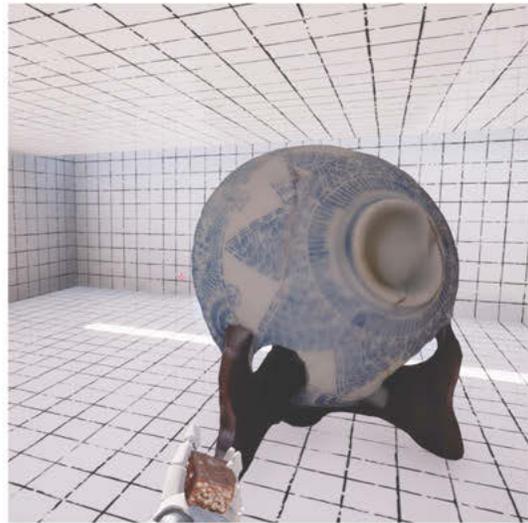
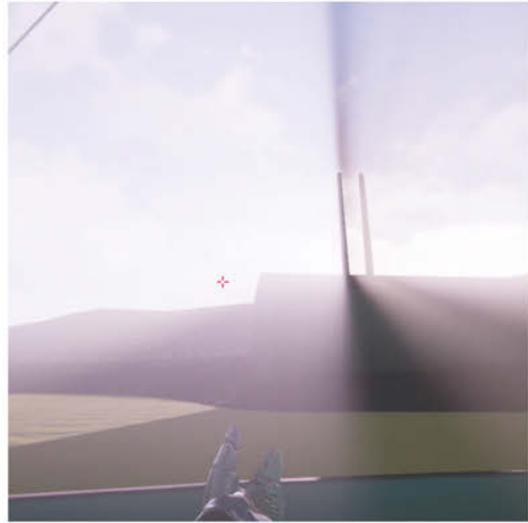


Fig. 40. Historic artifacts are converted to 3D models using photogrammetry, specifically with the software *Photoscan*. *Unreal Engine*, a game engine, is used to create the Digital Story using imported photogrammetry. *Unreal Engine* features a visual scripting language called *Blueprints* which allows for programming interactivity within games without the need for writing code.

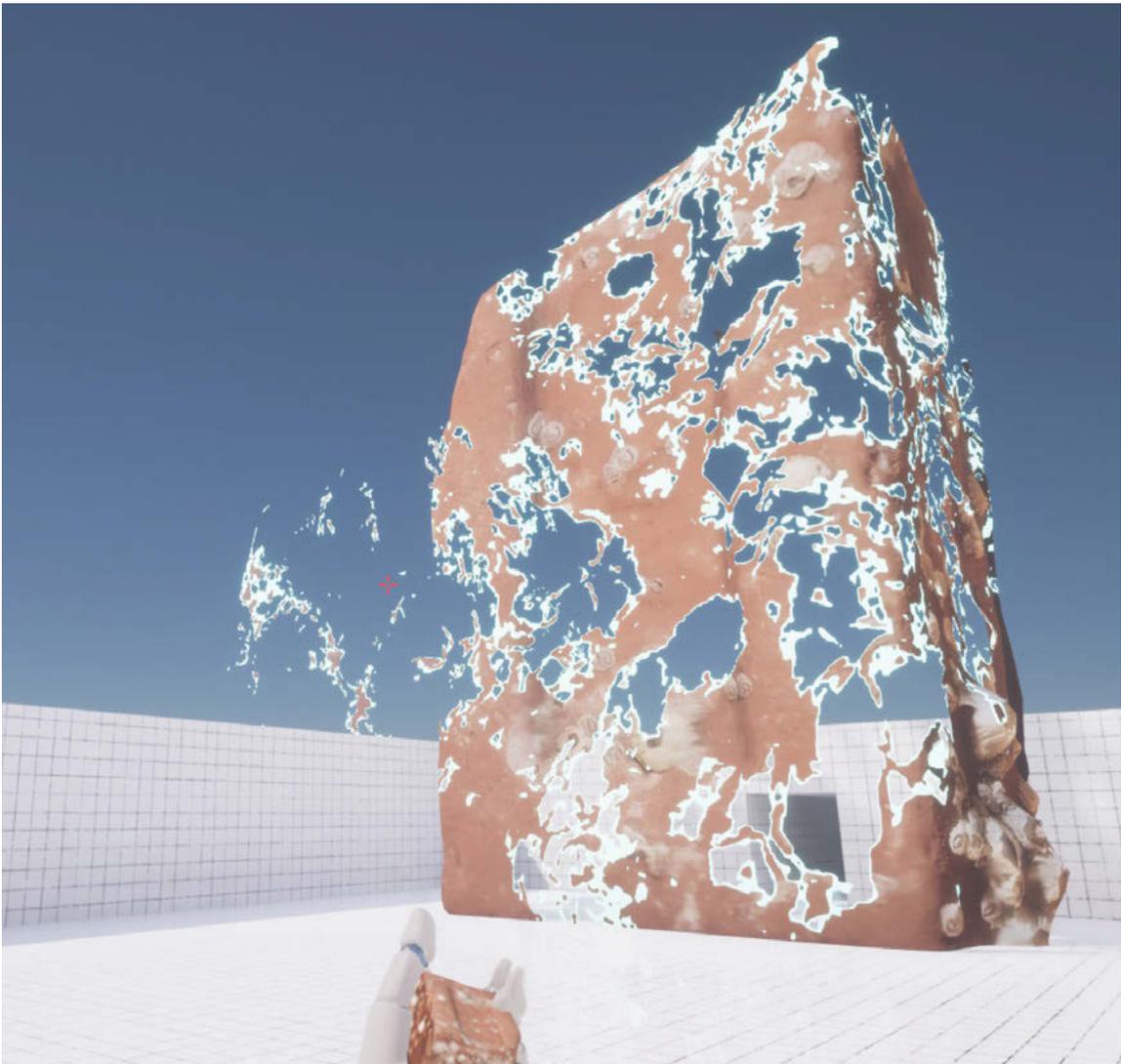
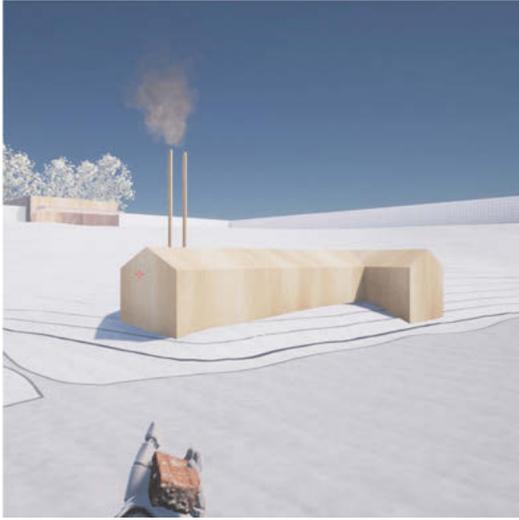
Fig. 41. Following two pages, a selection of screenshots from a proof of concept demo for the Digital Story, presented at Colloquium Two. The demo is composed of a series of vignettes designed around photogrammetry, which overlap in the same space.



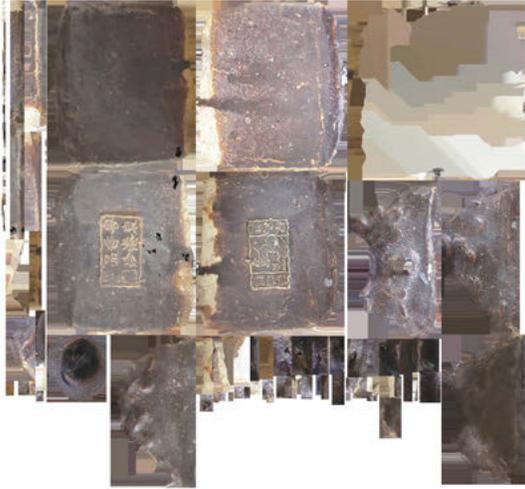
INTANGIBLE TERRITORIES

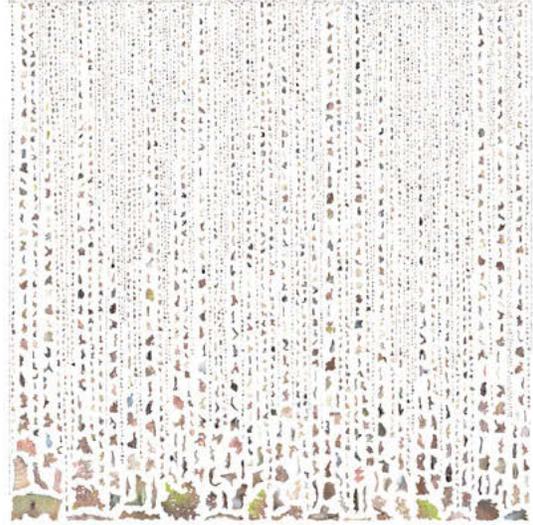
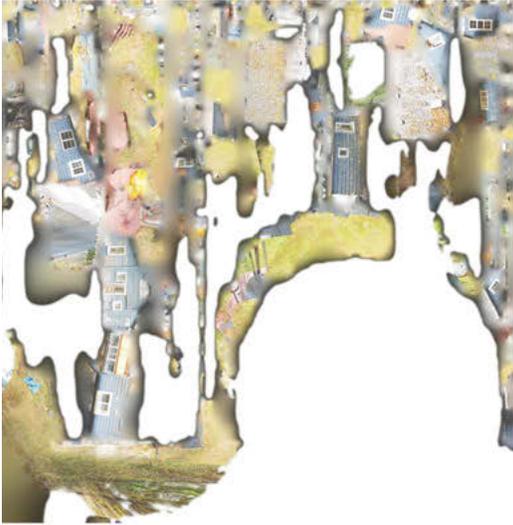


INTANGIBLE TERRITORIES



INTANGIBLE TERRITORIES

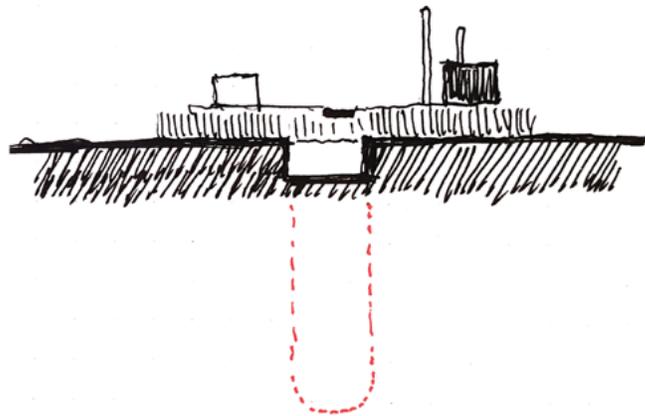
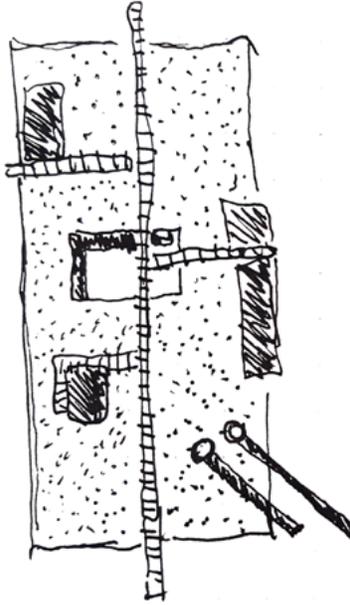




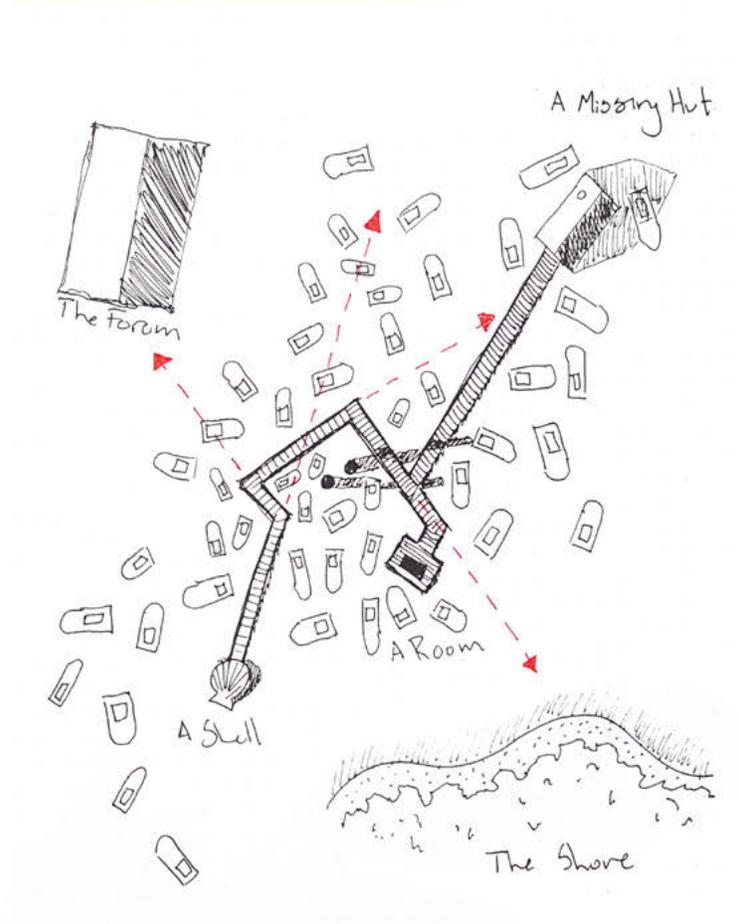
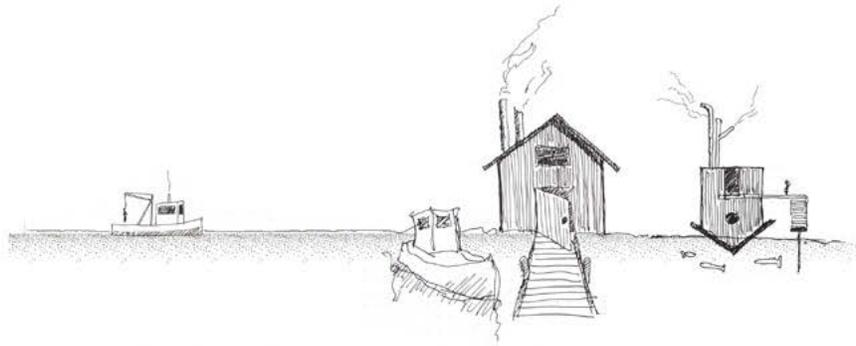


*Fig. 43.* Previous two pages, a collection of textures produced by the photogrammetry technique, including the brick, a Japanese bowl, a car, and several structures.

*Fig. 42.* Material presented at Colloquium Two.



Twin A  
of the first story



**Twin B**  
of the first story

*Fig. 44.* Comparison of two intentions for planning Twin A and Twin B of the first story on Japanese-Canadian internment.

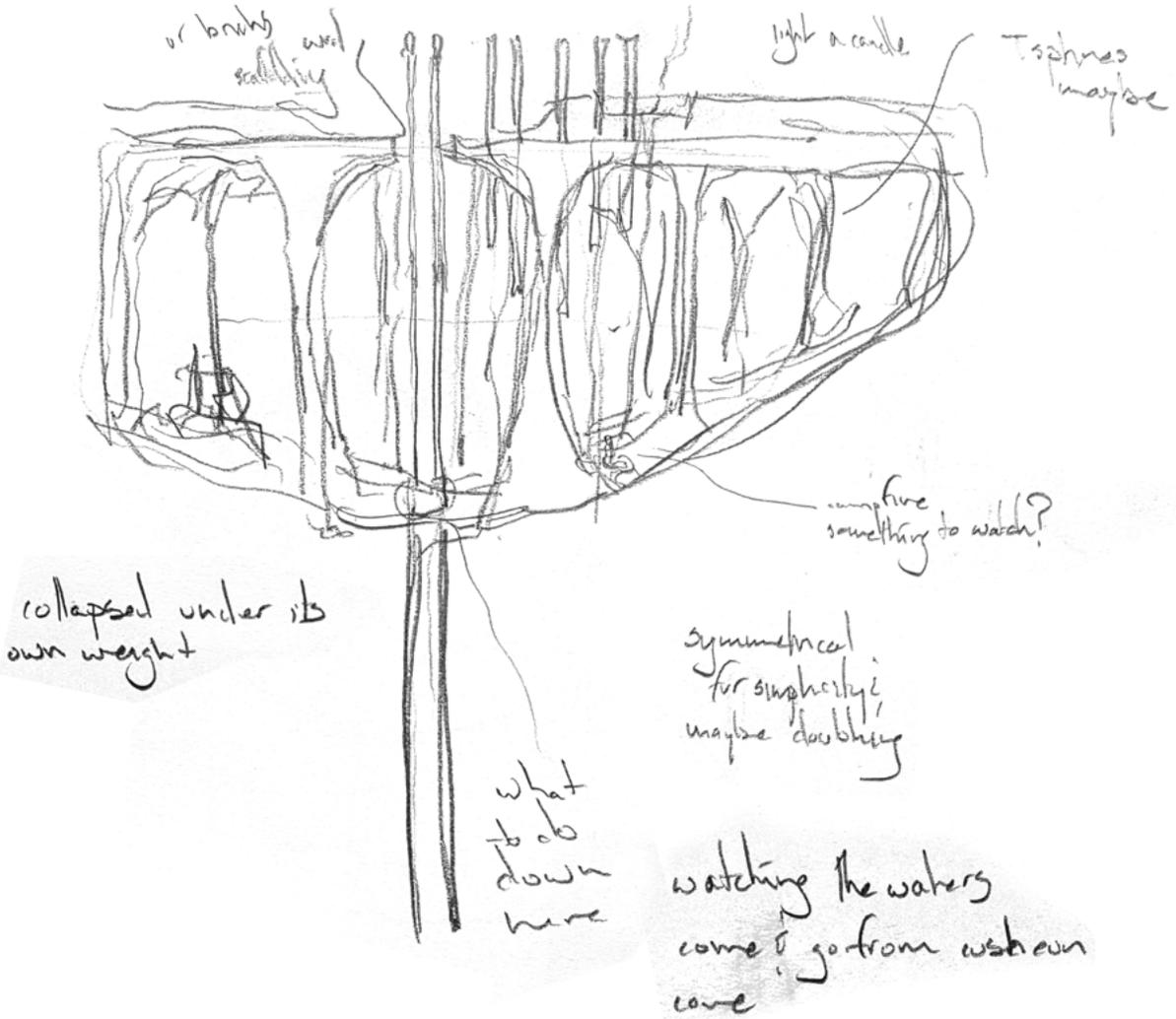
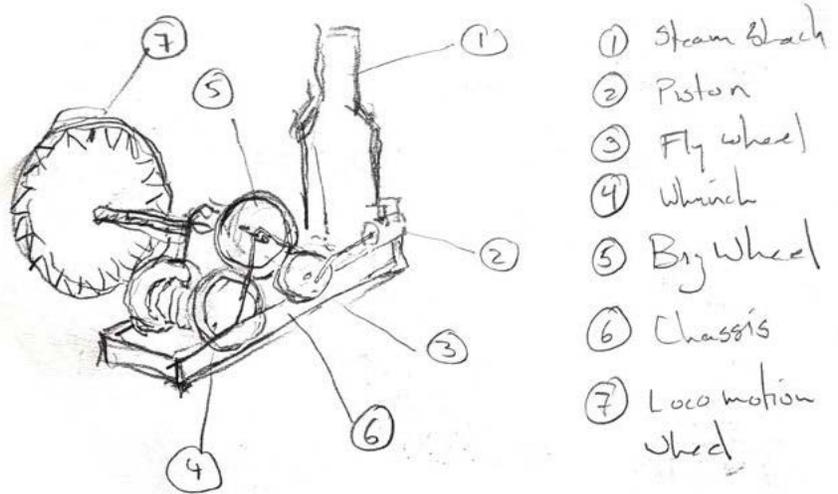
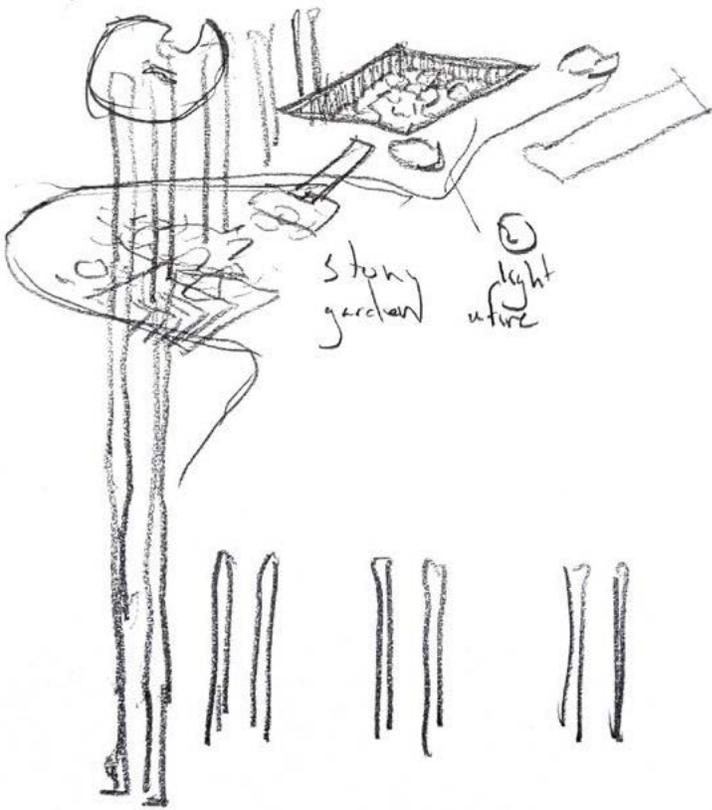


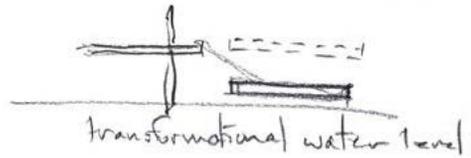
Fig. 45. The following three pages show sketches used in developing the ideas for the various levels of the game.



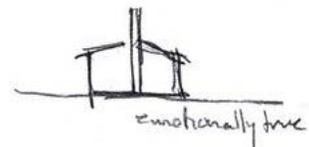


Stony garden  
light  
a fire

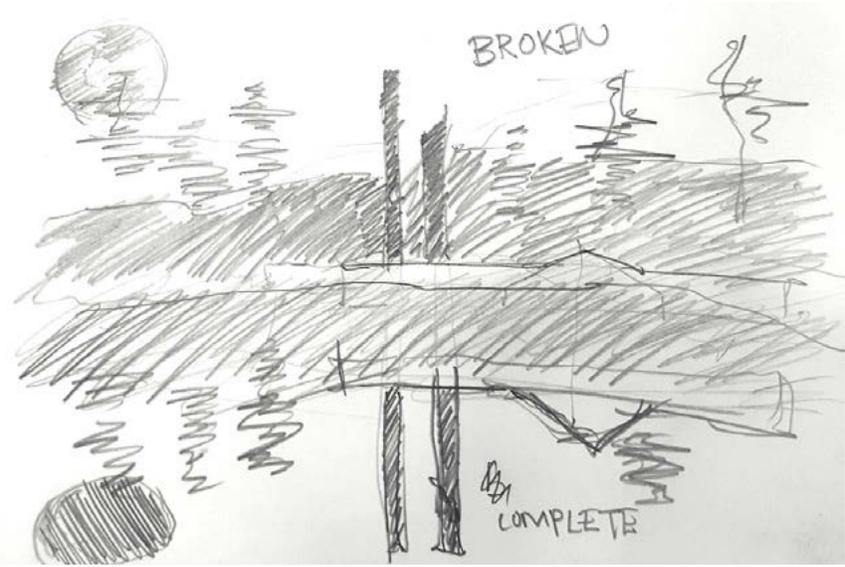
The place is special.  
piles of stuff  
a liberal pathologist  
"stuff buried"  
→ a general theme,  
that which is buried  
is put out of site  
right.



transformational water level



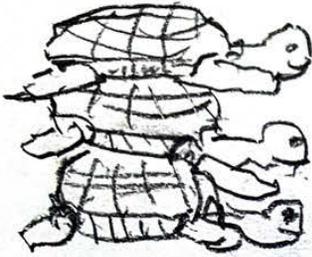
emotionally true



BROKEN

COMPLETE

A Turtle

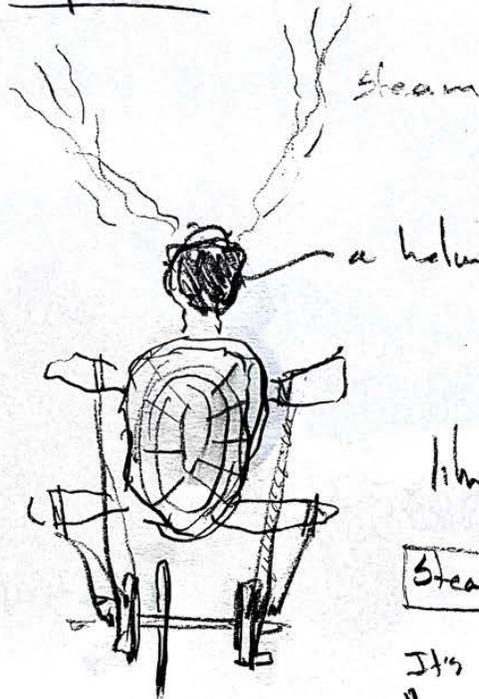
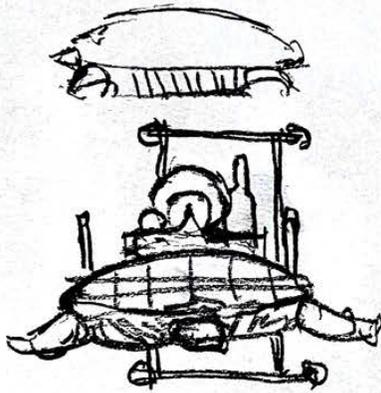


All the way down

Turtle water

history of the object

- the steam donkey doesn't work anymore so the turtle took over



steam

a helmet

- the Bike Elevator Dam a Smoke stack on Salt Spring.

like a bicycle

Steam Turtle

It's really important that the turtle wants to be there.

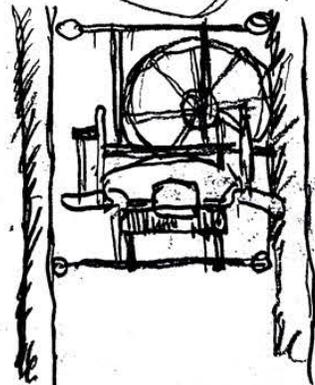
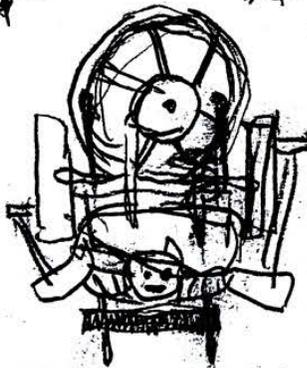
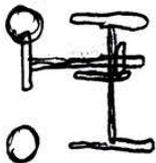
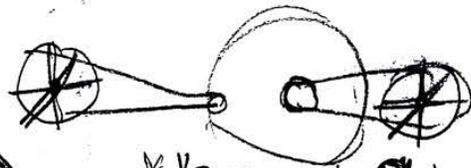
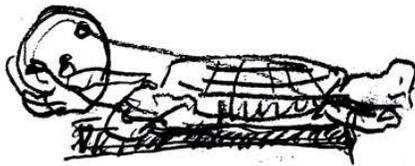






Fig. 46. The following five pages show screenshots of playing through the game from start to finish.

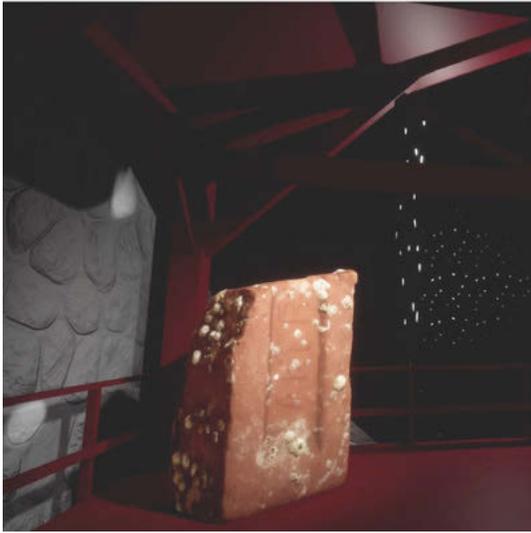
Fig. 47. Pages 72-76 provide an over-view of the various levels within the game.

INTANGIBLE TERRITORIES



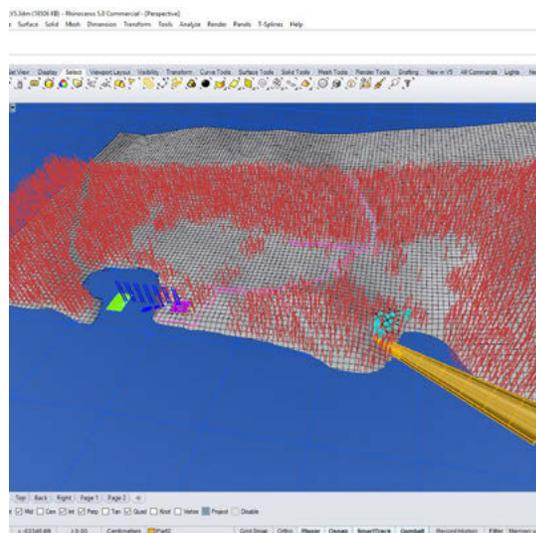
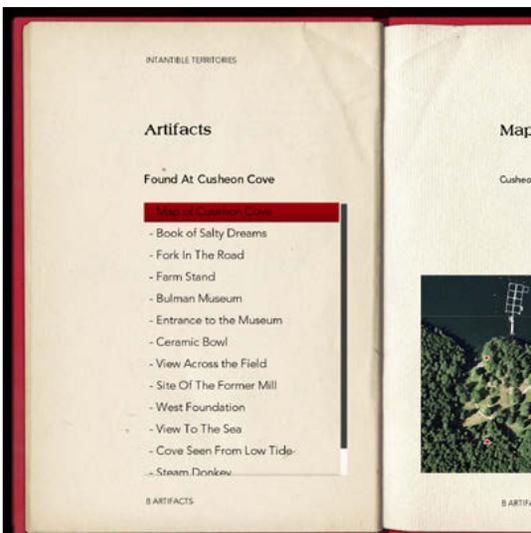
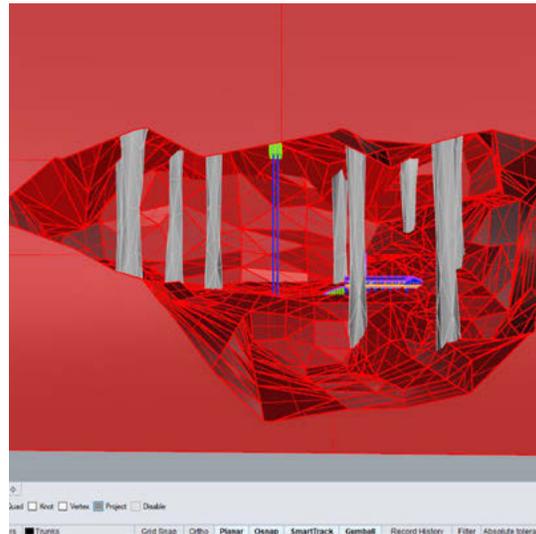
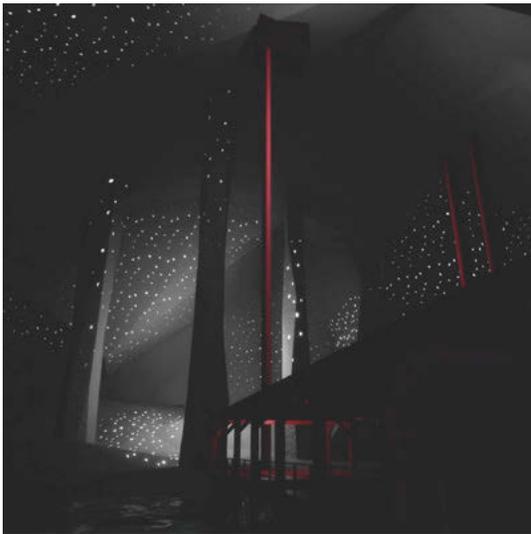
INTANGIBLE TERRITORIES



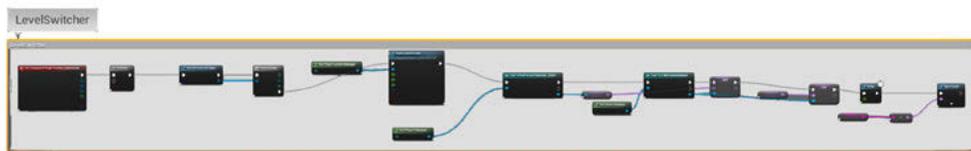
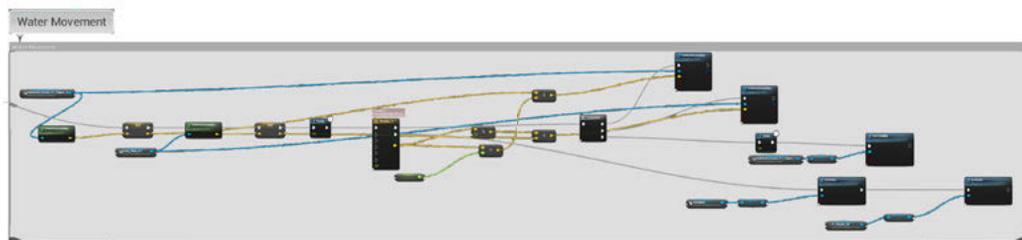
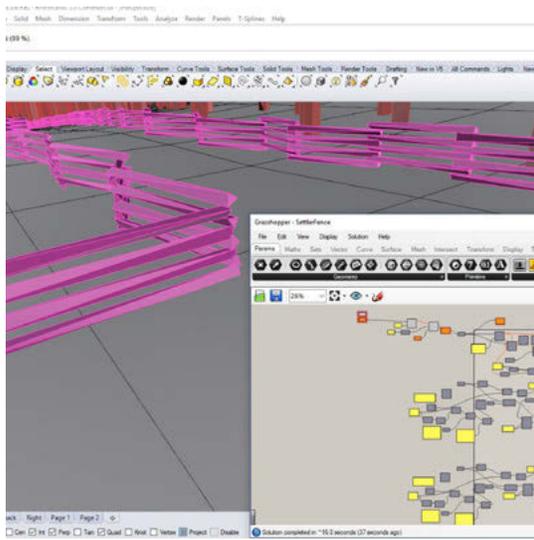


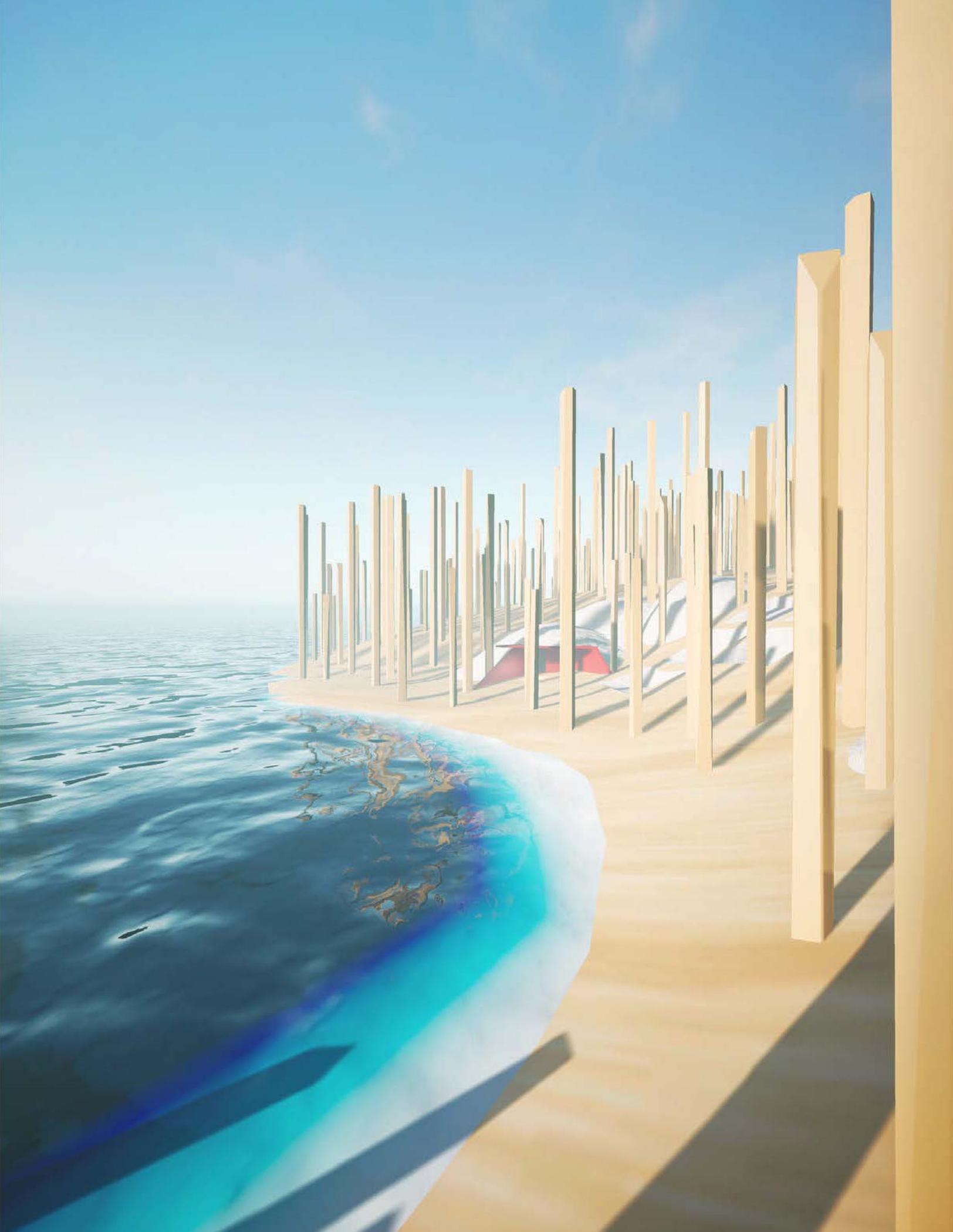
"Take this story, for instance. It's yours. Do with it what you will. Tell your friends. Turn it into a television movie. Forget it. But don't say in the years to come that you would have lived your life differently if only you had heard this story. You've heard it now."

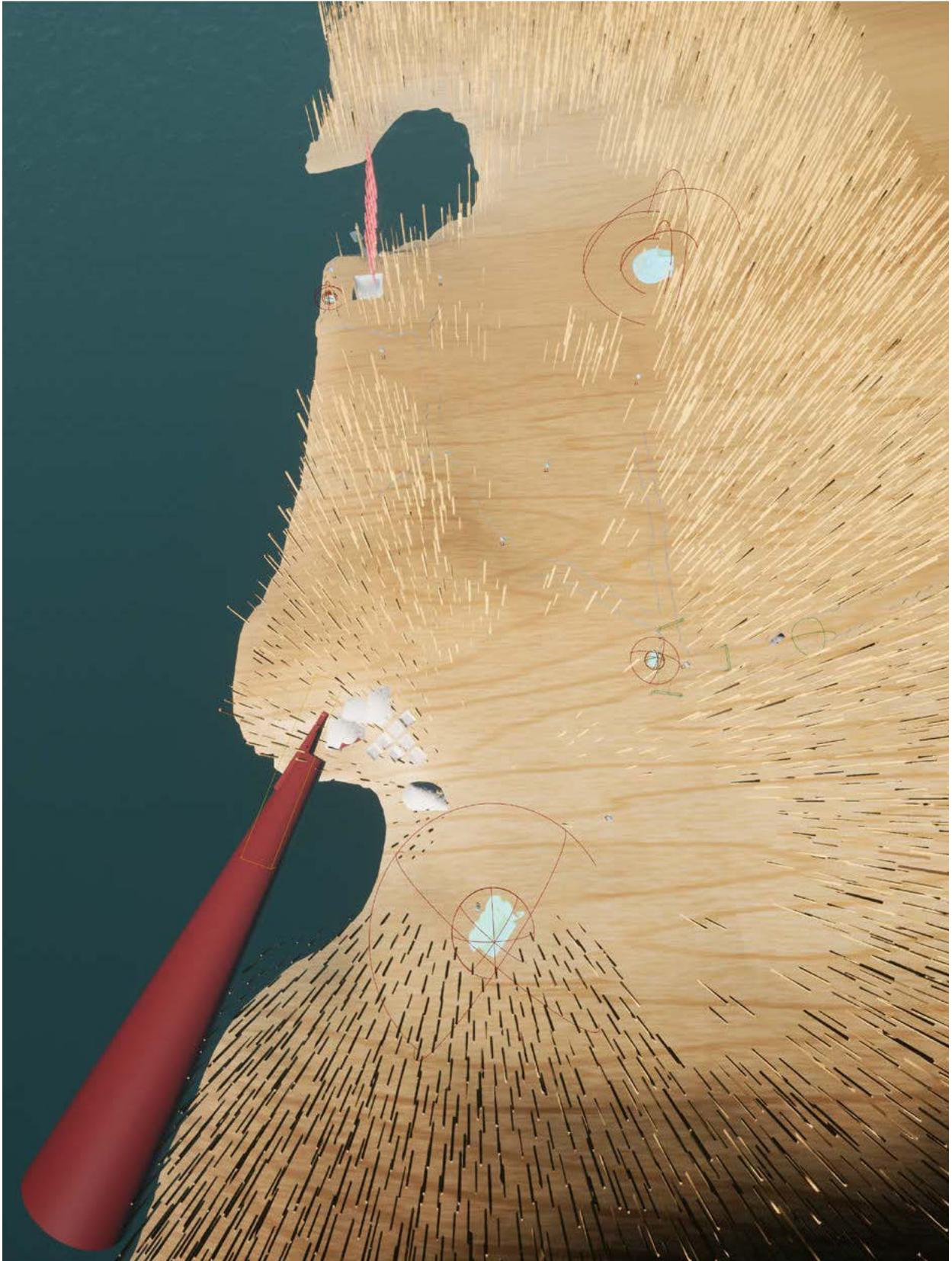
-Thomas King, The Truth About Stories



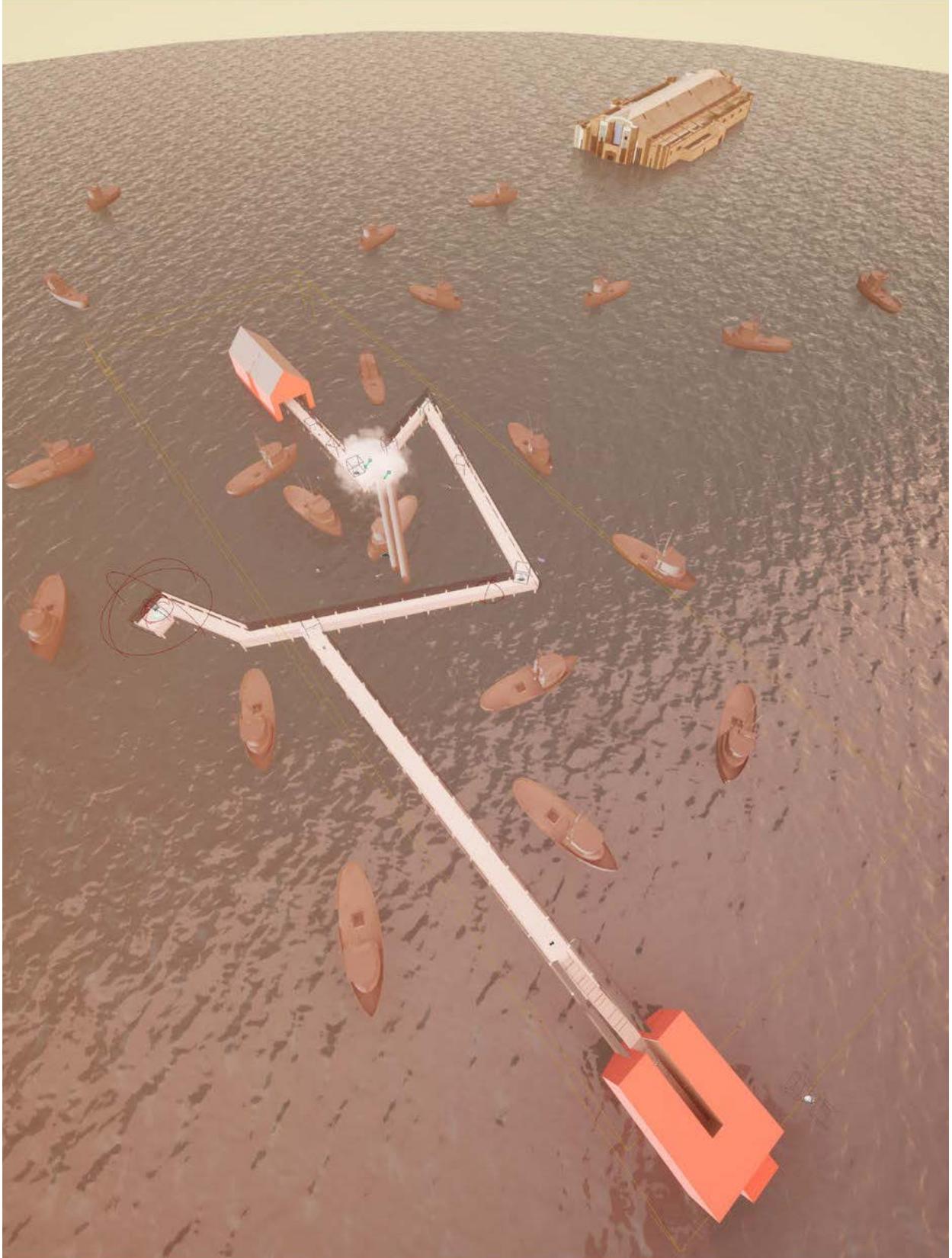
INTANGIBLE TERRITORIES

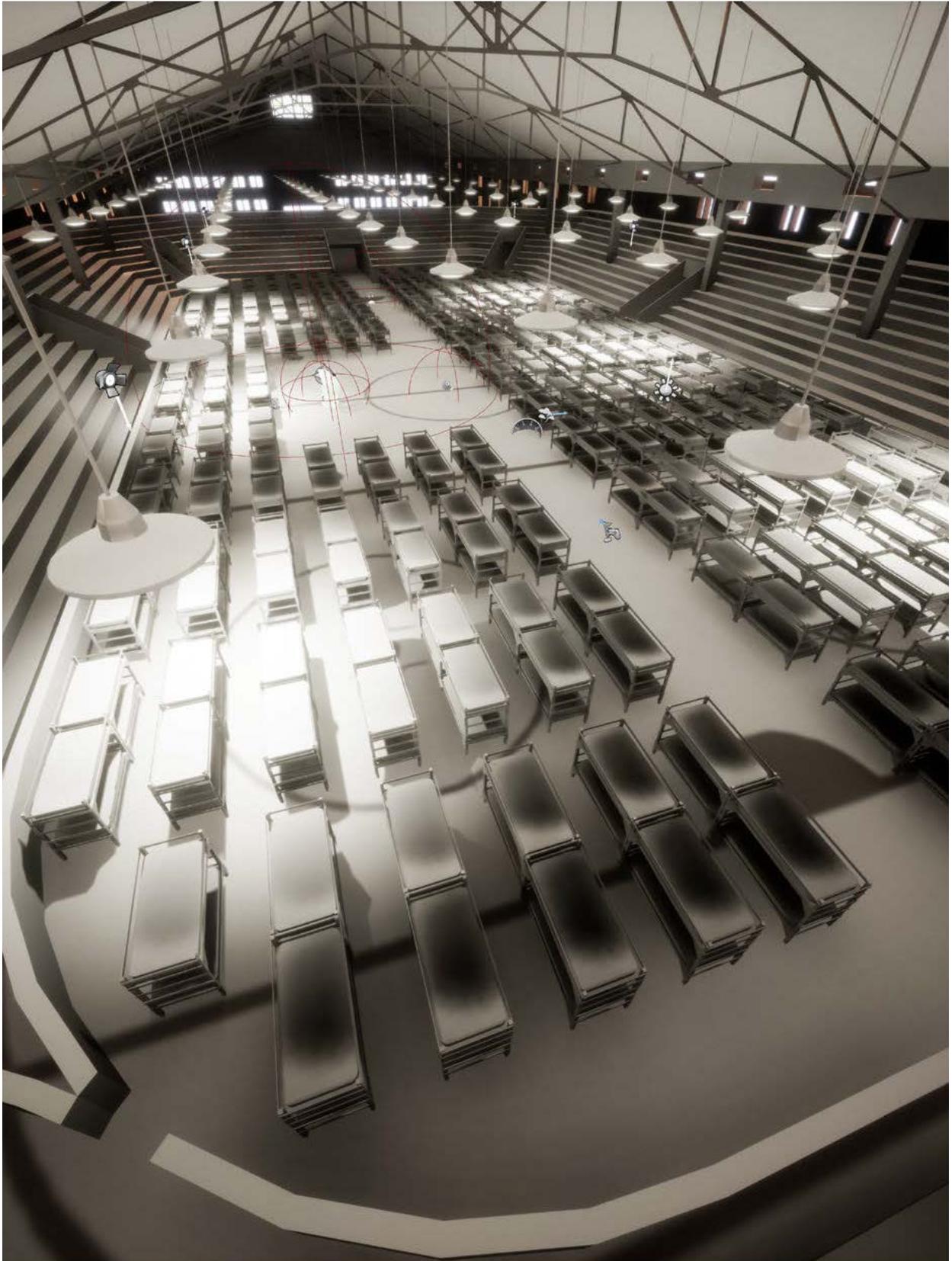


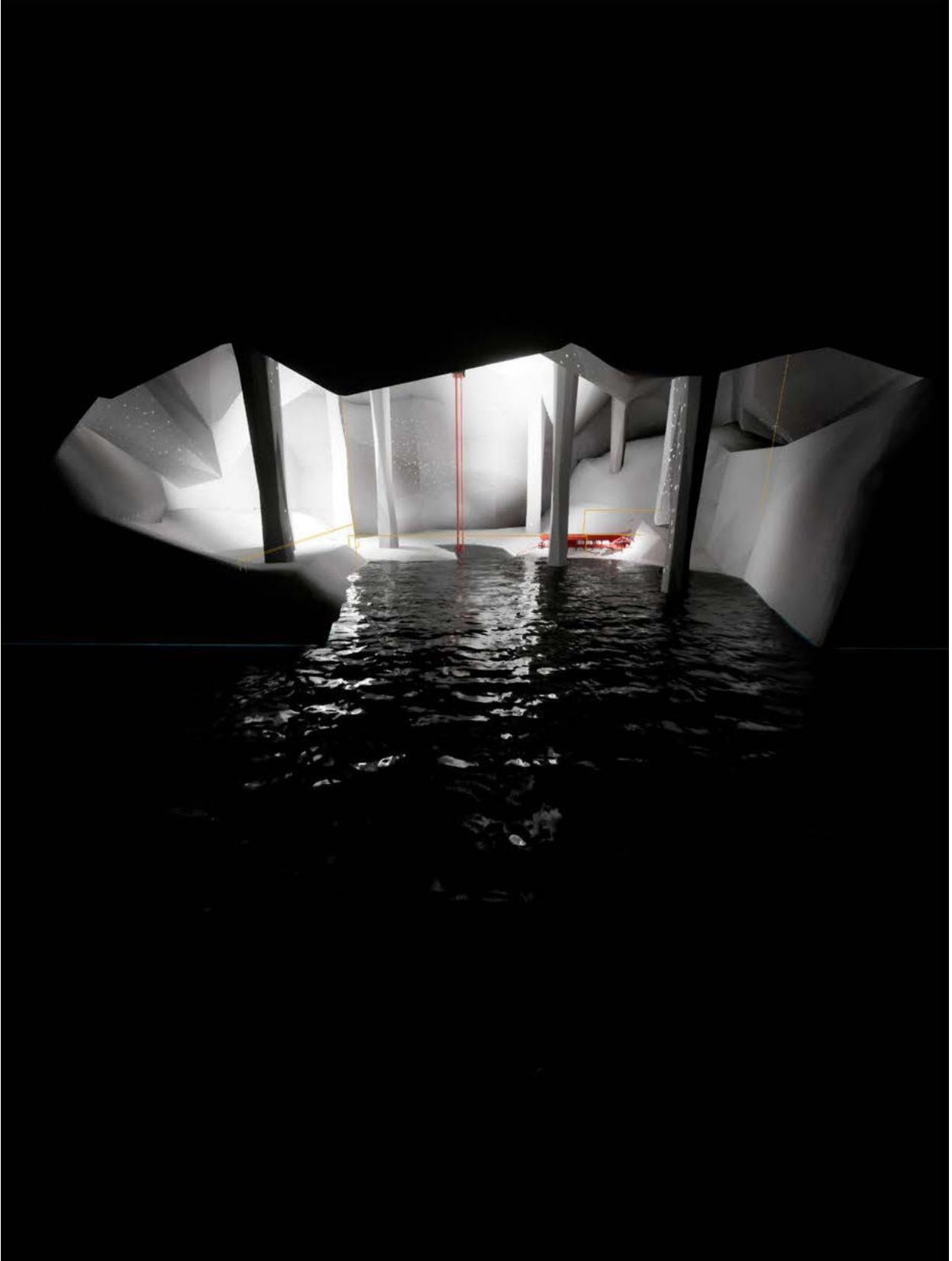


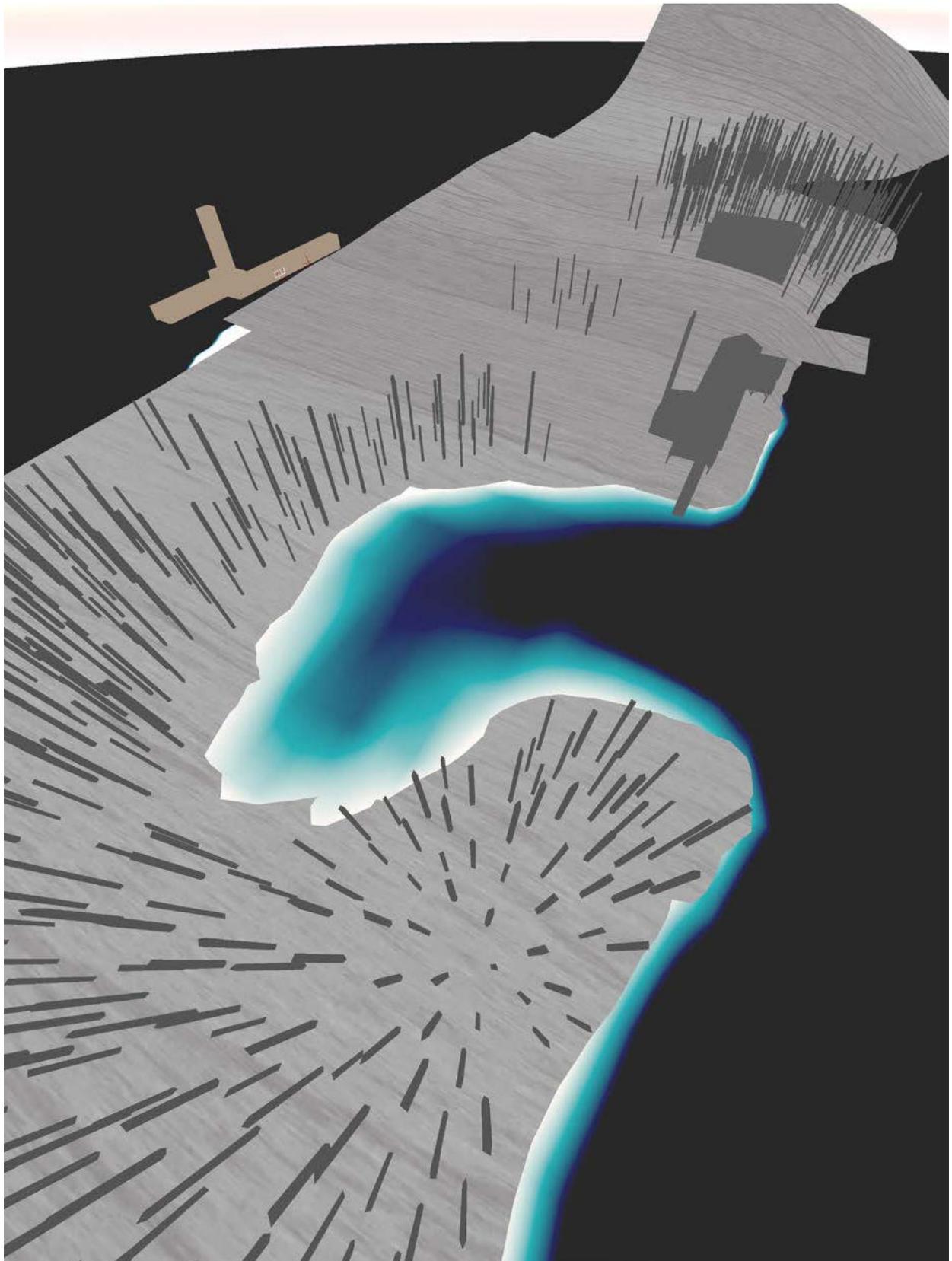


INTANGIBLE TERRITORIES









# Reflections

This thesis set out with the intention of making the hidden qualities of a site, Cusheon Cove on Salt Spring Island, tangible through digital storytelling.

This task is significant because important histories related to the site, which speak specifically of the challenges of British Columbia's historical development, are at risk of being forgotten. Therefore the project sought to engage in storytelling which could promote a culture of historical awareness of these stories. The intention of 'making things tangible' was explored in different ways; the midden was interpreted as a cavern supporting the earth above, the missing huts and fishing boats of the Japanese-Canadians who were interned were formed into a spatial experience, a hockey arena full of empty bunkbeds was reconstructed to give a sense of tangibility to the surreal nature of a historical event.

In the service of making the memories of historic events tangible, photogrammetry of artifacts were taken both in and out of context. Where they were shown in their context, for example with the foundations of the mill, this relation to original context can be more clearly understood than if the artifacts were isolated within a museum. Where the artifacts are taken out of context, for example the fragment of Chris' museum shown on the dock in the first story, they work to clarify relationships to other events, like the confiscated fishing boats seen in the background. In this regard, although the photogrammetry is only a virtual copy of the artifact, they act

as mnemonic devices whose interpreted meaning can be more effectively, and affectively, communicated to the viewer. The artifact is placed in a new assemblage, and situated in relation to extrinsic qualities—whether they are near or far in time and space.

Having originally developed the intention of doubling the project into a tangible and intangible twin, Twin A and Twin B, it became increasingly difficult to maintain a meaningful distinction between those terms. As argued in part two, a digital story with no physical form can be considered tangible if it creates a sufficiently affective experience. Likewise it became apparent that trying to propose a ‘tangible,’ or conventional, architectural project was meaningless if isolated from intangible characteristics. In the end, the project is mostly constituted of ‘Twin B,’ the digital story. The concept of twinning was used more as a storytelling strategy to defamiliarize certain objects, for example by putting a double of the mill at the bottom of a cavern.

In considering Frampton’s statement for the architect to be a mediator between local and global forces,<sup>1</sup> I think to be faithful to Frampton’s idea favours working within one’s own cultural context. To consider the inverse approach, to act in a foreign context and try to integrate local concerns into an architectural project, doesn’t seem credible when considering the discourse of cultural heritage. I propose that UNESCO’s discussion of cultural heritage demonstrates a growing acknowledgement that all heritage value is extrinsic, and that things have no value that isn’t given to them by people. This realization has ethical implications for design—if all

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1 Frampton, Kenneth. “Towards a Critical Regionalism: Six Points for an Architecture of Resistance.” In *Labour, Work and Architecture: Collected Essays on Architecture and Design*. London 1; New York: Phaidon Press, 1985.

things' values are extrinsic, how can a foreign designer make a meaningful architectural contribution if they do not know the context well? The risk of imposing one's values and contributing to a hegemony of Western thinking seems certain, which is what Frampton was originally advocating against. If we accept there is no intrinsic value in a thing, I believe architects will have to radically change their methods when working far from home.

### **Reflections on Making a Game**

As previously mentioned, this project can be understood as a 'serious game' and more specifically as a walking simulator. I also want to re-emphasize the original intention of seeking a balance between content and technique, where technique in the service of content brings forward a critical perspective on the use of new technology, in this case a game engine. Upon reflection, the project seemed focused more on content and exercised less emphasis on technology, and more on the techniques of storytelling. In pursuing this balance it was always the intention of the project to avoid a technological determinism, where the project would only be about showing what's possible with a new technology, the game engine. I would assert this has indeed been duly avoided through emphasizing the importance of Cusheon Cove in this exercise.

However making a game has unique constraints that needed to be addressed. All games need some way to keep a player motivated. Films and novels do this with a narrative hook to invest the viewer in the story, but games need an interesting objective, a reason to play, which provides the primary locomotion of progression. As I previously described, any game is primarily designed for aesthetic pleasure, for entertainment; the ability

to educate the player about history is admittedly secondary to satisfying this aesthetic pleasure. Similarly to a film, why play a boring game? As discussed by Ramirez,<sup>2</sup> this is not necessarily a disadvantage, since an orientation towards aesthetic pleasure, of which there are many nuanced types, allows for the potential to address a larger audience and to contribute to a historical. In this sense a game perhaps doesn't have the same authority as an analytical text, but it can contribute to historical culture by addressing a broader audience which is normally less able to be reached by historical literature.

It's also worth mentioning that trying to make a videogame as an architectural designer lead to some joyful moments; like considering how an elevator powered by a giant turtle might work, which in the process was considered as an alternate design for the elevator which lead from the Cove down into the cavern. It was based on a Native American story about the origins of the world being on the back of a turtle and a reference to Turtle Island as the Americas.

In future projects, ideally I would seek to collaborate with a writer. I am convinced that architects can make a significant contribution to storytelling design, be it videogames, writing, building or otherwise, because we can thoughtfully consider how things might work in real settings, which leads to more affective environments.

After experimenting with the game engine Unity3D as well as Unreal Engine, I would choose to continue to use Unreal because it has more approachable systems for someone who doesn't know how to write

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2 Ramirez, Bruno. "Clio in Words and in Motion: Practices of Narrating the Past." *Journal of American History* 86, no. 3 (December 1, 1999): 987–1014. <https://doi.org/10.2307/2568603>.

computer code, although Unity seems better at making simpler projects which run better on less powerful computers. Considering this, I believe that the choice between software should be contingent on the composition of a project team.

Finally, although the digital story's result is short of the five game levels I planned to make, what was achieved still demonstrates the intentions of the project, and to make more would have simply demonstrated more of the same principles.

### **Reflections on Practicing Architecture**

This project is an argument for architects to contribute to other kinds of projects than making buildings, specifically how an architect could participate in a game development process as advanced by Van Buren.<sup>3</sup> It also demonstrates the pertinence of having an architect to develop spatial experiences for educational and museological applications.

In making the digital story I encountered many situations where the environment became designed to focus the player's attention on storytelling elements. This provoked a series of questions: is there potential for buildable architecture to also communicate stories? Should it? Who is qualified to write these stories? Following Ramirez's argument,<sup>4</sup> if an architect were to engage in such activity, it is not with the authority of a historian, but as an agent of historical culture. In a similar way that filmmakers and novelists are expected to bring a message to their medium, so too should architects. They

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3 Van Buren, Deanna. "Architecture in Video Games: Designing for Impact." *Gamasutra* (blog), October 12, 2015. [http://www.gamasutra.com/blogs/DeannaVanBuren/20151012/254238/Architecture\\_in\\_Video\\_Games\\_Designing\\_for\\_Impact.php](http://www.gamasutra.com/blogs/DeannaVanBuren/20151012/254238/Architecture_in_Video_Games_Designing_for_Impact.php).

4 Ramirez, Bruno. "Clio in Words and in Motion: Practices of Narrating the Past." *Journal of American History* 86, no. 3 (December 1, 1999): 987–1014. <https://doi.org/10.2307/2568603>.

already do, whether or not they are conscious of it. I think in any challenging works of art one can find evidence of a beating human heart, like Benjamin's clay handprints, trying to understand the world and their place in it.

As for the users of games and architecture, in a game it is easy to take for granted that the mere presence of a player changes the game world. Considering this, what might it mean to consider the inhabitants of buildings not as users, but as players? Can architecture engage players as agents within their environment?

Finally I should point out that through studying the Saanich history of Cusheon Cove, I have come to the personal realization that the practice of architecture is rooted in the business of settlement and assertion of control over territory. Having recognized this, it was a relief to work with a videogame rather than to propose a built work for this site. Despite that media representation (storytelling) can also be harmful, my game can be dismissed by an individual who does not like it or agree with it; it can even be deleted. But a building lays a claim, an assertion, and is impossible to ignore for those that don't want it.

### **On Stories, Storytelling, and History**

I have tried to be explicit in my position as the storyteller and make it obvious that the stories are my interpretation. One such strategy was to deliberately state with the subjective "I" how I came to know a story and what I think of it, similarly to how Benjamin describes the oral storyteller.

While the accuracy of any historic work is important, I was more concerned with opening an interest in Cusheon Cove to the player than I was concerned about precise historical accuracy. In other words, this

project does not seek to replace analytical historic text, but to situate itself as a agent of historical culture. Therefore the project seeks to make one or two revolutions of Coreth's spiral of interpretation,<sup>5</sup> being faithful to the spirit of the evidence as Nathalie Davis asserts,<sup>6</sup> while also leaving my own handprints in Benjamin's proverbial clay. If the project is able to open the player's imagination and curiosity to learn more about Cusheon Cove or reconsider some of their preconceptions, it has achieved its goal, and the player can defer to the experts to satisfy their curiosity.

While being faithful to evidence, the project took some creative license with some of the subjects, for example the midden. It is quite a profound piece of archaeology because it demonstrates that a place has been considered special for thousands of years. Therefore why not, through the means of storytelling, design a digital environment to experience it in a way to render that special place profoundly affective and tangible? Why not make its appearance indicative of its meaning? I trust no one playing the game will mistake for real the cavern under the ocean, or smokestacks which appear out of thin air; but although their inaccuracy as representation is evident, the message they communicate is true.

If there is still concern with my interpretation, many of the primary sources are available. The player can observe the photogrammetry, and is provided with copies of referenced documents. The evidence is provided like footnotes to the game, available for the player to derive their own interpretation.

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5 Emerich Coreth, *Grundlagen der Hermeneutik: Ein Philosophischer Beitrag* [in German] (Freiburg im Breisgau: Herder, 1969), 116.

6 Davis, Natalie Zemon. "Movie or Monograph? A Historian/Filmmaker's Perspective." *The Public Historian* 25, no. 3 (August 1, 2003): 45–48. <https://doi.org/10.1525/tph.2003.25.3.45>.

Finally it is also important that the ‘listener’ of the digital story actually plays the game rather than watch someone demonstrate it. The stories affect one differently as a ‘player’ than as a ‘watcher.’ One is not truly experiencing the game unless it is played and agency is practiced.

### **Conclusion**

Finally I would like to close this thesis with Salt Spring Island. The project began out of veneration for this quirky place, but this feeling was quickly tempered by a healthy dose of reality as the research developed. The idea of Salty Dreams was realized through examining the specificity of things found at Cusheon Cove, but I don’t think the idea is unique to the place nor that Salt Spring deserves to be particularly singled out—the idea is just perhaps more visible there. If anything I believe Salt Spring’s vocal nature will equip the community to confront these issues sooner and more openly than many others. Actually Salty Dreams can be found in many places, and indeed right across Canada. They speak of a desire to justify our aspirations and defend our homes, and the silence that creates in our history.

# Appendix: Key Terms

The following section aims to clarify the key terms used in the project and frame them in relation to how they respond to the thesis question. These terms are a product of research and interpretation. They reference existing literature but also explain the interpretation which I use in the making of the game. They span three main themes—storytelling, videogames, and tangible heritage. They aim to describe the significance of storytelling and how videogames can leverage their qualities for didactic and enjoyable experiences; they seek to broaden the reader’s understanding of videogames and what they can be used for; and finally, they consider the central question of how to make the hidden qualities of a place tangible.

## Stories and Histories

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### Story

A sequence of meaningful events. An answer to the question: what happened? According to Marie-Laure Ryan, “...story is not tied to any particular medium, and it is independent of the distinction between fiction and nonfiction.”<sup>1</sup> Stories emerge when particular events are drawn forth from the background of everyday life and given meaning. In this way stories

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1 Ryan, Marie-Laure. “Toward a Definition of Narrative.” In *The Cambridge Companion to Narrative*, edited by David Herman, 22–35. Ohio State University: Cambridge University Press, 2007. 26.

have a figure-ground relationship to the everyday. “In this view, the mere action of focusing on a certain tree in the forest is a narrative act.”<sup>2</sup>

However, it is also important to distinguish that although stories seem to depict events, they can be represented without a causal order, depending on the medium. Vilem Flusser demonstrates how a photograph can illustrate a story, but the story does not have a ‘beginning and end’ like a conventional linear text.<sup>3</sup> Videogames have a similar character in that different players can potentially choose to experience events in different sequences and therefore extract different meaning and interpretation from the story as a consequence of their own agency.

### **Storytelling**

The arrangement of information into a narrative for communication with an audience, with the purpose of having the audience consider some concept. Storytelling is an act. Good storytelling is affective. Affective storytelling renders intangible stories tangible.

Walter Benjamin and Joan Scott can help us to understand the concept of storytelling. According to Benjamin, “...the storyteller takes what he tells from experience— his own or that reported by others. And he in turn makes it the experience of those who are listening to his tale.”<sup>4</sup> For Benjamin information is not important to the art of storytelling, it is the transmission of experience which is important. Good storytellers interpret and don’t offer simple explanations of their stories, their craft is not to be didactic, but memorable. Because the actual retelling to the listener is

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2 Ryan. “Toward a Definition of Narrative.” 28.

3 Flusser, Vilém. *Towards a Philosophy of Photography*. London: Reaktion Books, 1983.

4 Benjamin, Walter. “The Storyteller.” In *Illuminations: Essays and Reflections*. New York: Schocken, 1969. 87.

embodied and sensible—in the traditional sense a listener has an exchange with a storyteller who speaks and gestures in front of them—one can see how good storytelling can be stimulating and therefore affective. When a storyteller can render a story so affective that it can be felt as sensation, I argue the story has been made tangible to the listener’s experience.

And so Scott asserts that fundamentally “...through the subtlety of their presentation and the deftness of their interpretation, storytellers open their readers’ imaginations; in this way the story’s richness and germinative power endures.”<sup>5</sup> One of the most venerable qualities of the craft of storytelling is that it possess the potential to not only educate and amuse, but to help us in imagining a world.

### **Interpretation**

To derive meaning from information. With regards to interpreting history, according to Miguel Bedolla, the purpose of interpretation is not only to derive meaning, but to do so in a way that is consistent with the context of a subject and the intentions of any original author. Interpretation which strives to portray past events with scientific accuracy follows the historical method.<sup>6</sup>

### **History**

The past recounted as a rigorous story. According to Louis Gottschalk, the historian deals with that which already exists, but also in making, in that they literally create history through writing and ascribing meaning. History

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5 Scott, Joan W. “Storytelling.” *History and Theory* 50, no. 2 (May 1, 2011): 203–9. 204.

6 Bedolla, Miguel. “Historical Method: A Brief Introduction.” *Crabtree and Miller, 1992, 169*.

is interpretive and implies the meaning of events, as well as descriptive in that it seeks to communicate clearly what happened.<sup>7</sup>

Although it is written about the past, history is written for the present, and so always speaks about what is relevant the moment a text is written.<sup>8</sup> The purpose and applications of history are diverse. Joan Scott explains how history can be used to transmit information, to consolidate collective identities, or to provoke an emotional effect. Scott further demonstrates how history can be used to open imaginations, that it can be framed to provide insight to current events, that it can give a voice to underrepresented groups, and that it can simply be for pleasure.<sup>9</sup> Dean, Meerzon, and Prince also elaborate how history can be used for healing as well as exploitation.<sup>10</sup>

Although historiography is conventionally bound by a duty to “historic truth,” a growing number of historians have come to reassess the value of conventional analytical text compared to other communication mediums like exhibitions and filmmaking.<sup>11</sup> Indeed there is now greater appreciation for the idea that history has always contained elements of fiction, and that fiction can be put in the service of history. The idea that a historian may use poetic license to communicate the meaning of events is achieving greater acceptance.<sup>12</sup> This practice takes particular significance when attempting to represent the experience of people who have not been included in historical records. In the words of esteemed historian and author Natalie Zemon

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7 Gottschalk, Louis Reichenenthal. *Understanding History: A Primer of Historical Method*. New York: Random House Inc, 1969. 44.

8 Dean, D., Y. Meerzon, and K. Prince. *History, Memory, Performance*. Springer, 2014. 6.

9 Scott. “Storytelling.” 204.

10 Dean et al. *History, Memory, Performance*. 14.

11 Ramirez, Bruno. “Clio in Words and in Motion: Practices of Narrating the Past.” *Journal of American History* 86, no. 3 (December 1, 1999). 998-1000.

12 Dean et al. *History, Memory, Performance*. 18.

Davis: “let the imagination be guided by evidence, interpreted as best one can, when it is available and, when it is not available, by the spirit or general direction of the evidence.”<sup>13</sup>

### **Historical Method**

In “Historical Method” Miguel Bedolla describes an approach in four steps:

1. Research is conducted on elements of the past that are available in the present
2. The results of the research are interpreted
3. The interpretation is judged for its correctness
4. The final interpretation is communicated, usually in writing<sup>14</sup>

Herrmann, citing Heidegger and Gadamer, further clarifies this interpretive process begins with premises based on preconceptions of the historical subject.<sup>15</sup> These are constantly revised as research is collected, and as the interpretation iterates and improves the meaning of the historical interpretation, it shifts from a basis of preconceptions to expertise. Herrmann, now referring to Emerich Coreth,<sup>16</sup> describes how this process proceeds in a spiral pattern, that interpretation is constantly re-designed as more historical information is integrated.<sup>17</sup>

### **Historical Culture**

Historical culture refers to the history which is commonly known—the historical consciousness of a society as a part of its civic character. It is the

13 Davis, Natalie Zemon. “Movie or Monograph? A Historian/Filmmaker’s Perspective.” *The Public Historian* 25, no. 3 (August 1, 2003): 45–48. 47.

14 Bedolla, “Historical Method,” 164.

15 Gadamer, Hans-Georg. *Truth and Method*. Translated by Joel Weinsheimer and Donald G Marshall. 2nd Revised edition. London ; New York: Bloomsbury Academic, 2004, 151–52; Heidegger, Martin. *Being and Time: A Translation of Sein Und Zeit*. SUNY Press, 1996, 152–53 and 314–16.

16 Coreth, Emerich. *Grundlagen Der Hermeneutik: Ein Philosophischer Beitrag* [in German]. Freiburg im Breisgau: Herder, 1969, 116.

17 Herrmann. “Tracing Change in World Cultural Heritage.” 65.

view of historian and filmmaker Bruno Ramirez that although historical films are made first to entertain and not to educate, the historical information communicated in a film contributes to historical culture. Ramirez argues that historical culture must be a major concern for historians who should endeavor for their work to reach mass society rather than remain within the closed circle of the academy.<sup>18</sup>

While one might question if mass audiences would have an interest in films (or games) about history, one need only reflect on recent films to see numerous of examples of historical fiction that are commercially and critically successful. Again, it is important to point out that the first concern of these films is entertainment (why watch a boring film?), but there seems to be something uniquely attractive about stories set among true events. For example, the videogame series *Assassin's Creed* has iterated twenty games to date, using the allure of new historical settings to maintain interest in the franchise while the gameplay remains largely the same. Considering this, Ramirez points out that individuals who produce media, be they filmmakers or game designers, can be agents of historical culture.<sup>19</sup>

## What Makes A Good Game

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### Videogame

Two decades of game studies has produced remarkably little consensus on what constitutes a videogame.<sup>20</sup> Videogame designer Sid Meier has defined videogames as “... a series of interesting choices.”<sup>21</sup> This definition opens a

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18 Ramirez. “Clio in Words and in Motion.” 1012.

19 Ramirez. “Clio in Words and in Motion.” 1011.

20 Egenfeldt-Nielsen, Simon, Jonas Heide Smith, and Susana Pajares Tosca. *Understanding Video Games: The Essential Introduction*. Routledge, 2009. 22.

21 Egenfeldt-Nielsen. *Understanding Video Games*. 38.

field of possibilities for the designers to create games and to challenge the way players interact with the medium. It is also a practical definition—it illustrates more the intentions of a game maker than a precise explanation of what a game is. Meier’s definition, although it takes much for granted, valorizes what many designers believe is important according to Egenfeldt-Nielsen et al, and is a useful working definition. However it is also useful to unpack its meaning.

In Danish, there are two words that correspond to the English word “game.” *Spil* denotes structured games with formal rules, whereas *leg* is more the idea of unstructured playful activity like the made-up games of children.<sup>22</sup> A number of writers have addressed these two types of games, describing them as opposites or employing them as categories—but I would argue that there are many examples of games that create the possibility of both conditions. I think the reader will agree how both children “playing” in a sandbox or professionals “playing” chess involve making “interesting choices” — to return to Sid Meier. In many modern videogames, a player can choose between trying to satisfy predetermined objectives or they may choose simply freely roam the game world. These two possibilities for enjoying a game, *spil* for satisfying objectives and *leg* for freedom, can be understood as different forms of making interesting choices.

Hunicke, LeBlanc and Zubeck propose a list of aesthetic qualities that attract us to videogames:

- 1 Sensation (game as sense-pleasure)
- 2 Fantasy (game as make-believe)
- 3 Narrative (game as drama)
- 4 Challenge (game as obstacle course)

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22 Egenfeldt-Nielsen et al. *Understanding Video Games*. 24.

- 5 Fellowship (game as social framework)
- 6 Discovery (game as uncharted territory)
- 7 Expression (game as self-discovery)
- 8 Submission (game as pastime).<sup>23</sup>

One can imagine how a player makes interesting choices in accordance with these different qualities, and the authors further demonstrate how a single videogame might have some but not all these qualities.

Although this thesis project concerns mainly the aesthetic qualities of narrative and discovery, it is useful to observe the full list of qualities as well as the breadth of possibility between spil and leg to appreciate a broader understanding of the scope and potential of videogames.

## **Play**

In our discussion of videogames, the following statement by Johan Huizinga will frame our understanding of “play”:

“...an activity which proceeds within certain limits of time and space, in a visible order, according to rules freely accepted, and outside the sphere of necessity or material utility. The play-mood is one of rapture and enthusiasm, and is sacred or festive in accordance with the occasion. A feeling of exaltation and tension accompanies the action, mirth and relaxation follow.”<sup>24</sup>

In other words, play is voluntary, somehow differentiated from everyday life, involves focus, and is pleasurable and satisfying. Sandra Walker Russ has further developed Huizinga’s theory by arguing that play is very much a part of everyday life and is a significant component to creative thinking. Furthermore, play and creativity engender affect. Indeed, there is extensive

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23 Hunicke, Robin, Marc Leblanc, and Zubek Robert. “MDA: A Formal Approach to Game Design and Game Research.” In *Proceedings of the AAAI Workshop on Challenges in Game AI*, 4, no.1:1–5. San Jose: AAAI Press, 2004.

24 Huizinga, J. *Homo Ludens*. *Routledge*, 1938, 132.

literature in education research linking affect, play, and creativity as tools for learning.<sup>25</sup>

In the context of this project, it is through the act of play and the medium of the videogame that the player learns of the history of Cusheon Cove. It is through the affective qualities of play and the pleasure of discovery that the history is remembered. Play therefore contributes to the affect of storytelling and is a unique quality of videogames.

## Considering the Tangible

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### Cultural Heritage

Christina Cameron and Mechtild Rössler have argued that the current framework for defining cultural heritage was formulated after the World Wars when massive destruction of entire cities provoked an awareness and concern for the protection of the built environment. This framework is rooted in theories developed in the 19th century by European architectural historians.<sup>26</sup> Built works, groups of buildings, and natural sites deemed worthy of preservation could be called cultural heritage under the formulation of the 1972 UNESCO World Heritage Convention and inscribed on a World Heritage List which conferred special status.<sup>27</sup> Since UNESCO has recognized the concept of intangible heritage in 2003, that which was formerly called cultural heritage is now called tangible heritage,

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25 Russ, Sandra Walker. *Affect and Creativity: The Role of Affect and Play in the Creative Process*. Psychology Press, 1993.

26 Cameron, Christina, and Mechtild Rössler. *Many Voices, One Vision: The Early Years of the World Heritage Convention*. Routledge, 2016.

27 UNESCO. "Convention Concerning the Protection of the World Cultural and Natural Heritage," 1972. <http://whc.unesco.org/en/conventiontext/>

with the term cultural heritage used as an umbrella term which denotes both tangible and intangible heritage.<sup>28</sup>

Significantly, the act of distinguishing a particular thing as heritage is dependent on the values a culture uses to decide that a thing is important. Considering this, one can understand there is a wide range of things which different cultural groups might decide to distinguish as heritage. To address this, UNESCO specifically references two kinds of value systems: one of “outstanding universal value” meaning the values of an international committee who judges if a particular thing should be considered part of humanity’s collective heritage; or “representative value,” meaning the values determined within a specific community which could be relatively different between communities.<sup>29</sup> However, we will see how these two UNESCO value systems present some complications for the tangible.

### **The Tangible**

Although in common usage one might assume that the tangible refers to things which are exclusively physical. However, numerous examples can be found of things without material form. Things are also commonly described as tangible if they produce an affective response that evokes a strong sense of reality—like an engrossing novel or a photograph which makes a distant conflict seem relatable. A tangible thing might not be physical, but it can still be “seen” in the metaphorical sense. This quality of being not only physical but “perceptible” is defined in the Merriam-Webster Dictionary as meaning both “capable of being perceived, especially by the sense of touch,”

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28 Vecco, Marilena. “A Definition of Cultural Heritage: From the Tangible to the Intangible.” *Journal of Cultural Heritage* 11, no. 3 (July 1, 2010): 321–24. 323.

29 Herrmann. “Tracing Change in World Cultural Heritage.” 148.

and “capable of being precisely identified or realized by the mind.”<sup>30</sup> This understanding that tangible things are characterized by being affective is the understanding adopted by this thesis but differs from the normative definition of tangible heritage.

### **Tangible Heritage**

Tangible heritage is a term used by UNESCO to denote physical things, usually sites but also objects made by a community and deemed important. It is a normative term in the sense that UNESCO seeks to have it understood similarly among its member states, who would then adopt it into their own legal and administrative framework for heritage conservation. The term has particular power because things of tangible heritage that meet the World Heritage Committee’s definition of “outstanding universal value” have the privilege of being inscribed on UNESCO’s World Heritage List and receive international recognition and possible financial support.<sup>31</sup>

Notably this thesis’s definition of tangible differs from the UNESCO definition in that it denotes things which are affective, suggesting that the tangible is not exclusively physical.

### **The Intangible**

The following definition differs from the normative UNESCO definition of intangible heritage in that I argue “non-physical things,” which is roughly the UNESCO definition of intangible,<sup>32</sup> are in a tangible state when they

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30 “Tangible.” Merriam-Webster Dictionary.com. Accessed March 5, 2018. <https://www.merriam-webster.com/dictionary/tangible>.

31 Herrmann, Judith. “Tracing Change in World Cultural Heritage : The Recognition of Intangible Heritage.” Université de Montréal, 2016. <https://papyrus.bib.umontreal.ca/xmlui/handle/1866/14112>.

32 Cameron, Christina. “Introduction.” In *Proceedings - Tangible and Intangible Heritage: Two UNESCO Conventions*, 11–14. Montréal: Canada Research Chair on Built Heritage, 2007.

are sufficiently enacted to produce a subjective affect. Therefore this thesis' definition of tangible includes much of what UNESCO would consider intangible, leaving the term intangible to mean a thing in a state which has qualities more related to the notions of unknown, not understood, unrecognized, or not grasped by the subjective mind.

This thesis defines the intangible as that which is unseen by society, and by that meaning not only invisible to sight, but that which a society chooses not to 'see' in the metaphorical sense of the term—that to 'see' is to perceive that a thing exists.<sup>33</sup> In this way, the intangible can be understood as that which is concealed from perception and recognition, and we might distinguish the stories of Japanese-Canadian internment and indigenous inhabitation at Cusheon Cove as particularly intangible things.

Furthermore an old broken brick covered in barnacles we might call tangible, but the fact that the brick is from a timber mill which was built on a midden and later destroyed, is an intangible quality of the brick. Indeed tangible things are often given meaning by their intangible, or extrinsic, qualities. The barely-graspable memory of a timber mill itself we might call an intangible thing, but when the memory of the mill is retold, the act retelling is sensible, perceptible, has the potential of being affective, and therefore in the act of storytelling the mill is made tangible.

The story of the mill is intangible, but the act of storytelling is a tangible thing. Seen in this way tangible and intangible things are not conceptualized as opposites but as states, and like water can move from a liquid state to a

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33 Zivkovic, Milica. "The Double As The 'Unseen' Of Culture: Toward A Definition Of Doppelganger." *Facta Universitatis* 7, no. 2 (2000): 121–128.

frozen state, so too can a thing pass from an intangible state to a tangible state and also back. The intangible lacks reality because it does not affect us.

Considering that the memory of the missing mill can only be preserved through the retelling of its existence—through storytelling—it seems reasonable to assert that things which are in an intangible state are at serious risk of being destroyed once they are forgotten.

### **Intangible Heritage**

Recently intangible heritage also has a normative UNESCO definition, but according to Judith Herrmann “there is continuing ambiguity and uncertainty about the nature and position of intangible heritage in World Heritage.”<sup>34</sup> In simple terms the location of an intangible thing is located within a person’s mind, and cited examples include music, dance, folk stories, traditional craftsmanship, and entire languages.<sup>35</sup> It therefore has a more anthropological than archaeological character compared to tangible heritage. It also recognizes that things of tangible heritage often have intangible qualities and indeed, there are examples of things of tangible heritage being preserved solely for their intangible qualities. This often ambiguous intertwining of the two notions of tangible and intangible presents difficulties for the World Heritage Committee.

The underlying principle which is supposed to allow for the identification of intangible heritage is a respect for cultural diversity, but this actually creates a dilemma for the World Heritage Committee. For various reasons it has been determined that intangible heritage can only be identified as important by the local community which produced it, and therefore it

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34 Herrmann. “Tracing Change in World Cultural Heritage,” 6.

35 Herrmann. “Tracing Change in World Cultural Heritage,” 98.

is said to be identified in accordance to its ‘representational value.’ This stands in stark contrast from the identification of tangible heritage which is identified by the expertise of the World Heritage Council when they confer it ‘Outstanding Universal Value.’<sup>36</sup> Considering this difference, of what relevance is the World Heritage Council’s expertise if it can’t be used to decide which things of intangible heritage should be protected?

I therefore suggest, as many others have,<sup>37</sup> that the division of tangible and intangible heritage is a false dichotomy. However, it remains in the World Heritage Committee interest to refrain from integrating the ideas together under a singular conceptual framework because the division allows the committee to maintain authority over tangible heritage. If the two concepts were intertwined, surely the Committee would risk losing even more authority over the subject of heritage.

For this reason I am convinced that there is room to develop the notion of the tangible, specifically with regards to architecture, design, and cultural heritage, since the current definition appears to suit more the interest of dominant bureaucracies than the sake of correctness. But to the Committee’s credit, by promoting debate around the intangible, it has invited re-problematization of the tangible.

### **Digital Recording**

Collected information which documents things of cultural heritage and exists in a digital format. It includes the set of accepted practices used to document tangible heritage; notably laser scanning, photogrammetry, and

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36 UNESCO. “Convention Concerning the Protection of the World Cultural and Natural Heritage,” 1972, art. 1. <http://whc.unesco.org/en/conventiontext/>

37 Herrmann. “Tracing Change in World Cultural Heritage,” 99.

other methods of producing accurate high-resolution data It is collected for the purpose of preservation and dissemination of cultural heritage.<sup>38</sup> Digital recording is often used interchangeably with the term digital heritage, but it is the record itself which would be considered digital heritage. Lusenet points out that UNESCO defines digital heritage as including:

“Cultural, educational, scientific and administrative resources, as well as technical, medical and other kinds of information created digitally, or converted into digital form from existing analogue resources” and to include “texts, databases, still and moving images, audio, graphics, software and web pages.”<sup>39</sup>

Interestingly, digital recording itself is considered to be at serious risk of becoming unusable in the future as technology changes and the mediums that contain heritage documentation deteriorate.<sup>40</sup> For this reason I would suggest that digital recording is itself intangible.

### **Buildable**

That which is reasonable to physically build with available resources, meaning mainly materials and techniques. To propose buildable projects is understood as the traditional role of the architect, and built works are conventionally regarded as tangible.

### **Virtual**

Something described as virtual is so nearly true that for most purposes it can be regarded as true. In that sense a simulation is virtual because the outcomes of a simulation are comparable to reality. Therefore the simulated

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38 Lusenet, Yola de. “Tending the Garden or Harvesting the Fields: Digital Preservation and the UNESCO Charter on the Preservation of the Digital Heritage.” *Library Trends* 56, no. 1 (November 1, 2007): 164–82. <https://doi.org/10.1353/lib.2007.0053>.

39 UNESCO. “Charter on the Preservation of Digital Heritage,” 2003, art. 1.

40 Lusenet. “Tending the Garden or Harvesting the Fields.” 2.

spaces which exist within a videogame are virtual, as well as conventional architectural drawings, since both evoke a semblance of reality.

### **Affect**

Kevin Lewis O’Neill provides an evocative and succinct definition of affect theory:

“Affect is similar to emotion or feeling, but has much more to do with the body than either. Affect is raw, reactive sensation.<sup>41</sup> It takes place before consciousness and before discourse. Hair standing on the back of a neck, the warm glow of holiday festivities, the rush of enthusiasm at a political rally—this is affect. From the standpoint of affect, writes William Mazzarella, ‘society is inscribed on our nervous system and in our flesh before it appears in our consciousness’.<sup>42,43</sup>

In this regard affect describes sensation which is experienced subjectively, it is also an object of study in cognitive science.

Benjamin picks up on this idea and argues that information, like what we might read in a newspaper, provides too much explanation and doesn’t leave room for the reader to develop their own “psychological connection” to the meaning of the text. He then describes the interpretation of the reader as allowing for an “amplitude” that information lacks.<sup>44</sup> I would argue that this “psychological amplitude” that Benjamin describes can be understood as affect. Information by itself lacks affective power and is easily dismissed, forgotten and consequently, the meaning is lost. Storytelling, on the other

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41 Gregg, Melissa, and Gregory J. Seigworth. *The Affect Theory Reader*. Duke University Press, 2010.

42 Mazzarella, William. “Affect: What Is It Good For?” In *Enchantments of Modernity: Empire, Nation, Globalization*, edited by Saurabh Dube, 291–309. Routledge, 2009. 291.

43 O’Neill, Kevin Lewis. “Beyond Broken: Affective Spaces and the Study of American Religion.” *Journal of the American Academy of Religion* 81, no. 4 (December 1, 2013): 1093–1116. 1095.

44 Benjamin. “The Storyteller.” 89.

hand—through its ability to move someone subjectively through affect—is more memorable.

Affect can also be understood as a rhetorical strategy used in pursuit of advancing an argument. Ben Shephard explains how Aristotle regarded affect in *Rhetoric*:

“He argues that affect is ‘that which leads one’s condition to become so transformed that his judgment is affected, and which is accompanied by pleasure and pain.’ Aristotle’s affect is a force embodied through pleasure and pain that shifts our condition and our judgment.”<sup>45</sup>

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<sup>45</sup> Shepard, Ben. “Affect.” *The Chicago School of Media Theory* (blog). Accessed March 5, 2018. [lucian.uchicago.edu/blogs/mediatheory/keywords/affect/](http://lucian.uchicago.edu/blogs/mediatheory/keywords/affect/).

# Epilogue

The following paragraphs seek to clarify certain aspects about the project, particularly how it opens different critiques about history and the tangible while addressing further reflections on the mechanics and experience of the game.

The scenario of the game attempts to directly critique the historiographical process by making evident how certain stories are included or excluded in the writing of history. As I have mentioned earlier, there are certain silences distinguishable in the history of Salt Spring Island; for example, a notable lack of written details of the indigenous presence on the island. However the midden of Cusheon Cove demonstrates that the place had been considered important for thousands of years regardless of the existence of written literature. This condition, that written history is a product of what a historian can find and chooses to emphasize, is made explicit through the player's interaction with the 'Book of Salty Dreams' within the game.

Throughout the game, the player is allowed to explore freely the site and to end the game at any time. The game records only the details which the player has discovered by compiling them in the final Book of Salty Dreams. Such process is analogous to a conventional historiography where only the details the historian discovers and deems important are included in a history. In doing so, the game seeks not only to inspire a curiosity in the history of Cusheon Cove, but also to make the player aware of the precariousness

of historical records in general. However unlike an actual historiography, upon finishing the game the player receives feedback that there is more of Cusheon Cove to discover, which encourages them to return for multiple playthroughs in order to collect as much historical evidence as they can.

Furthermore, the notion of twinning had particular importance in the creative development of the game. In retrospect it can be seen as a personal strategy for developing ideas for the scenario, while having its roots in a tradition present throughout the history of western civilization as discussed in Part Two. From its initial proposal within the thesis, the twinning concept was always intended as a form of comparative analysis which could yield evocative results, though the application of the concept diverged from its original intention as acknowledged in Part Five.

In considering the Bulman mill for example, although it could have been situated as a reconstruction located on its original position on the site within the 'hub world,' by locating the mill in a 'twinning' subterranean version of the cove, there is a recontextualization of the twinned subject that still maintains a relationship to the original space but allows for the possibility of illustrating unexpected relationships. The 'cheapness' of experiential space within a videogame makes this possible, especially in comparison to a built architecture where producing an entire space twice might not make sense for practical and economic reasons. In this way, contextualization and recontextualization become key operations which explore both the evident or 'unseen' meanings of a subject. To make another example, the Japanese bowls in the game could have been shown located near where they were originally excavated—thus creating a historic reconstruction of the original context. In the game they have been shown exaggeratedly

enlarged and located within the reconstructed hockey arena—something impossible which never happened—but nonetheless this recontextualization illustrates a real event, that Japanese-Canadians were displaced from Salt Spring Island to the arena during the Second World War. Twinning in this way can be a methodology for world-making, an act of interpretation which has a basis in existing and relatable things.

Twinning also allows for a different kinds of distance to exist between the player and the subject, and problematizes how we might understand the differences between a real thing and its representations. By distance I mean how abstracted the representation is from the real thing in its original context. In the game the photogrammetry strongly evokes the ‘real thing’ but is clearly a representation. The photogrammetry is a strong the link to the physical, or non-virtual, artifact. It is only a shadow of an object yet it is the most object-like thing in the video-game and in some cases can be interacted with. Further work could address the question of whether, for example, the original brick from Bulman’s mill could be considered more virtual if it were isolated in a museum display case rather than having the interactive photogrammetry of the brick in a digital reconstruction of its original context. In this way virtual is not the opposite of real, indeed I believe virtual things can be real and tangible, but a virtual thing is more about lacking materiality than realness.

Finally, my reflections on the tangible have a fundamental divergence between the UNESCO definition of the term and my personal interpretation. I hope to open many questions as to how intangible heritage might be demonstrated within a videogame relative to its UNESCO definition. In particular although it would be possible to simply present audio and video

documentation for the player for accepted 'intangible things' like music and dance, a game has the possibility to establish a scenario where, for example, a player participates in the enactment of a traditional dance. The medium can potentially make participation very accessible to an audience by simplifying its performance to button presses, making a thing of intangible heritage more relatable, yet also raising questions about the appropriateness of such reduction.

As mentioned, I came to a personal interpretation of the tangible, essentially that the tangible describes that which is affective, and things can move between intangible and tangible states similar to how water changes phase through affective experiences like storytelling. With this in mind, I was able to pursue a process which I believed could 'make things tangible.' Moving this proposition outside of the videogame medium, if one accepts my premise, what capacity might built architecture have to render the intangible as tangible?

# List of Figures

## Proposition

Fig. 1. Salt Spring Island is only accessible by ferry.

Fig. 2. Map of Salt Spring Island showing locations of existing dwellings, ferry routes, and Cusheon Cove.

Fig. 3. Book which recounts the history of Cusheon Cove as told through artifacts.

*Source:* Kahn, Charles, and C. T Hatfield. *Forgotten Cusheon Cove, Salt Spring Island*. Salt Spring Island, BC: Salt Spring Press, 2007.

Fig. 4. By the early 20th century the descendants of the various immigrant and first nation groups made for a small but distinctly unique community.

*Source:* On The Coast - CBC News. "Salt Spring Island's Black Settlers Set Stage for Today's Community." CBC, 2016. <http://www.cbc.ca/news/canada/british-columbia/salt-spring-island-black-1.3433086>.

Fig. 5. *The Lost Fleet*, the name given to the fishing boats owned by Japanese-Canadians which were confiscated by the Canadian government during World War Two.

*Source:* Hernandez, Jon. "'Lost Fleet': Exhibit Shows How Racist Policies Devastated B.C.'s Japanese Fishing Community | CBC News." CBC, 2017. <http://www.cbc.ca>.

Fig. 6. The Greek historians Herodotus and Thucydides.

*Source:* BBC Radio 4. "History of History, In Our Time." BBC, January 22, 2009. <http://www.bbc.co.uk>

Fig. 7. *The Storyteller* (Der Erzähler) by Georg Bergmann.

*Source:* Art Renewal Center Museum. *Artwork / Der Erzähler* by Georg Bergmann. 1845. <https://www.artrenewal.org>.

Fig. 8. Sayanatsalo Town Hall by Alvar and Aino Aalto. Frampton advocated for an approach to modern architecture which would respond more critically to local contexts.

Fig. 9. Much of the Discovery Programme's digital heritage documentation can be viewed on their Sketch-

fab webpage.

*Source:* The Discovery Programme. "The Discovery Pro

Fig. 10. Hospital training simulation made with architectural models and game engine software.

*Source:* Merschbrock, Christoph, Ann Karina Lassen, Tor Tollnes, and Bjørn Erik Munkvold. "Serious Games as a Virtual

Fig. 11. *Assassin's Creed II* involved architecture consultants for historical research.

*Source:* Saga, Manuel. "What It's Like to Be an Architectural Consultant: Interview with

Fig. 12. Top, in *The Witness* players solve puzzles while exploring an abandoned island.

*Source:* Van Buren, Deanna. "Architecture in Video Games: Designing for Impact." *Gamasutra* (blog), October 12, 2015. <http://www.gamasutra.com>.

Fig. 13. Right, Van Buren proposed that environmental details would reveal information about *The Witness*' history.

*Source:* Ibid.

Fig. 14. Top, in *What Remains of Edith Finch* details in game's house characterize its inhabitants.

*Source:* Ramanan, Chella. "What Remains of Edith Finch Review: Magical Ode to the Joy of Storytelling." *The Guardian*, April 26, 2017, sec. Games. <http://www.theguardian.com>.

Fig. 15. Right, the house leads to magical-realist vignettes in other spaces which reinterpret stories of the characters' deaths.

*Source:* Ibid.

Fig. 16. An architectural thesis project as a videogame.

*Source:* Duval-Stojanović, Maxime. "A World Digital." Master's Thesis, McGill University, 2015.

Fig. 17. The mill of Cusheon Cove, shortly after it was irreparably damaged by fire in 1931.

*Source:* Cusheon Cove Collection. "Cusheon Cove Mill." Salt Spring Islands Archive, 1931. <http://saltspringarchives.com/cusheon/mill/pag->

es/50177.htm.

## Response

Fig. 18. Site photos taken during visits in August 2016 and September 2017. On previous page, a sign greets visitors at the entrance. Hatfield's museum of found-artifacts. The Cove empty with the tide out. The Cove at high tide.

On current page, view from former agriculture field towards the Pacific Ocean. Gravel road towards main residence with stacked-log fence. The original house of the Bulman family.

Fig. 19. Photos gathered by Hatfield. Clockwise from top right, an early version of the mill. Several inhabited shacks. Gathering outside the cookhouse after a wedding. The original Bulman family house. The Bulman family walking to Beaver Point School. Bulman in his office.

On the next page, an intermediate version of the mill and the 150 bed bunkhouse.

Source: Kahn, Charles, and C. T Hatfield. *Forgotten Cusheon Cove, Salt Spring Island. Salt Spring Island, BC: Salt Spring Press, 2007.*

Fig. 20. Inside the *Bulman Museum* Hatfield has laid out the findings of his excavations and research. The museum is visited by tourists and schoolchildren.

Fig. 21. Hatfield painstakingly reassembled dozens of pieces of Japanese ceramic bowls from buried fragments.

Fig. 22. Several artifacts were digitized through photogrammetry and are viewable on SketchFab.com.

Fig. 23. Following page, comparison of historic aerial photos of Cusheon Cove from the National Air Photo Library.

Source: National Air Photo Library. "Cusheon Cove Aerial Photos." Natural Resources Canada, September 21, 2007. <http://www.nrcan.gc.ca/earth-sciences/geomatics/satellite-imagery-air-photos/air-photos/9693>.

Fig. 24. Map showing previous structures and notable features of Cusheon Cove. Five places of interest have been identified.

Fig. 25. The project is developed as two complementary doubles.

Fig. 26. Top, Santa Maria dei Miracoli and Santa Maria in Montesanto Churches in Piazza del Popolo in Rome. Often referred to as 'twins,' their internal organization is different compared to their similar exterior.

Fig. 27. Right, Luke Skywalker attempts to confront his greatest fears and discovers they are his own 'dark'

tendencies.

Source: Kershner, Irvin. *Star Wars: Episode V - The Empire Strikes Back. Action, Adventure, Fantasy, 1980.* <http://www.imdb.com/title/tt0080684/>.

Fig. 28. Typical playing cards. Like the twin churches in Rome, illustrations of the notion of 'doubling' are ubiquitous in the cultural products of western civilization.

Fig. 29. *The Forum Arena* in Vancouver BC 1942, it briefly served as an 'evacuation' station for men of Japanese heritage before they were relocated east of the Rocky Mountains. The Forum is a hockey arena, the original home of the *Vancouver Canucks*.

Fig. 30. Diagram describing intended project structure.

Fig. 31. Kimiko Murakami, bottom left, with her family on Salt Spring Island in 1908.

## Five Stories

Fig. 32. Sheep were also raised in the fields of Cusheon Cove.

Source: Cusheon Cove Collection. "Cusheon Cove Mill." Salt Spring Islands Archive, 1931. <http://saltspringarchives.com/cusheon/mill/pages/50177.htm>.

Fig. 33. Several labourers work at the mill.

Source: Ibid.

Fig. 34. Posing for a photo on the wharf of Cusheon Cove. Not long after the wharf would collapse due to overloading from lumber, and the mill would never recover from the financial loss.

Source: Ibid.

Fig. 35. Taking a break. The area around Cusheon Cove was extensively logged while the mill was in operation. The forest has since regrown.

Source: Ibid.

Fig. 36. From top to bottom, several artifacts were collected from the site, and installed in a custom designed display case.

Fig. 37. Below, although the artifacts are protected and untouchable in the display case, photogrammetric models were made allowing for duplication and manipulation in the digital story.

## Process

Fig. 38. Previous page from left to right and above, collages which interpret Story Two, Story Three, and Story One. Collage serves as a method for understanding and recomposing historic information, and for exploring potential spatial relationships.

Fig. 39. Following two pages, found objects are arranged in 'Cornell Boxes' representing the five stories of the

Digital Story. The boxes allow for the introduction of new associations derived from the storyteller's subjective response to the stories, and further explore potential spatial ideas.

Fig. 40. Historic artifacts are converted to 3D models using photogrammetry, specifically with the software *Photoscan*. *Unreal Engine*, a game engine, is used to create the Digital Story using imported photogrammetry. *Unreal Engine* features a visual scripting language called *Blueprints* which allows for programming interactivity within games without the need for writing code.

Fig. 41. Following two pages, a selection of screenshots from a proof of concept demo for the Digital Story, presented at Colloquium Two. The demo is composed of a series of vignettes designed around photogrammetry, which overlap in the same space.

Fig. 43. Previous two pages, a collection of textures produced by the photogrammetry technique, including the brick, a Japanese bowl, a car, and several structures.

Fig. 42. Material presented at Colloquium Two.

Fig. 44. Comparison of two intentions for planning Twin A and Twin B of the first story on Japanese-Canadian internment.

Fig. 45. The following three pages show sketches used in developing the ideas for the various levels of the game.

Fig. 46. The following five pages show screenshots of playing through the game from start to finish.

Fig. 47. Pages 72-76 provide an overview of the various levels within the game.

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