

Design/Science Fictions: Worldbuilding as Landscape Practice

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Abstract

Design practices like Architecture and Landscape Architecture rely heavily on images to demonstrate agency through the re- contextualization of spaces, the transformation of environments, and hybridization of ecologies. Unlike earlier design agendas, sustainable practices face the challenge of quantifying proposals using scientific models (performance) in addition to qualifying them with cultural conventions (image). Given that these are proposals for the future, older modes of representation like drawing and painting are not as effective. These images are referential, referencing the past to communicate. Unlike static imagery, design fictions will enable the audience to experience in the story and environment. In contrast to film, television allows the for a long story arc of ecology and culture to evolve with complexity and nuance. In short, design fictions reveal future environments and model possible behaviors within these futures. Referencing worldbuilding and existing television series the author will describe a framework for television as a popular design media capable of revealing the agency of landscape architecture. The outcome will be an explanation as to how design fiction is a practice that involves the making of clients and patrons in response to future concerns and needs.

Keywords: Landscape Architecture, Painting, Worldbuilding, Science Fiction, Television

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Landscape Architecture and other contemporary design practices deal simultaneously with the process of compiling and data for decision making and compellingly presenting that content to a client or user group. Typically, this information is presented for projects in the near future when there are no significant changes to environmental conditions. The immediacy of most design project timelines omits the need to include complicated environmental projections as part of the decision-making process. However, there are instances in professional practice that require justifications for design decisions.

Mapping and diagrams are limited and require the audience to be capable of processing and synthesizing the information to understand the design process, and its impact. Renderings provide more insight into a design will look like when complete. As static images, they lack immersive qualities that explain the effects of change- designed and otherwise- on people who occupy the designed site or region.

My research explores popular television as a design medium, considering how narratives are used to represent landscape projects. I am also interested in how climate change and other environmental conditions complicate decision making. Finally, I am interested in contemporary television that may serve as design precedents.

Both landscape and television use images to reflect broader historical, political, and social trends. In the case of landscape, image production is grounded in making static images starting with perspective drawing and painting. Landscape painting evolved around narrative and perspective, given the complexities of scale and topography. These complexities are represented in *St. Elizabeth's Flood*, painted between 1490-1500.¹ The painting depicts the catastrophic flood in the Netherlands in 1421, and rather focus on one specific place or scene the painting depicts the entire region as a flooded landscape. As an image, the spatial accuracy is less important than the narrative that built into the image.

In contrast, the Red Books by Humphry Repton are precise constructions of landscapes. The Red Books were prepared to illustrate the impacts of a Repton's design proposal using two images. The first was an image of the existing conditions, and the second image represented the proposed changes. Painted flaps were used to fold over the image of the current conditions, allowing the client to see their property "before and after." Technically these were not animations, but they had the effect of engaging the audience in real-time as they turned the flaps.

Both of these are examples are illustrative narratives that rely upon imagination. In the case of *St. Elizabeth's Flood*, the painting narrates the effects of a flood that occurred seventy years prior. Other than historical records or storytelling, there are no records available to describe the impact of the events that occurred. Geographical cues are embedded into the architecture to reference places across the landscape, illustrating the entire region.

Repton's Red Books are fictions, given that they are descriptions of design proposals. The before and after images are designed to compel the client into executing the work described the book using illustrative plans and descriptive text. The precision used in making the images allow the client to "see" the designs as they will appear after the trees have fully matured.

Contemporary design decisions have more complicated trajectories. Most significantly, climate change has impacts on landscapes that evolve over long periods that are not always

evident. As an example, Matthew C. Fitzpatrick and Robert R. Dunn introduce a method for comparing climate data projections for 540 cities in North America with contemporary climate data.² Climate analogs have been prepared previously, but the Fitzpatrick and Dunn geographically reference locations, meaning you can visit the climate for a given city sixty years in the future. As an example, according to the modeling prepared by Fitzpatrick and Dunn, in sixty years New York City and the surrounding region will feel more like contemporary Jonesboro, Arkansas.³ The climate will be dryer, but the temperatures will be higher.

Compared to landscape paintings, this modeling completed by Fitzpatrick and Dunn is a different type of landscape fiction, that relies on immersion. These fictions are based on scientific projections instead of historical references or desired outcomes driven by aesthetics. The effect of this is that you can develop an immersive understanding of the environment in addition to seeing the changes in flora and fauna.

Use science to frame a landscape projection points to increased complexity when designing landscapes and also imagining them. Large amounts of discrete data can be challenging to process and organize to understand a problem. The economist and political scientist Herbert Simon described the problem of synthesizing information using three points called bounded rationality.⁴ Simon describes bounded rationality as the constraints applied to the decision-making process of any person, using three central points. The first is that information is often limited and unreliable. The second is that people have limited capacities to absorb and synthesize information. The third is that there is only a limited amount of time to understand to make decisions based on the available information.

These three points can be applied to evaluate *St. Elizabeth's Flood* and Repton's Redbooks. *St. Elizabeth's Flood* exemplifies the problem of limited information. The floods and place are represented inaccurately. The Red Books were devices to help synthesize all the content in the book. The illustrative foldouts synthesized the text and plan drawings understandable through the use of perspective. The Red Books also address this issue of time because they are illustrations of the proposed future landscape.

Unlike the paintings, Fitzpatrick's and Dunn's geographically cross-referenced climate analogs are immersive. However, they require that you physically occupy the space, which is a significant limitation. The models expedite familiarity with changes but traveling to the analog location to experience the difference is not something every resident.

The limitations of static images and physical travel make a case for other mediums that address the problem of how to convey information to an audience or user group. The ability to communicate content in a controlled and digestible manner is vital to help people make informed decisions. Science fiction writers used models that are similar to the one described by Herbert Simon to create frameworks for stories and is referred to as worldbuilding. Like bounded rationality, worldbuilding organizes what the audience knows so they may follow the story.

The science fiction writer N.K. Jemison uses a system of immersive levels to determine the level of specificity provided to the reader.⁵ High immersion refers to information that is implied and rarely mentioned in the text. Moderate-level immersive content is information that is mentioned periodically throughout the book, enhancing or changing the direction of the narrative. Low-level immersion content consists of information that is continuously

explained and makes up the meat of the story. Compared to the paintings, *St. Elizabeth's Flood* would be a medium level or high-level immersion, whereas the Red Book illustrative perspectives are low-level immersions.

The models provided by Simon and Jemison for understanding how to organize information are also relevant to design practices. Where Simon outlines how large amounts of data can be prohibitive for effective decision making, Jemison describes frameworks that curate information to enhance comprehension. Applying both approaches is where storytelling in the form of science- or scientific fiction- becomes a beneficial model for design practices.

There processes in landscape architecture analogous decision-making and worldbuilding. Landscape architecture is a discipline that deals with time and change. Photo-renderings limits descriptions of problems that deal with time, obscuring complexities that the audience or user groups will eventually confront.

In contrast, the serial nature of television is an immersive format that allows the audience and user group to synthesize issues related to change through empathy. Referencing Simon and Jemison, narratives built in a serial form enable the designer to reveal complex problems using an intentional process. Layered descriptions of the world the characters- and by association, the audience- will occupy. The explanation of the constraints that frame Simon's argument becomes the mechanisms that are used to create future scenarios according to Jemison's worldbuilding process.

There are examples in contemporary television that are applicable. In the United States, the Weather Channel used augmented reality in conjunction with weather updates during Hurricane Florence. The short clips were a supplement the standard weather forecast using charts and radar. The network also had reporters stationed in Charleston, South Carolina to describe the impact of the hurricane as it made landfall.

The augmented content illustrated the dangers of flooding. The level of information immersion was low, relying upon information provided in the forecasts. As the weather reporter in the studio discussed the importance of evacuating low-lying lands, the model was used to illustrate water levels. Showing the water level at incrementally higher levels allowed the reporter to describe specific dangers and impacts that the reporters in Charleston were unable to demonstrate accurately.⁶

In 2016 National Geographic Channel aired *Mars*, a series set in 2033 in which a crew of scientists establishes a base on Mars.⁷ Unlike the Weather Channel's augmented reporting, *Mars* explicitly address the science of space travel. The series shifts between the future and the present, interviewing contemporary scientists to reveal the complexities of space travel and off-planet settlements as background for the fictional story. The high levels of information coming from scientists educate the audience while preparing them to them for the evolving storyline.

Other examples are more story-based. In 2013 the Channel 4 aired *Utopia*,⁸ an alternate earth conspiracy thriller about food scarcity and conspiracies. At the low-level of immersion, we follow a group of average people who entangled in a plot with global implications. The assassins who chase them to facilitate our understanding of medium-levels immersion, providing information and incentives for the main characters to survive. High-level immersive information framed as storylines that are completely separate from the low-level

characters. The recently released series *Chernobyl* follows a similar approach of using interwoven layers to retell the story of the nuclear accident that occurred in 1986.⁹ In this short series, time is used as a device to both compress event that took place over several years and as a way to organize information.

While it is not an explicit part of the storytelling, both of these television series have links to landscapes. *Utopia* is about a world of food scarcity and people looking for places of refuge. Episode five of *Chernobyl* focuses on the long campaign to destroy radiated plant material within the nuclear exclusion zone. What would happen if a landscape architect became a design producer? How would they tell similar stories about places in the future? As the environment changes, the base for design patronage needs to expand and be educated. Television about design is one of the few ways to reach this expanding audience.

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