

SHOTENGAI

商店街

by

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Abstract

The thesis uses the medium of the science-fiction short film to address the potential of architecture to narrate the contemporary notion of *Shinto techno animism*. *Shinto animism*, traditionally found within elements in nature, has been translated in contemporary Japanese technological culture into *techno-animism*. The site for this short film is in a *shotengai* – a local street market. Here, the *shotengai* urban typology becomes the architectural trope and catalyst from which the thesis explores the relationship of *techno-animism's* implications on space.

Seminal works of Japanese science-fiction will be studied to situate the relation between technology and its animation and reveal how *techno-animism* manifests itself in various ways through characters, cities, or objects. The short film uses multiple digital techniques such as three-dimensional modelling, animation, video software, and on-sight filming organized by a production time-line specific to the animation industry.

The thesis interprets *techno-animism's* spatial consequences to range from vast infrastructures to the minute household item, each interconnected through spiritual *kami*. *Shinto* beliefs are complex and ever-changing. Space and object become a metaphor which relates *Shinto* myth with everyday reality. The thesis stands as a personal expression and interpretation of these contemporary *techno-animistic* beliefs. Just as the incense burning around the *Ise* shrine allows for purification to bring forth the *kami*, the literal atmosphere of space portrayed are meant to evoke the meaning of a *techno-animist* world.

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Prologue

Find your passion.

Be prolific.

Keep pushin' it.

Introduction

While broad and diverse, the science fiction genre continually challenges the world as we know it. At its most basic level, science-fiction succeeds at depicting the human condition: "...*humanity made strange in the world of the world made strange for humanity*".¹

The genre can pose critical questions regarding speculating on future phenomenon. It is the genre of science fiction which courageously represents this perspective:

"What does it mean to suppose a government overwhelmingly more powerful than the citizenry? How can the act of invention change a person? Does the world look the same through the eyes of another? Science fiction may help readers explore their world, their society, their life, their vocation – these are among the highest uses of art".²

Narratives and stories within science-fiction film, become a way to cut through complex systems to package and disseminate its key parts to the audiences, in a form that they can begin to develop emotional relationships with. Key works of science-fiction has encapsulated society's hopes, dreams, wonders, and fears in worlds so believable yet foreign. Films such as *Blade Runner* and *2001 A Space Odyssey* have depicted their environments (future ethno cities and the abyss of space) as the backdrop from which narratives of humanity and technology are brought into question, so too have these films become a cultural snapshot of their respective times. These worlds become new vessels of existence which we can almost see, feel, touch, and smell – they are something so familiar, yet everything appears slightly off:

"Alan Watts, an English writer, once said when Daisetsu Teitaro Suzuki was once asked how it feels to have 'satori', the Zen experience of awakening, he replied: 'Just like an ordinary everyday experience, except about two inches off the ground'".³

The thesis will investigate what could exist in these conceptual "two-inches".

1 Rabkin, Eric S. *Science Fiction: a Historical Anthology*. Oxford University Press, 1983. Pp.7

2 Ibid. Pp.7

3 Kneipp, Jessica. "The Beauty of Simplicity You Get From Yasujiro Ozu Films." *Vision Times*, 11 Mar. 2015, www.visiontimes.com/2015/03/11/the-beauty-of-simplicity-you-get-from-yasujiro-ozu-films.html.

Chapter 1

Manifestation - Shinto Beliefs & Techno-Animism

1.1 Meaning of the Kami

While in contemporary Japan, *Buddhism* and *Shintoism* are considered the two most widespread religious practices, the indigenous belief system is *Shintoism*. The following section will overview the key concepts of the native belief system that situate my thesis. This begins with a description of understanding the literal meaning of *Shintoism*, its origins and cosmological structure and moves onto its relationship with *animism* and *techno-animism*.

From its genesis, the Japanese religion has been formulated around *Shintoism's* central term: *kami*. *Shinto* is made up of a series of kanji characters. The meaning of these characters is as follows: *shin* – meaning spirit, and *michi* – meaning path. The first character *shin*, has a parallel character, *kami*, in which *Shintoism's* deeper meaning lies. *Kami* translates to spirits, essence, or gods. The native Japanese reading of the characters is *kami no michi*⁴, the *path* of the *kami*, or the *way* of the *spirit*.

Kami is manifested through any number of inanimate/animate things, but have been traditionally most revered in elements or forces in nature (for example landscapes or rivers). For *Shintoism*, the spirit of *kami* (both positive and negative, good/evil) are directly embedded in the “thing” – they are not separate.

1.2 Origins

The earliest descriptions of *Shinto* beliefs have been found in the Yayoi period (1000 BC – 300 AD), when Japan's society was based around agricultural production and offered objects and food through systematic rituals.

*“Archaeological evidence suggests that religious life developed in connection with rice cultivation. Many such sites were located near springs, waterfalls, and riverbanks or hills and mountains, suggesting a focus on water and its importance to agriculture. It is believed that boundaries were created around ritual sites, and that spirits called Kami were invited to descend into some object, such as a tree, pillar, animal, waterfall, island, or mountain.”*⁵

The *kami* or spirits were equated to natural forces and did not

4 Bowker, J. (2000). *Shinto*. In *The Concise Oxford Dictionary of World Religions*. : Oxford University Press. Retrieved 15 Mar. 2020

5 Hardacre, Helen, *Shinto*, Print publication date: 2017 Print ISBN-13:

take on a physical form, but rather manifested themselves into physical things through “human invitations”⁶. As the *kami* were identified as natural forces, they were unpredictable and possessed both productive and destructive forces. Just as rain and sun could help grow a healthy crop, floods and drought could destroy them. Thus early Shinto beliefs viewed the ritual of material offering as a means to call upon the *kami* “spirits” to manifest a physical thing in our *Nakatsukuni* world in hopes of pleasing them for improved agricultural yield.

Since its genesis, the agrarian Japanese society has intuitively linked the spiritual realm with the worldly physical realm. Objects or natural elements manifested by the *kami*, became intermediary objects. As a result, objects and nature have always been afforded a greater significance to the individual and the society as a whole, as anything could be considered sacred or manifested. While this is a basic understanding of the *Shinto* practices, objects imbedded with spiritual characteristics is a concept that has seeped into the general culture of Japan and shaped its world view. In the latter chapters of this thesis, connections between *Shintoism* and the Japanese science fiction genre will be analyzed to unveil that while not explicitly referenced, *Shintoism* shapes the manner in which fiction is created.

1.3 Shinto Cosmological Structure

Shinto mythology classifies this universe as one comprising of three levels, and another parallel universe known as *Tokoyo* an eternal paradise separated by a sea. This universe consists of a “...*Plain of High Heaven (Takamagahara), the Manifested World (Ashihara no Nakatsukuni or Nakatsukuni), and the Nether World (Yomotsu-Kuni or Yomi)*.”⁷⁸ *Shinto* mythology describes through early sacred text that the *kami* came into existence when Heaven (*Takmagahara*) and Earth (*Nakatsukuni*) separated. Here we understand the event when the physical and spiritual realm became divided. The spirits of *kami* exist in our physical world through what they have manifested, however the *kami* spirits have their own mirror existence in the *Takamagahara*.

9780190621711 Published to Oxford Scholarship Online: December 2016. Pp. 19-20

6 Ibid. Pp. 19-20

7 Bowker, J. (2000). *Shinto*. In *The Concise Oxford Dictionary of World Religions*. : Oxford University Press. Retrieved 15 Mar. 2020

8 Leeming, David. “A Dictionary of Asian Mythology” Oxford University PressPrint Publication Date: 2001Print ISBN-13: 9780195120523



Fig. 01 Shinto cosmological structure, and conceptual narrative structure

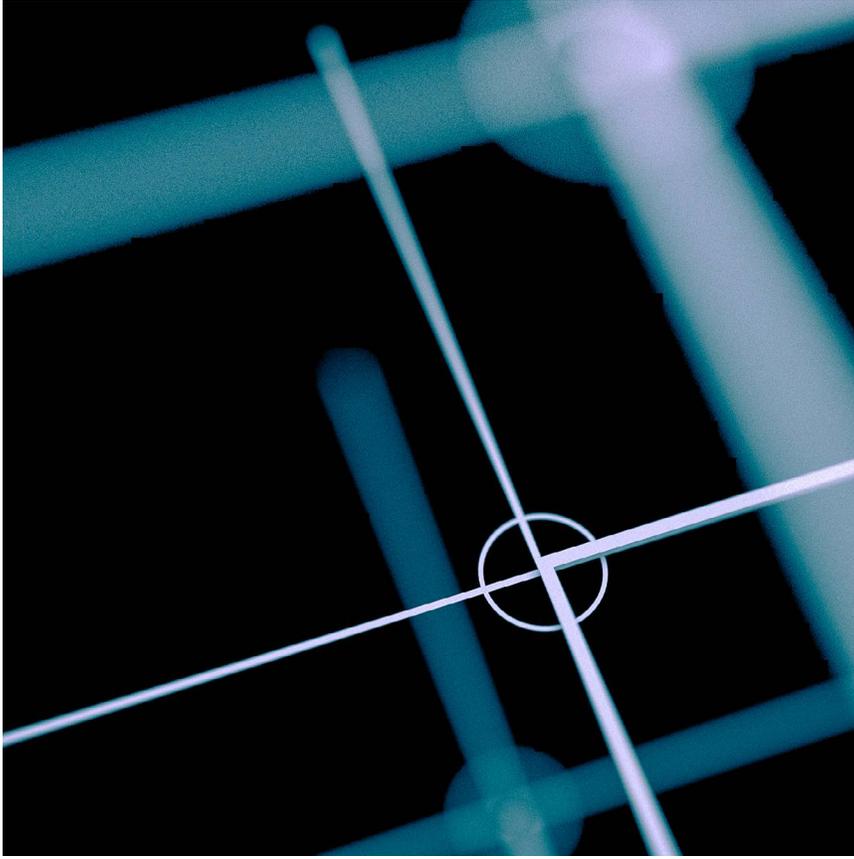


Fig. 02 Shinto cosmological structure, detail

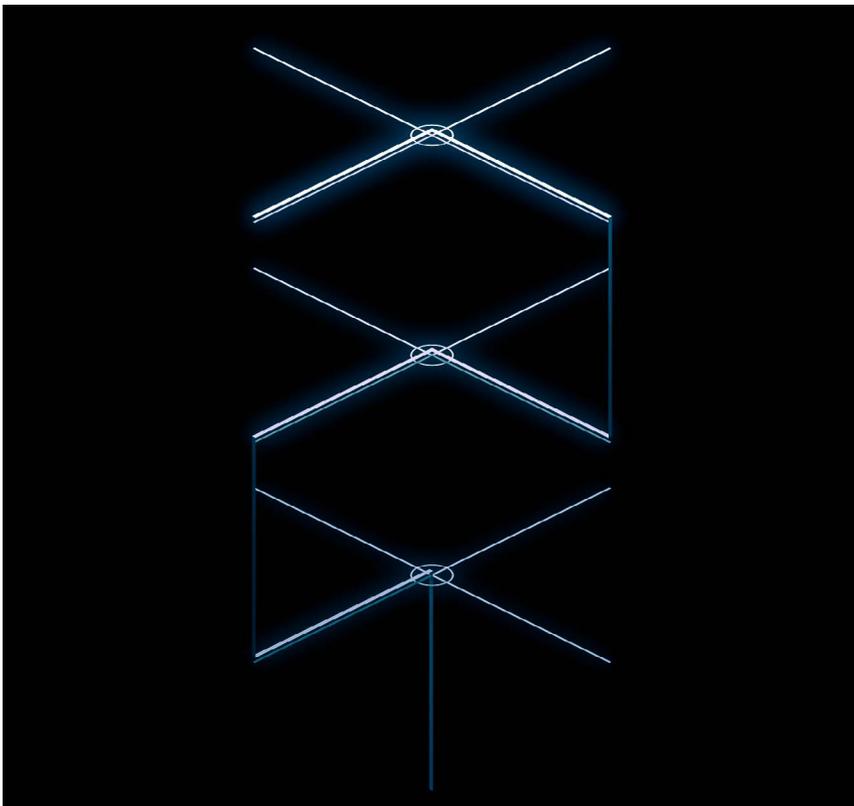


Fig. 03 Shinto cosmological structure, detail

Our Universe	Division	Parallel Universe
<i>Level 1: High Heaven (Takamagahara)</i> <i>Level 2: Manifested World (Ashihara no Nakatsukuni or Nakatsukuni)</i> <i>Level 3: Nether World (Yomotsu-Kuni or Yomi)</i>	<i>Sea</i>	<i>Tokoyo – Eternal Paradise</i>

Fig. 04 Shinto cosmological structure, chart organizing the various levels of Shinto mythology

1.4 An Ecological Belief Structure

The early practices of *Shintoism* developed during the *Yayoi* period were highly diversified as they varied between regions or even family groups – a lack of continuity existed within the religion. It was only later in Japan’s history (670 AD), when various political movements began to strive for a unified nation that *Shinto* mythology began to become standardized. As *Shinto’s* origins were actually a conglomeration of various practices throughout the land it has been “*suggested that Shinto (the term itself is of later origin) might be better seen as an ‘ecology’ rather than a ‘religion’*”.⁹

Another way that *Shintoism* can be understood is as a religious ecology that acts as a world view method from which to ‘operate’. *Shintoism* can be seen as a means to relate the human and non-human actors. *Shintoism* effectively breaks down or undermines dualisms¹⁰ between human and non-humans and builds up a type of engagement between the two whether explicit or not.

*“Shinto is a polytheistic system that expresses in some profound way the Japanese world view. There are Shinto prayers and Shinto rituals, but the doctrine is minimal. Some might call Shinto a way of life rather than a religion per se....Originally the word kami was used to describe any mysterious or sacred reality, anything that seemed to possess numinosity. However, everything is potentially kami and, thus, worthy of reverence.”*¹¹

The embedded spiritual qualities of the *kami* within any potential object fundamentally changes the manner in which actors goes about their

9 Jensen, Casper Bruun, and Anders Blok. “Techno-Animism in Japan: Shinto Cosmograms, Actor-Network Theory, and the Enabling Powers of Non-Human Agencies.” *Theory, Culture & Society*, vol. 30, no. 2, 2013, pp. 84–115., doi:10.1177/0263276412456564. Pp. 98

10 Ibid Pp. 89

11 Leeming, David. “A Dictionary of Asian Mythology” Oxford University PressPrint Publication Date: 2001Print ISBN-13: 9780195120523

daily lives. It effects ritualized sequences such as the how a tea ceremony occurs, and commonplace interactions or familiar acts such as packaging an item or pruning a plant. *Shintoism* "...conceptualizes continuity between humans and nonhumans which it can produce only metaphorically..."¹² whether the metaphor is completed through the act of the ritual, an object, or literature¹³. *Shintoism* indeed animates that which is not, through the *kami* – enter *animism*.

1.5 Animism

Shintoism's central belief concludes that all things have a spirit called *kami*: this is defined as *animism*. In Japan through *Shintoism*, the cultural practice of embedding spiritual characteristics into objects is vital to the relationship and coexistence between humans and non-humans. This cultural practice has meaningfully changed with other cultural transformations, most notably with technology.

Animism inherently increases the complexity of what is defined as spiritual or sacred within Japanese society. The wide-spread use of *animism* allows for a "...radical 'personalization' of the universe, with both human and non-human worlds consisting in a plethora of 'spirit beings' known as *kami*, the boundaries between which are vague and interchangeable." ¹⁴ *Shinto* principles allow for all things to be "...mutually permeable entities, which appear as a unified and dynamic field of existence..."¹⁵ *Animism* now extends far past the traditional elements of nature and in recent times is attributed to technology. Serving as a cultural backdrop continuing in contemporary Japan, *animisms* definition has evolved to encompass new advances in technology with a proprietary term called *techno-animism*.

1.6 Techno-Animism

In *techno-animism*, technology can be instilled with a spiritual characteristics much the same as elements in nature. In extending spiritual essences to technology, *techno-animism* is defined as the spirit or *kami*

12 Jensen, Casper Bruun, and Anders Blok. "Techno-Animism in Japan: Shinto Cosmograms, Actor-Network Theory, and the Enabling Powers of Non-Human Agencies." *Theory, Culture & Society*, vol. 30, no. 2, 2013, pp. 84–115., doi:10.1177/0263276412456564. Pp. 89

13 Ibid Pp. 89

14 Ibid Pp. 97

15 Ibid Pp. 97

given to technology. The term is also defined as the integration of human qualities within technology. *Techno-animism* enables the discussion of this coexistence of humans, nature, objects, and technology. It is the method that is used to reveal the unique and nuanced qualities of Japanese science fiction.

In Japan, *Shintoism* has played a pivotal role in defining cultural perspectives on the coexistence of humans, non-humans, and now technology. Deeply rooted *Shinto animistic* beliefs hold that the vital energies or forces called *kami* are present in all aspects of the world and universe, they have their own life, or *inochi* “the most essential quality of something whether a living being or a made object such as a car or a puppet”¹⁶. These deeply embedded cultural concepts form a positive, and embedded relationship of people and technology, as technology have their own *kami* and *inochi*.

1.7 Case Study: Ghost in the Shell – An Embodiment of Techno-Animism

Ghost in the Shell, an animated film by Mamoru Oshii, will be used as a case study to describe how *techno-animism* has affected the Japanese science fiction genre. The 1995 film narrates how *techno-animism* acts as a mechanism from which harmony exists between humans and technology.

Michal Daliot-Bul, a professor in Japanese Studies at the University of Haifa writes a critical analysis of the philosophical differences between animated films created in Japan and their Western adaptations. She uses this comparison to highlight how relationships between humans and technology in Japanese films are seen as a complex ecological relationship, and argues that their conceptual grounding is based on traditional *Shinto animism*. Daliot-Bul uses Mamoru Oshii’s seminal film, *Ghost in the Shell*, as a case study describing how this work of science fiction illustrates a *techno-animist* world-view.

In the final sequence of the original animated film, the protagonist (Major Kusanagi - a cyborg) willfully merges with the antagonist (the Puppet Master - a computer super program) to pro-create a new digital entity. In the latter Hollywood remake, the sequence has the opposite outcome:

¹⁶ Daliot-Bul, Michal. “Ghost in the Shell as a Cross-Cultural Franchise: From Radical Posthumanism to Human Exceptionalism.” *Asian Studies Review*, vol. 43, no. 3, 2019, pp. 527–543., doi:10.1080/10357823.2019.1631257. Accessed 5 Oct. 2019. Pp 537

the protagonist refuses to merge and instead declares that she desires to maintain her humanity above all else. The protagonist Kusanagi specifically says, "...that humanity is our virtue"¹⁷. Daliot-Bul describes the deeper meaning implied in the 1995 film - a symbiotic relationship between humans and technology.

"This flattening of hierarchies between humans, animals, non-organic and artificial objects is often articulated in Japanese culture in different forms and different contexts...The reader (or viewer) is presented with a concept of evolution that does not privilege humans over other species or even over artefacts, technology and information..."¹⁸

In understanding the Japanese perspective of *techno-animism*, it is important to note that humans are not hierarchically above other things. This overarching understanding of the *kami* within all things is indicative that humans are just another element in the cosmos.

Material practice has always been deeply embedded in the *Shinto* religion, as *animism* provides the metaphor from which life embodies the material. In early *Yayoi* period Japan, material agency occurred through the ritual of offering goods to the *kami* spirits to please them. In current Japanese society as Anne Allison, a cultural anthropologist suggests, the deep cultural roots of *Shinto* beliefs have now been encapsulated in popular media via anime and its associated paraphernalia. Allison, describes how *animism* and *techno-animism* are unique characteristics that exist within Japanese popular culture which allows for the intimate co-existence of technology within these fictions:

"...toys such as Pokemon, Mighty Morphin Power Ranger and Sailor Moon share the distinct property that the characters are animated. This characterization relates not only to the genre of anime, a specific Japanese style of video cartoon, but also to the observation that Japanese toy figures are imbued with life and agency. The broader point is that Japanese narratives routinely make spirits, robots and animals co-habit in the world in ways that ignore boundaries between human and extra-human realms. The crossovers exhibited by Japanese toy culture are symptomatic of an 'animist unconscious' deeply embedded in Japanese social life. That this 'unconscious' is at ease with mixing advanced technologies and spiritual capacities suggests that the animism at hand is of a different kind than the one usually discussed in anthropology. Japan, is home to 'techno-animism'."¹⁹

¹⁷ Arad Avi, Paul Steven, and Costigan Michael, Producers. Sanders, Rupert, Director. 2017. *Ghost in the Shell*. United States: Paramount Pictures Corporation

¹⁸ Daliot-Bul, Michal. "Ghost in the Shell as a Cross-Cultural Franchise: From Radical Posthumanism to Human Exceptionalism." *Asian Studies Review*, vol. 43, no. 3, 2019, pp. 527–543., doi:10.1080/10357823.2019.1631257. Accessed 5 Oct. 2019. Pp 537

¹⁹ Jensen, Casper Bruun, and Anders Blok. "Techno-Animism in Japan: Shinto Cosmograms, Actor-Network Theory, and the Enabling Powers of Non-Hu-

Fig. 05 Pokemon, 1996

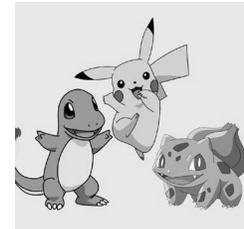


Fig. 06 Kyoryu Sentai Zyuranger, Mighty Morphin Power Rangers 1992



Fig. 07 Sailor Moon, 1992



*“Techno-Animism can be found in many if not all “industries of fantasy production”²⁰ - fictional characters, and narratives. The Japanese fictional universe provides a canvas from which “...one sees a universe where the borders between thing and life continually cross and intermesh. The entire world here is built from a bricolage of assorted and interchangeable (machine/organic/human) parts where familiar forms have been broken down and reassembled into new hybridities...technology (mecha) is a key component to the way life of all kinds is constituted— a priority the Japanese state placed on technology as well in its reconstruction efforts following the war...this aesthetic is techno-animism.”*²¹

In summary, Japan's indigenous *Shinto* religion is multifaceted and difficult to disseminate simple methodology from its teachings. Through its regional beginnings from multiple tribes across Japan, to its latter consolidation to a unified religion, *Shinto* beliefs can be seen closer to an *ecology* or *way of life* rather than a religion. What *Shintoism* does define clearly is just that - the principles for a vibrant *ecology* to exist, that is because of *animism* all things can be considered sacred. The *animistic* and *techno-animistic* qualities that all things potentially possess has inherently changed many aspects of Japanese society including its science fiction genre. While many authors of science fiction literature, film and manga deny any such direct correlation to *Shinto* concepts, the denial is warranted as *Shinto* concepts have deeply shaped the Japanese way of life and can be interpreted as a culturally ingrained notion.

Fig. 08 Mobile Suit Gundam Wing, also known in Japan as New Mobile Report Gundam Wing, 1995. A famous anime in the “mecha” genre.



man Agencies.” Theory, Culture & Society, vol. 30, no. 2, 2013, pp. 84–115., doi:10.1177/0263276412456564. Pp. 85

20 Rabkin, Eric S. Science Fiction: a Historical Anthology. Oxford University Press, 1983. Pp.7

21 Allison, Anne. Millennial Monsters : Japanese Toys and the Global Imagination, University of California Press, 2006. Pp.28

Chapter 2

Science Fiction & Japan

2.1 A Cultural Snapshot

Far from the lights of Hollywood, Japanese science fiction has continued to create stories which encapsulate and speculate upon the fears and wonders of the times. Fundamental in shaping the Japanese science-fiction genre (especially its presence on the global stage) is the prolific 20 year period between 1980 and 1998. Six seminal animated films/graphic novels will be analyzed from this time frame, in both their themes and plot, as they reflect upon a wide spectrum of issues pertinent to Japan during the end of the *Showa Era* (1926-1989). The narratives each touch upon key aspects of Japanese ideology, whether consciously or not and reflect its deepest cultural values vis-a-vis *Shintoism*.

To further position the thesis, it is useful to summarize a brief historical overview of *Showa-era* in which the science-fiction narratives have been created in. To historically situate the anime/manga, *Hans Brinckmann's Showa Era Japan: the Post-War Golden Age and Its Troubled Legacy*, will be used as a general structure. Written in 2008, the book outlines key themes during each decade, and its impact in contemporary Japanese society, economy, and politics.

The following four historical categories summarize the *Showa-Era*²²:

1950-1960: Post-war Japan and Reconstruction

The Great Kanto earthquake of 1923 along with the bombings of 1945 during WWII, meant that much of Tokyo, Hiroshima, Nagasaki and other large urban areas had been completely devastated and rebuilt twice within the span of thirty years²³. Cities across the country were injected by new industrial production from war-time technologies, and an overall mechanization of society was starting through the onset of the automobile and high speed modes of transportation²⁴. While an atmosphere of hope and progress pushed the nation forward, undoubted feelings of defeat continued to linger:

"Although it arguably represented "liberation" for the Japanese people— from the bombs, the bloody battles, the rule of generals, and the lack of food— it is the overtones of defeat and destruction that dominate

22 Brinckmann, Hans, 1932, et al. *Showa Japan: the Post-War Golden Age and Its Troubled Legacy*. Tuttle Pub, 2008, Pp. 13

23 Brinckmann, Hans, 1932, et al. *Showa Japan: the Post-War Golden Age and Its Troubled Legacy*. Tuttle Pub, 2008, Pp. 29

24 Cho, Hyunjung. "A Plan for Tokyo, 1960 : Tange Kenzō's Technocratic Utopia." *Journal of the Association of Western Art History*, vol. 41, 2014, doi:10.16901/jawah.2014.08.41.259. Pp. 145

the nation's collective memory."²⁵

1960-1970: Economic Growth

Japan's self-image and its global status, began to shift during the 1960's. Key to this national growth was hosting three global events: the 1964 Tokyo Olympics, 1970 World Expo in Osaka, and 1973 Sapporo Winter Olympics²⁶.

The Olympics and World Expo provided the catalyst that triggered an unprecedented construction boom: buildings, highways, toll-routes, and the first high-speed rail (Shinkansen).²⁷ In addition to these global events, key policy changes by Prime Minister Kakuei Tanaka in the fields of construction and banking, fueled the rapid changes to the urban environment.

*"The government provided the financing for massive infrastructure projects, while the banks were permitted, for the first time, to make available personal mortgages to the rising middle classes."*²⁸

Due to intense urban rebuilding and restructuring, the very character of cities was changing in an unprecedented fashion – traditional forms of urbanism were leveled and replaced with new higher density buildings. Within Tokyo for example, the traditional *Shitamachi* and *Yamanote* forms of urbanism had largely disappeared by the end of the 1960's. In addition to urban redevelopment, an enormous demographic shift into cities occurred, with roughly 400,000 people moving into Tokyo per year between 1950 and 2000²⁹.

1980s: High Growth & the Bubble Economy

"By the end of the 1980s, Japan could boast of a huge middle class, an average income that was among the highest in the world, and an equally high level of personal savings."³⁰

New forms of technology, in particular the advent and democratization of the internet, began to change not only technological industries but also gave rise to new lifestyles. "*The emergence of the information society and the spread of the computer*"³¹ allowed individuals to participate and thrive in new subcultures that would struggle to materialize in a country that tends to subvert peripheral social trends.

25 Showa Japan : The Post-War Golden Age and Its Troubled Legacy, Tuttle Publishing, 2008. Pp. 22

26 Ibid Pp. 23

27 Ibid Pp. 31

28 Ibid Pp. 20

29 IZUHARA, Misa and Ray FORREST. "Housing Histories and Intergenerational Dynamics in Tokyo." *Social Science Japan Journal* 15, no. 1 (2012): Pp. 54

30 Showa Japan: The Post-War Golden Age and Its Troubled Legacy, Tuttle Publishing, 2008. Pp. 73

31 Ibid Pp. 74



Fig. 09 Yanaka Ginza, site photo. An example of 1950's Japanese urbanism



Fig. 10 Yanaka Ginza, site photo. An example of a micro-scaled shopping street with a signed gate denoting the entrance.



Fig. 11 Yanaka Ginza, site photo.



Fig. 12 Yanaka, Tokyo



Fig. 13 Yanaka, Tokyo



Fig. 14 Yanaka, Tokyo

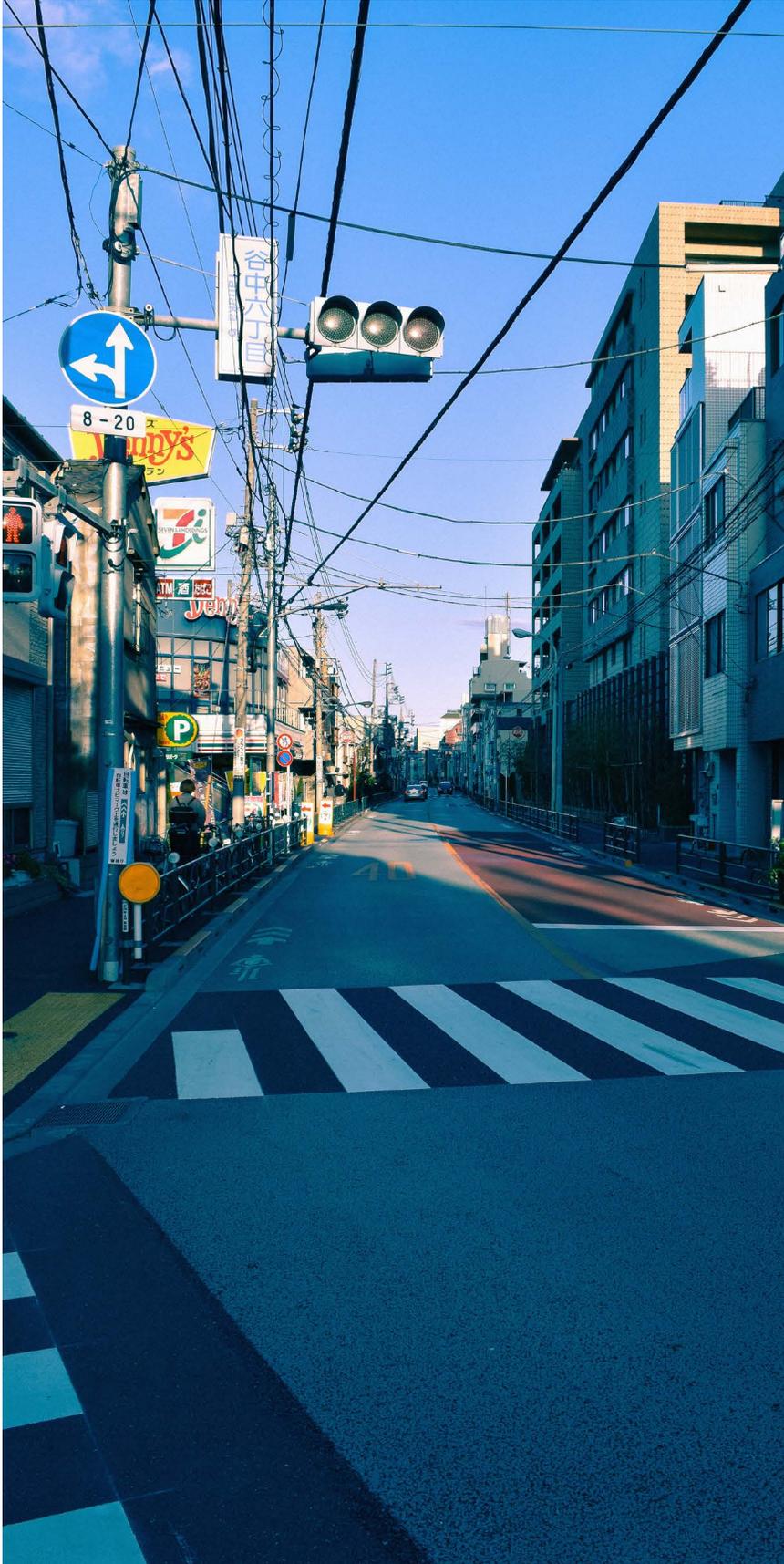


Fig. 15 Yanaka, Tokyo

Foreign investment, luxurious spending, and land speculation and acquisition ran rampant during the 1980's. Property values during the Bubble Economy inflated, and people's heavy investment in real-estate continued to push prices up to an exorbitant level until its eventual crash in 1989.

1989-2003: The Collapse of the Bubble

The collapse of the Bubble Economy in 1989 was caused by the Nikkei stock market crash. It resulted in an immediate one-third loss in value, that grew to 75 percent by the early 2000's. A drop in real-estate prices followed and in some extreme cases, land values (especially within urban centers) dropped to 10 percent of their former value³².

The troubled legacy of this era can be summarized by a drastically changed social atmosphere. The collapse of the Bubble Economy resulted in "... the end of the tradition of lifelong employment; an emerging trend toward individualism at the expense of the group culture; the continued rise of subcultures in the wake of loosening social strictures; the explosion of high fashion and indulgence of every type as the middle class shrank and new wealth contrasted with increasing poverty; and a creeping identity crisis, both national and personal."³³

In conclusion, the *Showa Era* was fundamental in shaping Japan's modernization post war through to the early 2000's. The urban, technological, political, and social changes profoundly impacted the content of science fiction narratives during this prolific time of upheaval. The case studies in the following chapter share many commonalities: futuristic dense cities, war, destruction, political unrest and corruption, and grappling with memories of the past are all themes which intrinsically pay homage to the *Showa Era*.

32 Ibid Pp. 84

33 Showa Japan: The Post-War Golden Age and Its Troubled Legacy, Tuttle Publishing, 2008. Pp. 87

2.2 Case Studies

Techno-animism has been a central thematic axis for many seminal Japanese science fiction films and graphic novels. This section will look at animated films, to understand how *techno-animism* operates in the Japanese science fiction medium.

Each film's key themes and characters will be categorized into three sections: marginalized, vehicles of alteration, and dominant. The simple but effective methodology provided by the book *Robot Ghosts: Japanese Science Fiction*, provides the method from which to organize themes/characters. The chart is as follows³⁴:

Marginalized	Vehicles of Alteration	Dominant
<p>A: Persons or entities that are oppressed or hidden</p> <p>B: Socially oppressed characters representing transforming powers or possibilities</p>	<p>A: Dominant entities will be subverted by the marginalized, the deadlock will be broken by the oppressed</p> <p>B: Taking action to change the present state</p> <p>C: The marginalized characters use devices as vehicles that can be used to directly or indirectly alter the power structure or current state</p>	<p>A: Persons, entities, or systems that hold or embody dominant or restrictive power structures</p>

Fig. 16 Case Study analysis chart

In organizing the case studies in this way I intent to reveal an overarching picture of this mode of expression, and clarify how Japanese science fiction from this period functions on the basis of an "*animation*" of "something". Having discussed in the previous section the historical context of the case studies, the *animistic* qualities within each marginalized/dominant "systems" will now be considered. Case study films:

1. 1980-1981 Domu: A Child's Dream
2. 1987 Neo Tokyo: Construction Cancellation Order
3. 1988 AKIRA
4. 1995 Ghost in the Shell
5. 1995 Memories: Magnetic Rose
6. 1995 Memories: Cannon Fodder

³⁴ Bolton, Christopher., Istvan Csicsery-Ronay, and Takayuki Tatsumi. *Robot Ghosts and Wired Dreams : Japanese Science Fiction from Origins to Anime* Minneapolis: University of Minnesota Press, 2007. Pp.163

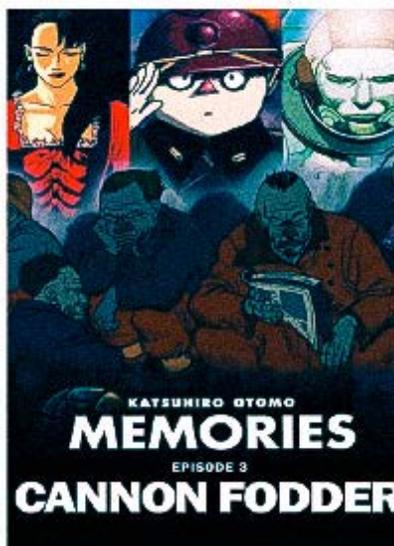
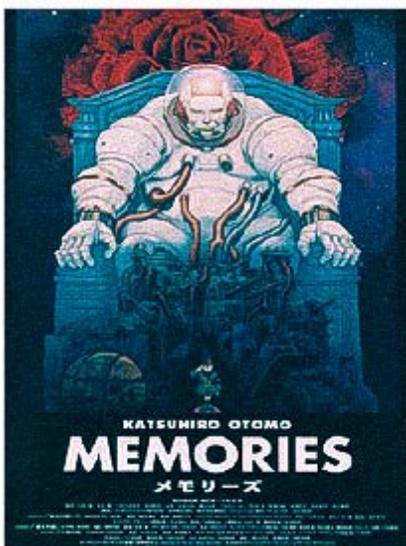
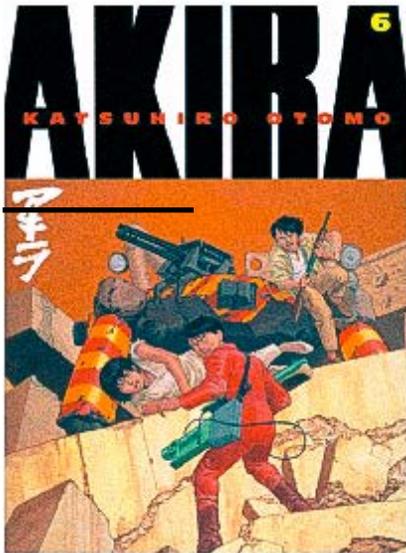
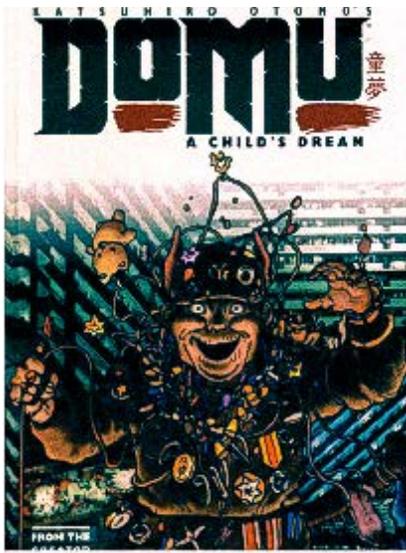


Fig. 17 Covers and movie posters for the six case study films and graphic novels.

1980 - 1981: Domu – A Child’s Dream

Set in a 1980’s Tokyo, a series of mysterious suicides have been occurring in a singular apartment complex. As the police investigate what is causing these suicides, they begin to hypothesize that supernatural forces are at work. An old man living in the apartment, nicknamed Old Cho, has telekinetic abilities and is using his powers to manipulate the residents into committing terrible crimes, murders, and suicides. In the midst of this chaos, a new family is moving into the apartment complex with their young daughter Etsuko who also has telekinetic abilities. Old Cho and Etsuko begin to battle, one fighting for the greater good, and the other for their own twisted fantasies.

Marginalized	Vehicles of Alteration	Dominant
A: Residents of the building B: Etsuko C: The police D: The apartment complex	A: Etsuko, harnessing her telekinetic powers subverts Old Cho and his powers. B: Telekinetic powers	A: Old Cho

Fig. 18 Domu - A Child’s Dream narrative analysis chart

Much of the story takes place in a mass-produced housing complex that is typical of 1980’s Japan. The meek living conditions portrayed throughout the graphic novel directly reflect those of the time; many low-income salaryman lived in such apartments in the suburbs of cities. The housing boom also meant that new developments often re-located residents resulting in many of the housing complexes being intergenerational.

In this story, the building becomes a metaphorical vessel for supernatural occurrences. Old Cho’s uses the vessel, and its people for his evil fantasies. It is only when Etsuko moves into the building complex that it begins to be harnessed for good - when she begins to fight back against Old Cho.

Throughout the story Old Cho uses telekinesis to control people to commit suicide. After the person has died he takes objects as trophies. These objects are usually small in size, and he often clipped them to his clothing. These in-animate trophies act as animate manifestations of the deceased person, and act as a type of life-blood for Old Cho.

While Old Cho and Etsuko have powerful telekinetic abilities, their physical appearance is that of any other character within the story. Similar in *Shintoism*, the supernatural and the everyday, exist side by side in *Domu- A Child’s Dream*. This is a key theme which will be touched upon in each of the remaining case studies.

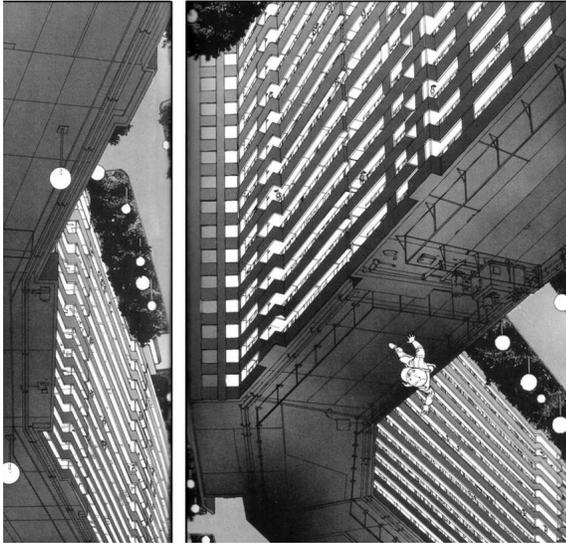


Fig. 19 Domu - A Child's Dream: the apartment complex



Fig. 20 Domu - A Child's Dream: Etsuko harnessing her telekinetic powers

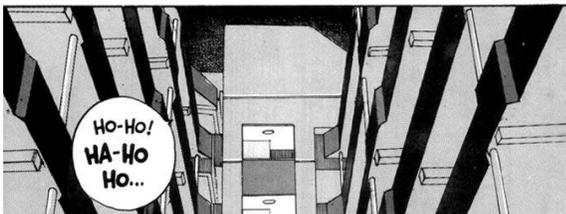


Fig. 21 Domu - A Child's Dream: Old Cho and his tokens from his victims

1987: Neo Tokyo: Construction Cancellation Order

In an unnamed country in South America, a changing government regime desires to shut down the previous government's major construction project. The location of the project is remote and seasonal weather unfavourable, therefore, robots are the only workers on site. A new site superintendent named Tsutomu is sent to shut down the operation.

Tsutomu arrives and is greeted by the lead robot superintendent. Tsutomu attempts to talk to the robot, but the robot does not listen as his operating system appears to be severely malfunctioned. As he tells the robot to shut down all operations, the robot ignores his orders and imprisons him in his room. After this altercation, Tsutomu concludes that all robots have truly malfunctioned, and watches from his room, now a prison cell, as the robots endlessly continue construction.

Weeks seem to pass. One day when a robot attempts to deliver a meal, Tsutomu retaliates and destroys the robot. Triumphant in his escape, he takes it upon himself to shut down the operation. As soon as he leaves the room, however, an emergency message is transmitted to his computer. The message describes that the government has been overthrown and the old government has taken back power and has decided to re-initiate the construction project. Tsutomu does not hear this timely message and continues on his mission to shut down the operation.

Marginalized	Vehicles of Alteration	Dominant
A: Tsutomu, the superintendent	A: Tsutomu destroying his robot captor to subvert the entire construction project	A: The automated construction robots B: Political Leaders C: The city being constructed

Fig. 22 Neo Tokyo: Construction Cancellation Order, narrative analysis chart.

In this animation, the political entities appear to have complete control over all infrastructure, and in this case the construction of a whole city. The superintendent, appears insignificant to larger political powers. Despite this, he still has the power to subvert an entire system. This commentary maybe interpreted as a parallel to the political protests occurring in Japan during the 1960's and 1970's.

The autonomous robots which build the city exist side by side with humans. There is no distinction regarding how the superintendent treats his fellow robot. As mentioned in the *Domu-A Child's Dream* analysis, both humanity and technology exist side by side. Never does the superintendent treat the robot's command as below him even though it is just a "machine". The design of the robots are also a literal interpretation of *techno-animism*, technology taking on anthropomorphic characteristics.



Fig. 23 Neo Tokyo: Construction Cancellation Order, the city as a character .



Fig. 24 Neo Tokyo: Construction Cancellation Order, Tutomo fights back against the robot.

1988: AKIRA

A mysterious nuclear explosion causes the destruction of Tokyo and initiates the beginning of WWIII. Thirty-one years after the war, Neo-Tokyo has been built as a giant artificial island within Tokyo Bay. The narrative is set before the start of the Tokyo Olympics within the vast and sprawling metropolis - rife with political unrest and anti-government protests. The story focuses on a gang of rouge adolescent bikers who while exploring the city, have a chance encounter with a psychic child – Takashi. Takashi is part of a secret government operation. Tetsuo, a young naïve member of the biker gang, accidentally crashes into Takashi. This crash awakens Tetsuo’s own internal psychic powers and he is immediately captured by the secret government organization for analysis. Tetsuo is a fragile character, due to his troubled upbringing, and struggles to control his newfound telekinetic abilities.

As the government operation tortures and tests him, he becomes unstable as his psychic powers grow. The power that has been awakened in him has given Tetsuo the power that he has always desired, and begins to use it for revenge and destruction. Unbeknownst to Tetsuo, as his powers grow, he is actually re-awakening the same mysterious entity that destroyed the city thirty-one years earlier, the entity named AKIRA which at the end of the film destroys Neo-Tokyo again.

Marginalized	Vehicles of Alteration	Dominant
A: Tetsuo B: Takashi, the psychic child	A: Tetsuo acquiring supernatural powers, which he uses to metamorphosize into a greater being	A: Politicians, corrupt society B: Neo-Tokyo

Fig. 25 AKIRA, narrative analysis chart.

Unlike *Domu- A Child’s Dream*, where youth is portrayed as the positive force to overcome evil, youth is depicted with dual morality – characters are outcasts of society yet still respond to help the greater good. Similar to the kami, spirits and manifested objects embody dual meanings, much the same as supernatural powers in AKIRA can be used for good and evil. Tetsuo is depicted as a troubled adolescent, who, through his newfound powers (again telekinetic: a common theme in Otomo’s narratives) abuses it to fulfill his personal desires of spite and revenge. This personal desire inadvertently causes the total destruction of a city.

Post war sentiment is a common theme in much of Japanese science fiction: destruction and loss of life occurring in cities - most notably defined by the Godzilla franchise. In many narratives, it is in the aftermath of destruction that a literal ray of hope is found. In AKIRA, this ray of hope is ambiguous, as the movie ends with Tetsuo metamorphosing into a new entity. This new entity is a metaphor for scientific progress, and an obvious

critique on the atomic bomb. Science continues to progress society forward, however its good intentions are often used for militaristic purposes.



Fig. 26 AKIRA, Tetsuo and Kaneda argue



Fig. 27 AKIRA, Neo-Tokyo and its dystopian architecture

1995: Ghost in the Shell

The narrative begins with Major Kusanagi being sent to assassinate a diplomat to prevent the escape of a high-profile programmer/hacker on Section 9's (a government police division) wanted list. In the aftermath of the successful execution, the police discover that the event was merely a cover-up of a larger series of events controlled by a mysterious hacker known as the Puppet Master.

As a result, Kusanagi and her team are given priority to find and arrest the Puppet Master for his crimes. As Kusangi gathers evidence and slowly gets closer to finding the Puppet Master, she experiences multiple malfunctions in her programming. Kusanagi finds out these malfunctions are actually the Puppet Master hacking into her brain, and upon uncovering this truth, continually attempts to dive into the internet in an attempt to hack into the Puppet Master and find his location.

After the Section 9 headquarters are broken into by the presumed Puppet Master, Kusangi and her team immediately track down the Puppet Master to a derelict location. In the climax of the film, Kusangi destroys the armed military robot safe-guarding the suspect, only to find out that the man they caught was simply a human shell - with his brain manifested by a digital super program which is the Puppet Master. In an attempt to find out the Puppet Master's intentions, Kusanagi connects her brain directly to the Puppet Master's brain, in order to deep dive into its programming. Now connected, Kusangai is asked by the Puppet Master "program" to merge with it, in order to produce a new even more powerful digital super program. In doing so, the Puppet Master explains that she would gain all his abilities, and as a result Kusanagi agrees to merge. The film ends with Kusanagi waking up in her fellow comrade's safe house, the comrade saving her brain from destruction during the operation, and transplanted it into a new shell. Kusangi's brain, now merged with the Puppet Master, speaks as a new entity – revealing that "it" is the new digital super program.

Marginalized	Vehicles of Alteration	Dominant
<p>A: Major Kusanagi, in particular her state of mind (questioning who she is)</p> <p>B: Section 9</p>	<p>A: Major Kusanagi accepts that change and evolution is the only way forward</p> <p>B: Kusanai does not sacrifice her humanity, but rather willingly offers it in exchange for something greater.</p>	<p>A: the internet</p> <p>B: the Puppet Master</p>

Fig. 28 Ghost in the Shell, narrative analysis chart

In the opening sequence of the film we see Kusangi, a cyborg, and her creation through advanced technological machines, with a human brain, and a fully bio-technological body. The technology imbedded in her cybernetic body is unanimous across society, and allows people's brains to

tap into the internet. This technology also allows peoples brains referred to as *ghosts*, to be hacked into – their bodies becoming a metaphorical *shell*. *Ghost in the Shell* is the ultimate embodiment of *techno-animist* concepts, where human and machine has fused seamlessly together. In addition to flesh and metal becoming a single entity, so has the human mind, it has become a digital memory which can be uploaded and downloaded.

Throughout the film, Kusanagi struggles to define who she is in regards to her intelligence: she asks herself if she is a form of artificial intelligence, how human are her memories, and do these memories make her human. At the end of the film we see Kusanagi at a crisis point: she is asked to merge with the “infinite web” by the antagonist the Puppet Master. Her decision reflects that of Eastern beliefs, Kusanagi understands that her kami is not in any way superior to the Puppet Masters. Major Kusanagi realizes that the Puppet Master is offering her something greater, and she accepts. Major Kusanagi does not see a greater value in preserving what is left of her own “human/cyborg” condition. Instead she sees progress, to become a greater being, (to evolve to something beyond her current status through technology) as the noble goal rather than trying to preserve her humanity.

“When the current ontological model of human being does not fit a new paradigm, a hybrid model of existence is required to encompass a new complex and contradictory lived experience. The cyborg body thus becomes a new complex and contradictory lived experience”³⁵



Fig. 29 Ghost in the Shell, Major Kusanagi reflects in her apartment unit, looking out to the futuristic city scape

35 Jennifer González, “Envisioning Cyborg Bodies: Notes from Current Research,” in: Chris H. Gray and Heidi J. Figueroa-Sarriera, Steven Mentor (eds.), *The Cyborg Hand-*

1995: Memories: Magnetic Rose

Set in the far future, a spaceship and its crew are on a salvaging expedition. They receive a SOS signal and are obliged to respond. Two of the crew members are tasked with entering the ship to see if there are any survivors. Upon entering the large decaying ship, the interior appears in pristine condition - a blend of baroque and renaissance architecture. As they wander around the interior, they discover that its owner was a once famous opera singer who suddenly disappeared after the murder of her husband. As the crew members continue on their mission, they come across a series of holograms depicting the opera singer's life, and the origins of the distress signal, a piano. The crew members approach the piano, and as they touch it, it seems to activate another hologram, one which appeals to each person's inner most desires. As one crew member falls for this trick, the other crew member resists the temptation and destroys the mega-computer running the simulation. He then contacts his fellow crew members to destroy the decaying ship. As the mega-computer glitches out of control due to its immanent destruction, the true nature of its being is revealed; the ship's on-board mega-computer has been seducing space travelers for centuries and bringing them to their death through its simulations.

Marginalized	Vehicles of Alteration	Dominant
<p>A: the 2 crew members sent to investigate the SOS</p> <p>B: the hundreds of other astronauts that have been seduced by the ships mega-computer</p>	<p>A: the strength of the human spirit overcoming the machine</p>	<p>A: the decaying ship sending SOS signal, seducing space travelers to enter</p> <p>B: The artificial intelligence system that inhabits the ships on board mega-computer</p>

Fig. 30 Memories: Magnetic Rose, narrative analysis chart.

Unique to this narrative is the manner in which humanity, technology, and the human mind is portrayed. Humanity has created artificial intelligence to presumably help us, however it has gone rouge, and is so convincing in its simulations that can tap into the human mind and its desires. Unlike Ghost in the Shell in which the artificial intelligence (AI) system offers something positive (greater knowledge), the AI in Magnetic Rose corrupts the mind with fantasies and destroys the person. The crew member, upon uncovering this truth, rejects the technology by destroying it. This narrative sends a message of warning as to the temptations that technology can present to humanity.

book (London: Routledge. 1995), pp.61



Fig. 31 Memories: Magnetic Rose, opera singer



Fig. 32 Memories: Magnetic Rose, virtual projection of a fantasy world created by the on-board super computer



Fig. 33 Memories: Magnetic Rose, the crew member destroys the super-computer

1995: Memories: Cannon Fodder

The story takes place within a walled city, made up of mega-cannons. The city is always at war, and ceaselessly firing at an unseen enemy. The sole responsibility of the inhabitants is to produce, maintain, and continue firing these cannons. The story follows the daily routines of one family in the city, beginning with their morning routines. The family of three, a father, mother, and son, fulfill their roles: a cannon loader, a factory worker, and a student at an elementary school. The sequence of firing one of the many cannons is ritualized, and the citizens carry out their banal tasks out of duty. At the end of the day, there is a broadcast on the television communicating another successful barrage upon this unknown enemy. After the family's dinner, just as the boy is about to go to bed, a warning siren is heard across the city, signalling another firing sequence. The boy goes to bed as if it is nothing to worry about.

Marginalized	Vehicles of Alteration	Dominant
A: the citizens of the walled-city	A: the story is ambiguous and offers no definitive outcome, rather it is a strong critique of an attitude of complacency and communist-like societies	A: the unseen enemy across the wall B: the media, and the cities political leaders

Fig. 34 Memories: Cannon Fodder, narrative analysis chart.

Unlike the previous five case studies, the meaning of Cannon Fodder's narrative is ambiguous. The marginalized citizens of the city seem to be content. A sequence displaying a political protest against the government appears to have little impact, most citizens refuse to question the higher powers. The child of the family, appears to be symbolic of a complacent attitude within this brainwashed society. The young boy only desires to grow up to fire cannons – this position being held as the highest within the city. The boy and his family do not question the media and their propaganda.

The documentary-like animation strongly represents how *techno-animism* is in the world. In Cannon Fodder, humans and infrastructure (the city) cohabitate. The humans are subservient to technology. The citizens toil endlessly to maintain the war machine that is the city and procedures of day to day tasks are done in a ritualized manner to better serve "the cannons". In this society the humans give their utmost reverence to the cannons and maintaining its technology – it appears as a god before them encompassing all aspects of their lives.



Fig. 35 Memories: Cannon Fodder, the boy and his father



Fig. 36 Memories: Cannon Fodder, the cannons which make up the city



Fig. 37 Memories: Cannon Fodder, the boy and his father discuss events of the day

Chapter 3

Narrative

3.1 Introduction

The thesis short film embodies traditional ideas of *Shinto animism* via *techno-animism* in contemporary Japanese culture into a spatial experience. *Shinto* mythology is used to define a future world's architecture exploring how the synthesis of myth and technology can translate into spatial and narrative experience.

3.2 Synopsis

The narrative will be loosely inspired by Katsuhiro Otomo's short film, *Cannon Fodder*, where the basis of its society revolves around keeping the city-megastructure functioning. Similar to *Cannon Fodder*, my short film *Shotengai* will investigate Takaharu's (the lone character) role in a future society greatly extended through technological infrastructures. The narrative questions if Takaharu's role, to keep the literal mechanisms and infrastructure of society running, even matter.

Set in 2100, Takaharu lives in a humble mid-rise building off a *shotengai*, somewhere in a dense Japanese city. The story reflects upon his everyday actions as a maintenance worker for a large corporation's code database. As the years have progressed, Takaharu has become increasingly jaded, and the bits of broken memory which narrates the film gives cues to his past employment, as a black market hacker.

Do Takaharu's actions to keep the servers running actually impact the seemingly endless server machines below ground? Does the maintenance of the hardware of the hardware actually keep the automated rice fields outside the city running? Do the material offerings given to the shrines actually please the techno-deities? Touched upon in the film are the remnants of what used to be an agricultural existence, the vocation in ancient Japan was not only work and sustenance but also a spiritual matter. What is left of the ancient Japanese agricultural industry is that of autonomous machines, and the connections with nature have been replaced with technology. The story furthermore reflects the ever-changing *Shinto* belief system: the animism traditionally found in nature has now been appropriated to technology with techno-animism. Technology in its entirety has fully replaced nature in society despite its ontology.

Shinto's mythological structure, that of the 3 worlds: *Takamagahara* (the heavens), *Yomi* (land of the dead), and the world between *Nakat-*

sukuni (our world), will be materialized in the film as the literal “worlds” in which Takaharu indirectly interacts with.

Our manifested world (*Nakatsukuni*) is represented by the *shotengai* and its surrounding urbanism. This is the world that Takaharu lives in. His computer terminal from which he fulfills his duty as a “code database” maintenance worker is owned by just one of the many mega corporations (referred to as Kawashima industries) which govern Japan’s endless infrastructure.

The small *hokora* shrine is the place that the citizens give offerings to the heavens, the *Takamagahara*. To the citizens, the heaven and their gods are the autonomous towers far outside the city which give them sustenance. Few people have seen them and they hold a revered status – their nickname being “sentinels of the land”.

The dual vertical pillars is the gate to the *Yomi* – the underworld. It is a symbolic threshold which is placed beside the *hokora* shrine, both are omnipresent and represent the duality between life/death in *Shintoism*.

3.3 Narrative Text

It seems like sameness every day.

同じような日々。

Singularities or irregularities within the code keep us busy.

単一性、もしくは不規則性は我々を多忙にさせる。

Sometimes days go by without any anomalies happening. It feels mind-numbingly boring and it pays shit, but hey then again were doing next to nothing.

時には、何も起こらずに時間が過ぎる。それは感覚が麻痺してしまうほどに退屈で、金にもならないが、まあ何もしていなかった結果だろう。

I can’t even remember how I got into this job in the first place. I guess that close call with Kawashima Industries was too close a call to keep doing this shit for the black market. Excitement was always at full tilt and the money was rolling in, but my mind was constantly spinning out of control.

この仕事に就いた経緯を思い出せない。

川島工業との一件は危機一髪だった。闇市場のためにこんなクソみたいなことを続けるのはごめんだ。

刺激はいつもあり、金も入ってくるが、自分の精神は常に制御し難いものになる。

Anxiety...don’t get caught...don’t get caught

不安。。。捕まるな。。。捕まるな

Do I ever wonder if these things even exist? All the time, they seem to keep us alive, and there haven’t been any blips in 50 years...

その存在を疑問視することがあるか。。。。いつでも、それは私達に生を与えるのにもかわら
ず、50年も音沙汰がない。。。。

People call them "sentinels" of the land, their hulking bodies a silhouette of over engineer-
ing...

人々はそれを地上の“見張り番”と呼び、その大きい図体を過剰なエンジニアリングのシルエット
と呼ぶ。

Everything, engineered, manufactured, produced...

すべてのものは、設計され、生産され、製造される。。。。

I've never have the chance to see them, but I've spoken to a couple people who have, it's
like what they always say, never meet your hero's?

それをみる機会はなかったが、目撃者に話したことはある、いつも言うじゃないか、ヒーローに
は会わないほうが良い。

Whatever they are, whatever it is...the underbelly exists everywhere

それらが何であれ、それがなんであっても。。。弱点はどこにでも存在する。

Everything connected. It stretches for eternity. An endless nexus.

すべて結合する。永遠を求め延長する。終わりのないネクサス。

It's a miracle if u ask me. This eternity, right under our feet, beating along, interlinked...

奇跡とも呼べる。この永続性、足の下に潜む、鼓動する、連結する。。。。

These big tech gods, cut down anything for progress. I hated them, I opposed them. But their
comfort is undeniable. Its eternity, right under our feet, beating along, an endless nexus...
interlinked

この技術の神達、前進するためにはなんでも削減する。嫌いだった、反対だった。でも、それが
与えるやすらぎは否定できない。その永続性、足の下に潜む、鼓動する、終わりのないネクサス。
。。連結する

Chapter 4

The Shotengai

4.1 The Shotengai Typology

The following section describes the site of the thesis animation. A general understanding of the *shotengai* typology will be described along with my personal on site analysis of its atmosphere and character.

A *shotengai* is a shopping street (covered or open) that is a traditional urban typology in Japan. Its origins began in the late 1500's when new policies of free market trade, called *rakuichi-rakuza*, were implemented to increase economic development. This new system of commerce radically changed the manner in which small business interacted and were distributed within communities and districts. Overtime the impact that *rakuichi-rakuza* policies had on business development and land acquisition evolved organically into the *shotengai* typology, characterized by densely lined streets of commercial establishments with arches denoting the boundaries³⁶. *Shotengai's* of contemporary Japan are bustling hives of local activity and commerce. They are often located near transportations arteries and serve commuters locals alike with affordable everyday goods and food.

*"Shotengai are the bustling centres of countless communities in Japan, and have long been deeply connected to their localities. Shotengai are often for pedestrians only, catering for almost everything people need for daily life. They also host numerous community activities, cultural festivals and traditional trade fairs throughout the year. They play other important roles such as welfare and security, and help create and support a sense of community."*³⁷

Using and analyzing current *shotengai* typologies across Tokyo, Osaka, and Kyoto will serve as the basis of the architectural grammar and its future speculation. The *shotengai* acts as one node in the nexus of infrastructures that it is part of. The following five points or spatial language have been distilled from site visits in Japan as a guild line for the design of the *shotengai*:

1. Volume and void: Intense juxtaposition of small, medium, large volumes and residual spaces.
2. Organizational strategies: Formal and informal urban solu-

36 To, Kien, and Keng Hua Chong. "The Traditional Shopping Street in Tokyo as a Culturally Sustainable and Ageing-Friendly Community." *Journal of Urban Design*, vol. 22, no. 5, 2017, pp. 637–657., doi:10.1080/13574809.2017.1281734. Accessed 5 Oct. 2019. pp 4

37 To, Kien, and Keng Hua Chong. "The Traditional Shopping Street in Tokyo as a Culturally Sustainable and Ageing-Friendly Community." *Journal of Urban Design*, vol. 22, no. 5, 2017, pp. 637–657., doi:10.1080/13574809.2017.1281734. Accessed 5 Oct. 2019. pp 4

tions, planned and unplanned.

3. Networks: Proximity to public transit and key city infrastructure.
4. Local culture: *shotengai*'s become the stage from which community events, and traditions are played out throughout the year.
5. Diversified Program: A *shotengai* creates a collective tapestry and integration of a multitude of architectural programs: local/commercial businesses, residential, religious, public + private amenities, tourism attractions, etc. It is truly the definition of a mixed-use area, which contributes to the vitality of the area that it is situated in.

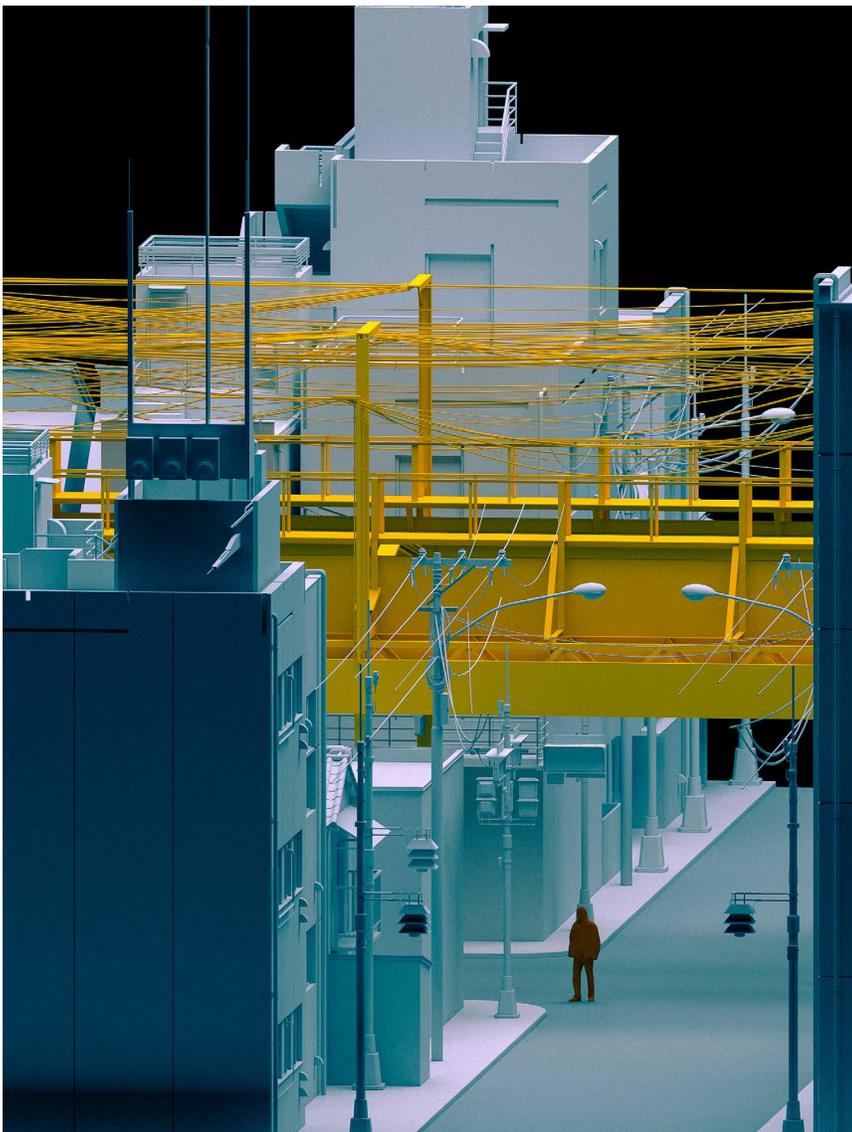


Fig. 38 Shotengai: diagram render showing density and scale of the steel shotengai structure.

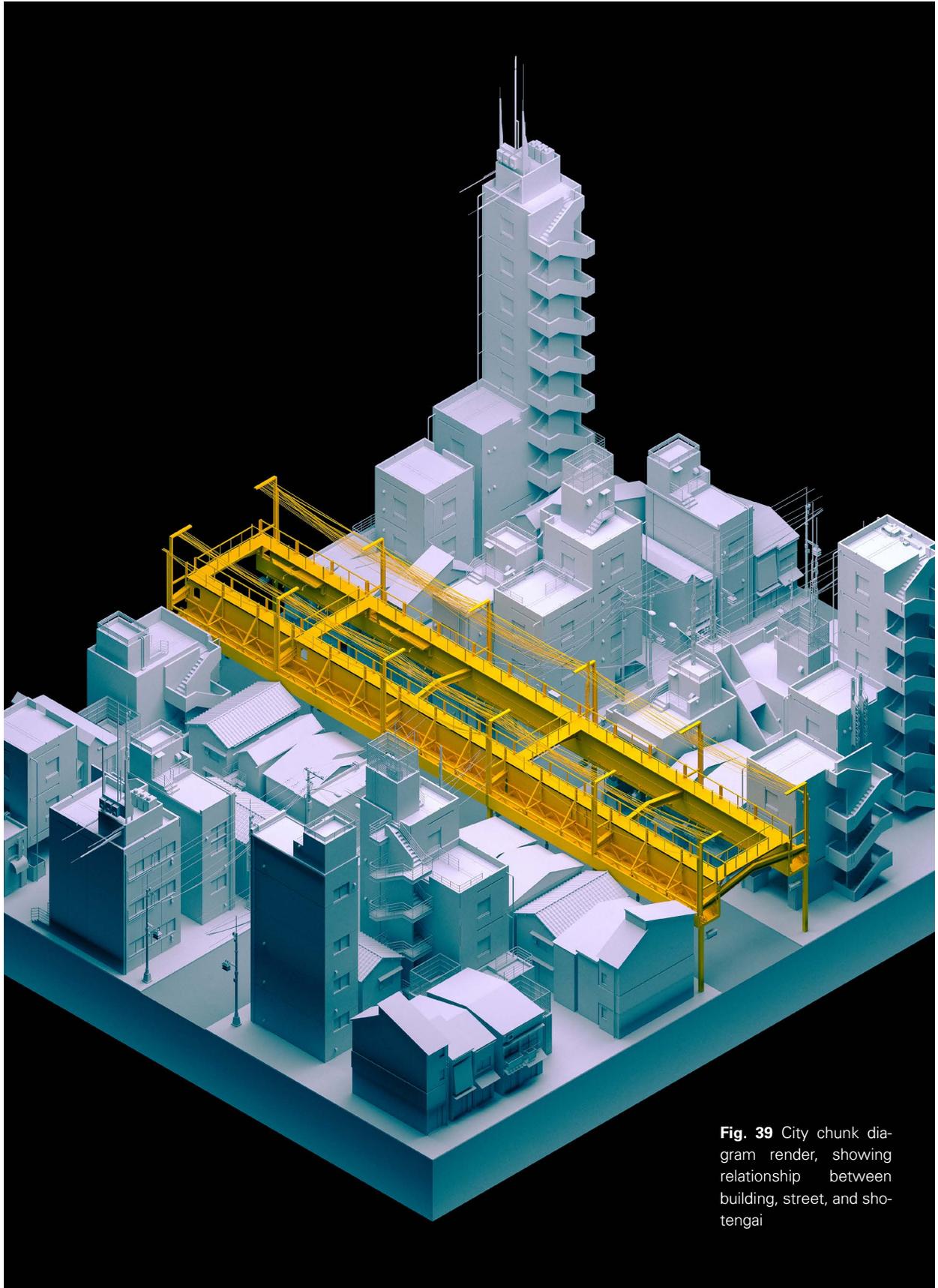


Fig. 39 City chunk diagram render, showing relationship between building, street, and shotengai

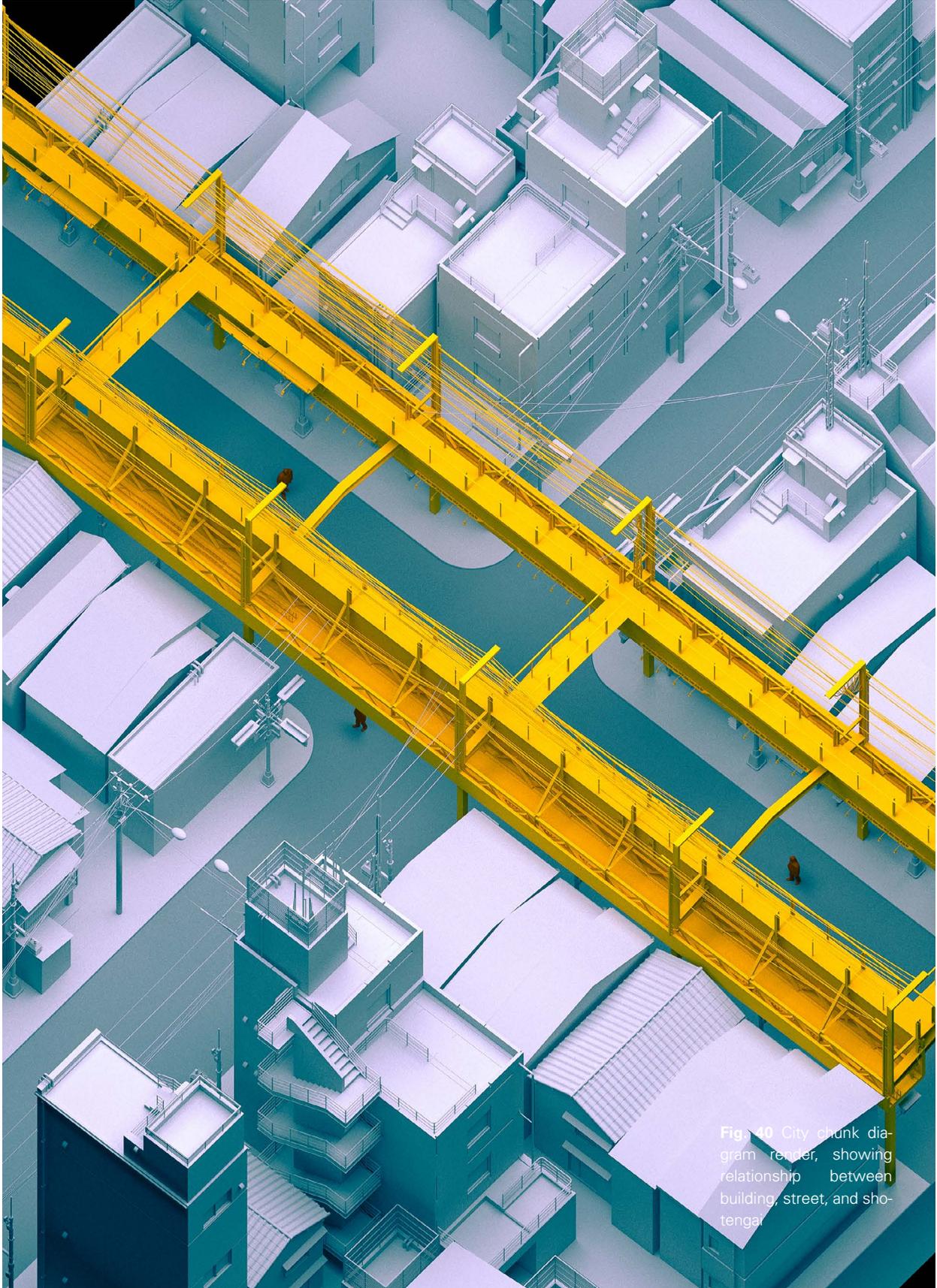


Fig. 49 City chunk diagram render, showing relationship between building, street, and shotengai

4.2 The Ise Shrine: Technology Equated to Nature

The cyclical rituals of respecting the *kami* through material offering gradually developed into the need to segregate a sacred plot of land to perform these actions. The *Ise* shrine became *shintoism's* architectural form from which to practice their beliefs. Integral in its design are the characteristic low-hung roofs, which embody "*an animistic attitude of willing adaptation to and absorption in nature.*"³⁸

In speaking about Japanese *Ise* architecture Kenzo Tange writes in his analysis of the Ise shrine:

"Space in Japanese architecture is still nature itself, space bestowed by nature. Even though space is delimited, it is not built up into an independent world severed from nature; it is considered in closest relationship to its environment and always reveals a striving towards oneness with nature. A suggestion of animistic feeling hangs about Japanese space."³⁹

In this thesis I consider the implications of the quote if 'nature' was replaced with the word 'technology' and 'animism' with 'techno-animism'. In that condition the new quote would be:

"Space in Japanese architecture is still technology itself, space bestowed by technology. Even though space is delimited, it is not built up into an independent world severed from technology; it is considered in closest relationship to its technological-environment and always reveals a striving towards oneness with technology. A suggestion of techno-animistic feeling hangs about Japanese space."

This implies how the *Shinto* belief system continually allows for a state of balance – between the *animate* and the *inanimate*, humanity and technology. *Shinto's* interchangeability between what is and is not sacred is what makes it unique and able to encompass past, present, and future values. The thesis animation investigates space much the same as the *Ise* shrine. The thesis positions space and architecture as a mere representational vessel for *techno-animism*. In my short film *Shotengai*, technology is the symbolic/metaphorical element that makes the space animated and sacred. Technology is the symbol from which the *kami* manifests.

38 Tange, Kanzo. *Ise: Prototype of Japanese Architecture*. Pp 18

39 Tange, Kanzo. *Ise: Prototype of Japanese Architecture*. Pp 33



Fig. 41 Atsuta Jingu Ise shrine

Chapter 5:

Design Methodology

5.1 Production Timeline

This section gives a methodology to the production of the animation developed in the thesis. While there are a number of possible methodologies, this thesis focused on the workflow developed by Andy Goralczyk, the Art Director of the Blender Animation Studio.

Phase 1: Asset Production

1. Concept Design/ Look development
2. Props
3. Environmental asset library
4. Set construction
5. Characters/Architecture
6. Texturing

Phase 2: Shot Production

7. Storyboard/ Layout
8. Pre-Visualization/Animation
9. Lighting
10. Effects
11. Final Rendering
12. Compositing/Fixes (Post-Production)
13. Grading (Post-Production)

The thesis animation has been structured around a *production timeline* which is specific to animation workflows. The following diagram was taken from a Blender Conference 2019 Lecture, titled *The Production Pipeline of Spring - Andy Goralczyk*⁴⁰. Andy Goralczyk, shared this structure - common place in the animation industry, and how it was implemented on their studios short film *Spring*.

There are two main phases which hold smaller sub categories within the *production timeline* structure, *Phase 1: asset production*, and *Phase 2: shot production*. *Phase 1*, is defined by an overall “blocking out” of all the basic aspects which are essential to creating any animation. This includes mainly 2D and 3D assets. The main goal of *Phase 1* is to take the concept design ideas, and develop them to a level of detail that works in tandem with, and supports the narrative.

Phase 2, called *Shot Production*, is defined by compiling the ideas and assets from *Phase 1*, and implementing them into the story/narrative, through the medium of the animated sequence or “shot”. *Andy Goral-*

40 Blender, The Production Pipeline of Spring - Andy Goralczyk, YouTube, 40:29, 18 Mar. 2020, https://www.youtube.com/watch?v=aR3yNNGK_sc&t=1458s, 2:50

czyk mentions in his conference speech, that *Phase 2* is cyclical, in that the technical process is repetitive⁴¹. He notes that as every animated film has many different shots, it is a repetitive process of gathering required assets, setting up the shot, and linking any other additional 2D/3D data (ie textures, simulations, etc). What is important to note, is that the production timeline structure is non-linear. Development of certain assets or characters will be an ongoing process throughout the whole creation of the film and these items will be edited, tweaked and re-inserted into the appropriate animation phase.



Fig. 42 Blender Conference 2019 Lecture, titled The Production Pipeline of Spring - Andy Goralczyk. Screen shot of work-flow diagram

5.2 Phase 1: Asset Production

1: Concept Design/ Look development

1A *Look Development (definition)*: another term for concept design in the animation/film industry. Look Development is concerned with ideating the artistic direction of the animation/film – how things look. *Style frames* is another term used interchangeably for *look development*.

1B The initial phase of the project. As this thesis is centered around the specificity of Japanese science fiction narratives and *techno-animism*, ideas and concepts generated through the reading and writing process were sketched out in 3D to begin to visualize how things were going to look like.

1C As the *Shinto* belief structure is quite ambiguous and open ended, the ideas for how to construct a film based around the concept of *techno-animism* began around analysing Japanese science fiction animation movies. These animated movies were deconstructed to recognize what type of

⁴¹ Blender, The Production Pipeline of Spring - Andy Goralczyk, YouTube, 40:29, 18 Mar. 2020, https://www.youtube.com/watch?v=aR3yNNGK_sc&t=1458s, 12:00

relationships the director made with the overarching themes, and how those themes were implemented and reflected within the actual design of its characters, props, environments, and architecture.

1D The initial concept for how the environmental design might materialize was modeled in 3D using Rhinoceros. A simple base module, was constructed (an upper hanger and lower hanger), and is designed as a type of generic infrastructure, where the scale, and XYZ orientation could be easily manipulated depending on how the narrative would be developed.

Early lighting and development renders were done to test the mood and atmosphere of these designs.

2: Props

2A *Props (definition):* Any objects which contributes to the “set” or environment, which the characters may or may not interact with.

2B The narrative of *Shotengai* includes three “worlds”, that of the underground, ground level, and agricultural realm. In order to keep visual, conceptual clarity and continuity, I knew that some *props* and elements could cross over between worlds/realms. Many of these items could be scaled and modified depending on the world to create variation but still maintain the same stylistic language.

Due to the manner in which narrative is shaped, there is no explicit physical interaction between the characters and the props. Instead, the characters narrate the film, revealing their attitudes and feelings towards their future world.

2C Some *props* used in the apartment unit sequence are purchased *Kitbash* models from *kitbash.com*. All the pots, pans, plates, chopsticks, some of the television sets, luxu-lamp, laptop, chair, and electrical wall outlets are from this purchased professional asset pack.

2D Modular units created from scratch include: table, bed, curtains, wall panels, floor panels, ceiling panels, room layout, kitchen sink, refrigerator, stove, handles, and all wires.

3: Environmental Asset Library

3A *Environmental Asset Library (definition)*: 2D and 3D assets related to constructing the "set". This is an extremely broad category and its contents can vary depending on the narrative and its historical timeframe. Very similar to the props category, the environmental assets are more specific to larger scale items such as the infrastructure, buildings, and literal environmental objects such as trees, grass, rocks, water, weeds, clouds etc.

3B The *environmental asset library* is the most important aspect related to the thesis. Each of the 3 worlds had to be designed and modeled keeping in mind how each of the architectures could interact – spatially and conceptually.

3C Agricultural landscape: autonomous rice processing facilities, cranes over landscape, dmp background, hdri sky, clouds, lighting,

3D Underground infrastructure: lower hanger, and upper hangers, wires

3E The *shotengai/city*: buildings of all scales, *shotengai* structure, light poles, misc street assets, 2d signs, 3d signs, antennas, ac units,

3F Apartment interior: general layout, wall panels, floor panels, ceiling panels, kitchen appliances, tables, chairs, bed frame, lighting.

4: Set Construction

4A *Set Construction (definition)*: is concerned with how the assets are assembled and compiled to create the scene. The name borrows itself from theatre production, where one would literally create a set on a stage. In animation the process is the same where the assets are compiled into three-dimensional modeling software into a "digital set".

Set 1: agricultural landscape

Set 2: underground infrastructure

Set 3: Shotengai/city

5: Characters/Architecture

5A Characters: Kiyoko and Takaharu

5B Focusing on a future society, the architecture itself needs to have a sense of embedded history. Set 50 years from now, there needs to be a sense of contrast between what is old and existing and the new technology that is implemented in society.

5C Agricultural landscape: new tech, but also heavily weathered because of its exposure to the elements. There also needed to be some features of the architecture that appeared as if they were first made for humans to inhabit, then over time they became fully autonomous.

5D Underground infrastructure: largely sealed off from the earth's surface, this seemingly limitless expanse of infrastructure appears as the veins of society, connecting all above ground infrastructural aspects. It needed to be generic so that different forms could be plugged into it depending on the shot, or what was happening above ground

5E Shotengai/city: again playing with the idea that the story takes place in 2085, 55 years from now, much of the architecture of a dense Japanese cityscape remain, but has been heavily added onto by new tech. The architecture appears as a patch-work, collage, and tapestry of old and new, endlessly layered onto over time.

6: Texturing

6A *Texturing (definition)*: Using images (most commonly in the JPEG and PNG formats) in an orthographic photo view, to apply a material to a three-dimensional model or surface. It is the literal process by which a 3D model is given a texture/material, as opposed to a generic grey "default" material found unanimously in all 3D software.

6B *Shader (definition)*: a *shader* is constructed of multiple layers of 2D information (again most commonly in a JPEG or PNG format) which make up the appearance of the material/texture. The standard layers which make up a texture are the following: base colour, roughness, bump map, normal map, displacement map, and glossy map.

6C It is important to note that all of the props, assets, sets, and characters/

architecture are periodically textured as they are developed and built. By the end of *Phase 1* 90% of assets should be fully textured.

4.3 Phase 2: Shot Production

Phase 2 begins with *storyboarding*, usually quick thumbnail sketches in the form of a *key frame*. Next these *key frames* are laid out chronologically in order for the animator/director to visualize how the overall narrative unfolds – this is an iterative process, seeing and testing what shots work and do not work within the story. At the end of the Layout section, *pre-visualization* (also called *pre-viz*) takes place, which takes the 2D *key frames*, and begins to block out the basic camera movements within the 3D software. Similar to the *storyboarding* process, the animated shots are then compiled together in chronological order of the narrative, so that the entirety of the film is blocked out.

7: Storyboard/ Layout

7A *Story Board/Layout (definition)*: Graphically defining the narrative through image sequences. This can take the form of quick thumbnail sketches or quickly modeling a scene in a 3D program and sketching over them using digital painting or analog techniques.

8: Pre-Visualization/Animation

8A *Animatic/Pre-Visualization (definition)*: a rough draft of the animated sequence or film. Also called pre-visualization in the animation industry. The sequence often contains no texturing or lighting, and is primarily concerned with the composition, time sequence of the shot, and how the camera moves in the scene. An animistic or pre-visualization may also contain sound effects, music, and voices to further enhance how the final shot may be composed

8B Camera animation are now implemented in the digital set based on the storyboard/layout.

8C Digital “sets” are now further refined and tweaked depending on the

type of camera movement. Objects and assets may be moved around, added, rotated, scaled, etc, to improve the quality of the shot. Composition, and how the composition improves the story telling aspect of the narrative is the key aspect to this stage.

8D The digital set and the camera movements are defined and almost finalized at the end of this phase. It is important to finalize the camera movement in order to minimize rebuilding and reorganizing the set. As some sets can be quite large and complicated to construct, it is paramount to build up and detail only that which is seen in the camera throughout the shot.

9: Lighting

9A The digital set and the camera movements are now integrated with lighting design. The manner in which the scene is lit encompasses natural and artificial light qualities, and also atmospheric qualities. For example: the scene could take place during the day/night, or dusk/dawn. The weather conditions could consist of rain, fog, snow, hail, dust etc.

10: Effects

10A *Effects (definition):* is a broad term and could be used to define a multitude of animated visual effects within a sequence.

10B For example, many common uses of effects are environmental effects such as fog, snow, rain, smoke, steam, lighting etc.

10C Other types of effects are animated components to assets, such as flickering lights, the spinning of a fan, cloth blowing in the wind, cyclical movements of mechanical parts, etc.

11: Final Render

11A Once all aspect of the scene are complete, the scene can be rendered.

11B Scenes are rendered as an image sequence, and then compiled as a video sequence in Premier Pro (this is done in stage 12)

11C Low resolution render tests are done to make sure everything in the scene is correct. It is important to do low res tests, as the render time can be monitored. If some aspects of the shot are slowing down the render time, then these aspects can possibly be optimized in some way prior to final full resolution rendering

12: Compositing/Fixes (post production)

12A *Compositing (definition):* to combine multiple layers of 2D images to make a single image.

12B Image sequence is compiled into a video in video editing software, Premier Pro.

12C Any additional layers of 2D effects are overlaid onto base animation. For example if smoke simulations are too heavy to animate and as a result causes long render times, smoke may be inserted in post-production as a 2D video overlay.

12D Any large or glaring errors in the animation are re-rendered and corrected at this stage. If the error is minor, it will most likely be corrected in the video editing software.

13: Grading (post-production)

13A Lastly, the animation sequence is colour graded. This is the same process as colour grading a photo. Values, highlights, contrast, exposure, etc. are corrected and final colour values are applied to the animation.

13B A common example of colour grading is the term called *split toning*. *Split toning* is the process by which 2 main colours on the spectrum are chosen as the main luminance values (this is a purely artistic judgement), and the surrounding colour values are equalized around it. One often sees in movies a teal and orange split tone. The effect is that shadows, and darker values have a blue/teal colour value, and highlights or lighter more colourful values are equalized to orange, red, and yellow values.

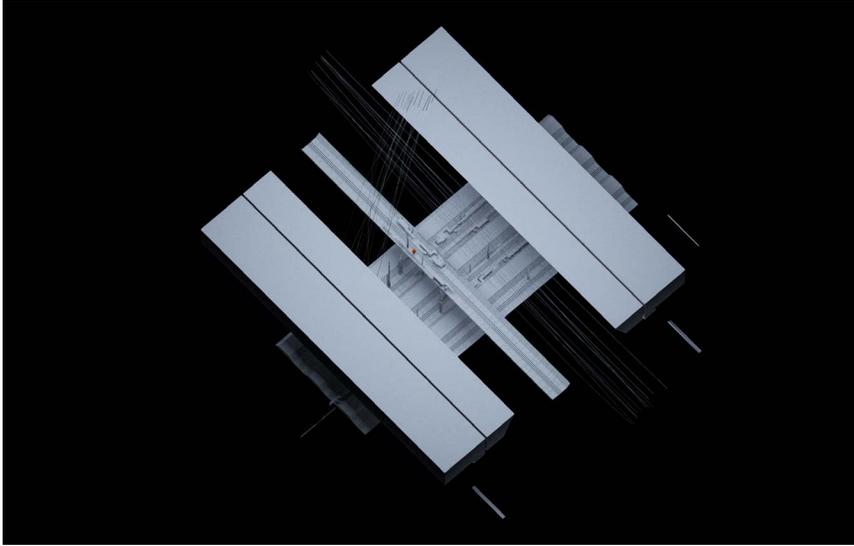


Fig. 43 Yomi, concept design

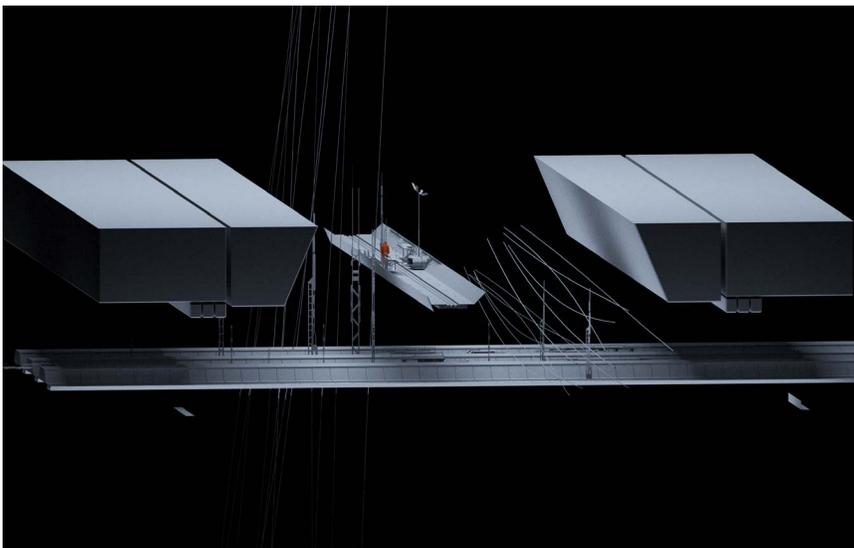


Fig. 44 Yomi, concept design



Fig. 45 Yomi, concept design



Fig. 46 Yomi, look development

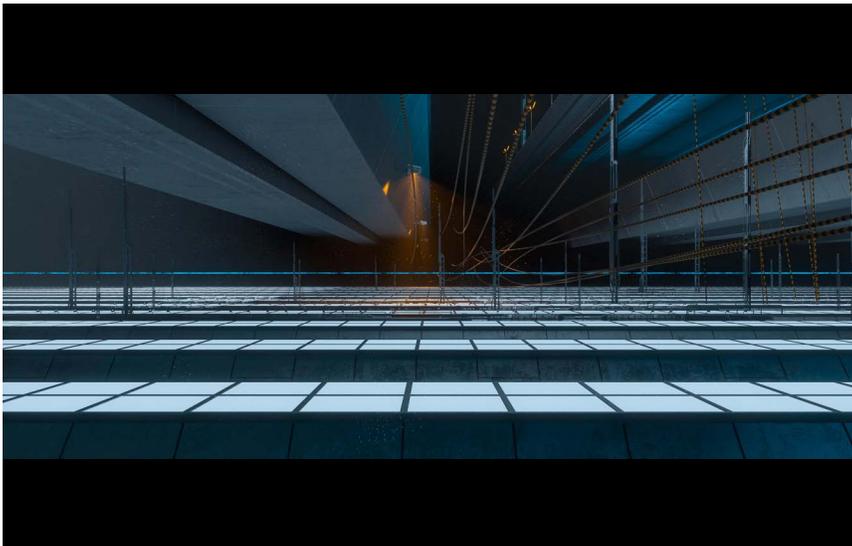


Fig. 47 Yomi, look development

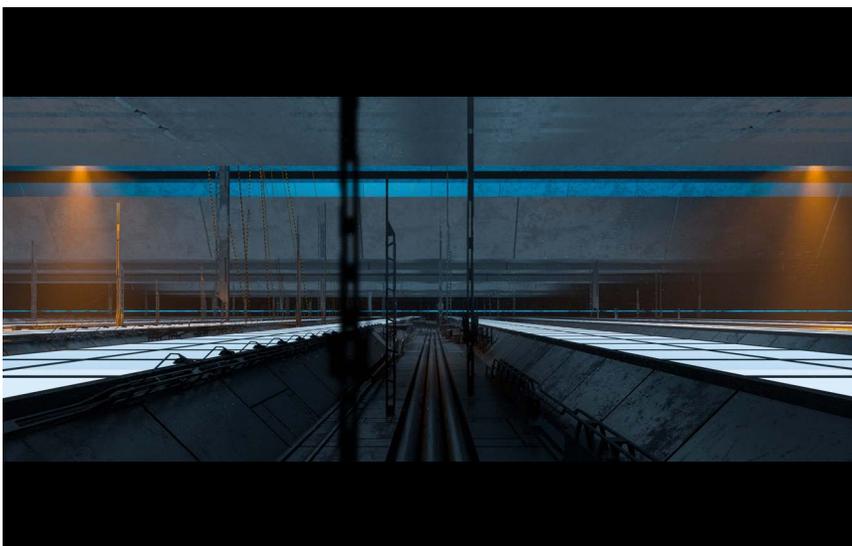


Fig. 48 Yomi, look development

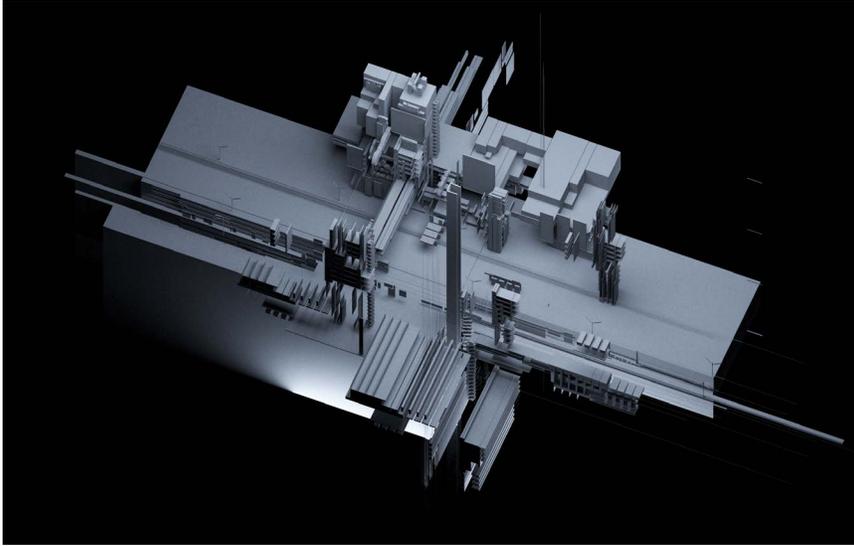


Fig. 49 Shotengai, concept design

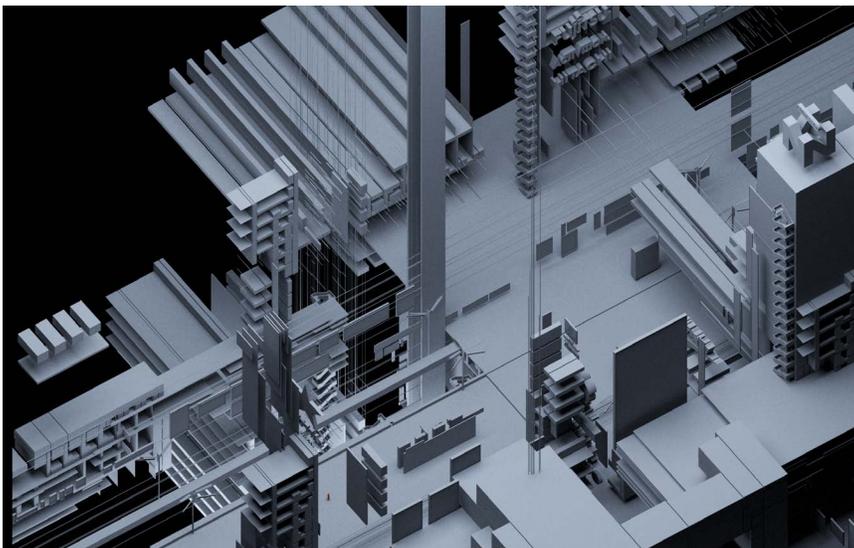


Fig. 50 Shotengai, concept design

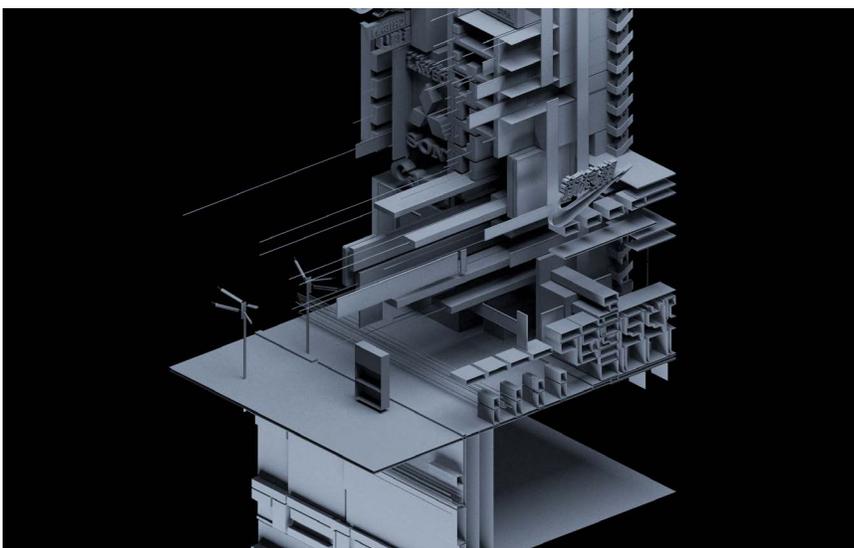


Fig. 51 Shotengai, concept design



Fig. 52 Shotengai, look development

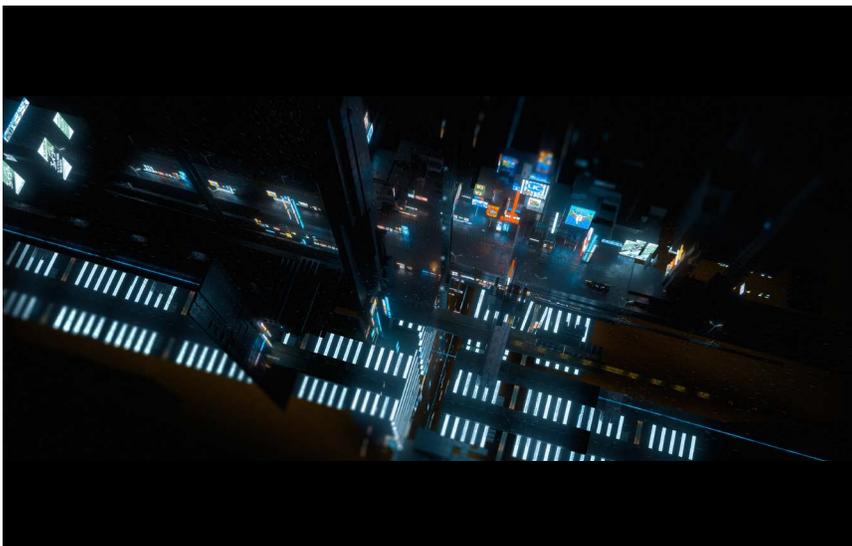


Fig. 53 Shotengai, look development

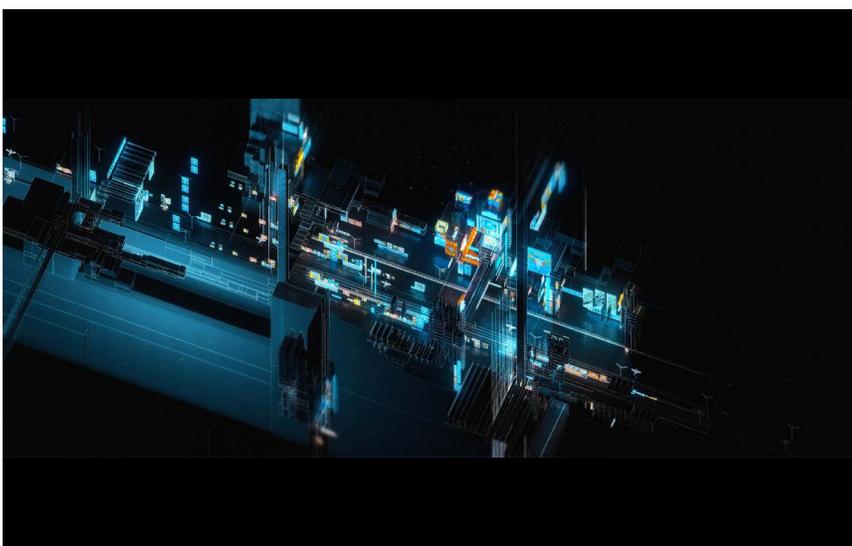


Fig. 54 Shotengai, look development

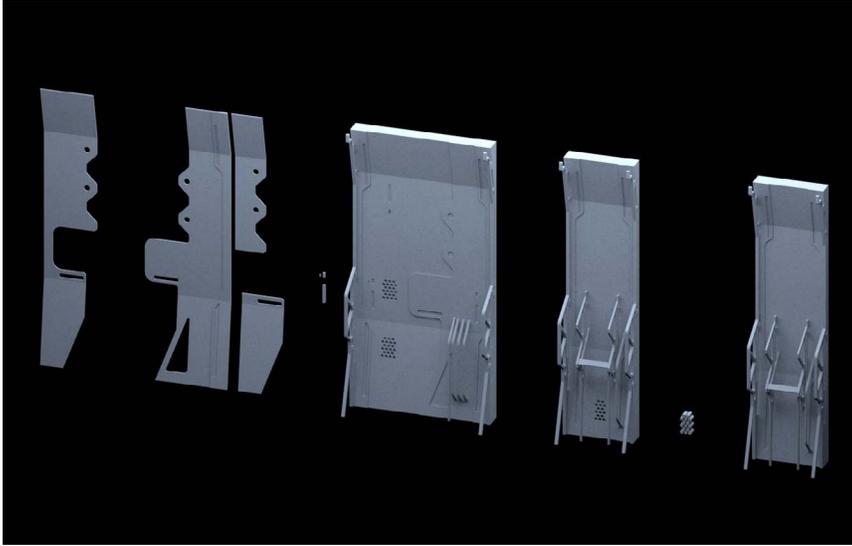


Fig. 55 Props, modular wall design

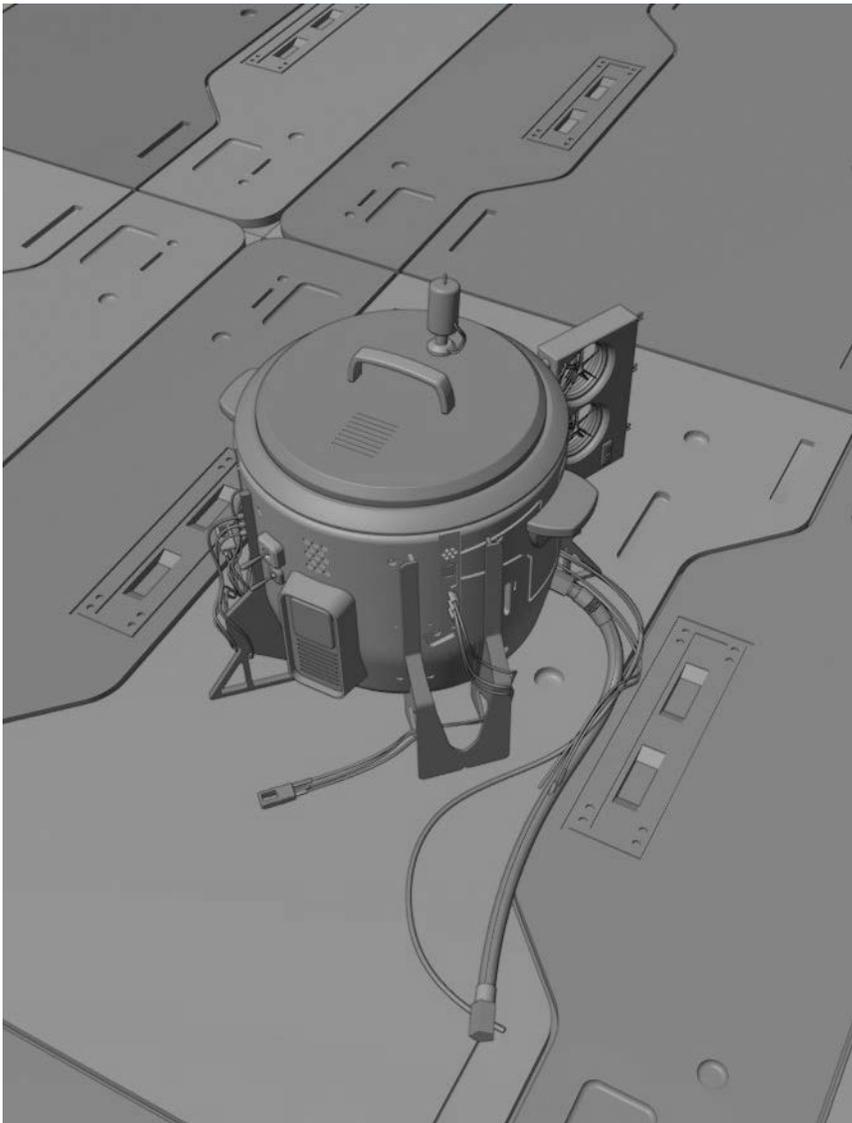


Fig. 56 Props, rice cooker



Fig. 57 Props, Takaharu's room



Fig. 58 Props, Takaharu's room



Fig. 59 Props, Takaharu's room

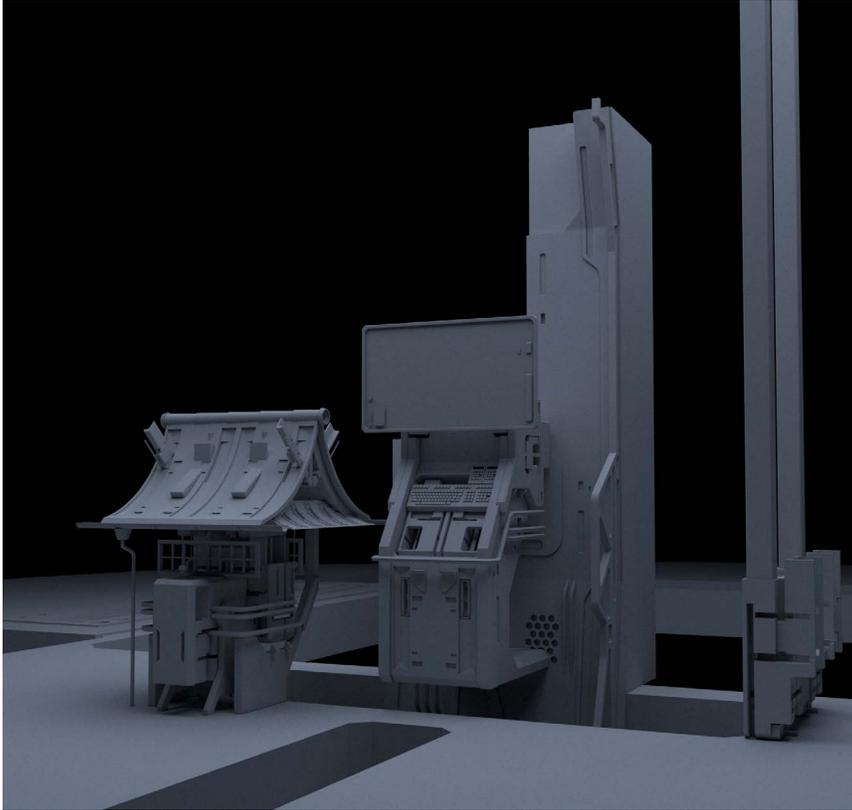


Fig. 60 Props, shrine, Kawashima Industry Computer unit, and Yomi gate

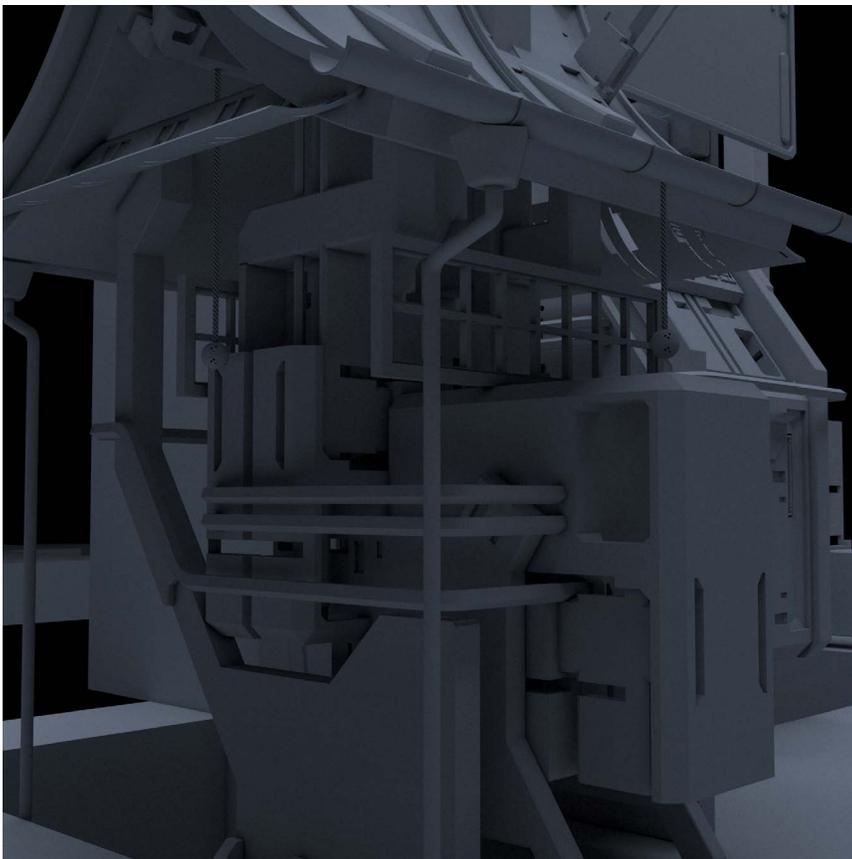


Fig. 61 Props, shrine detail

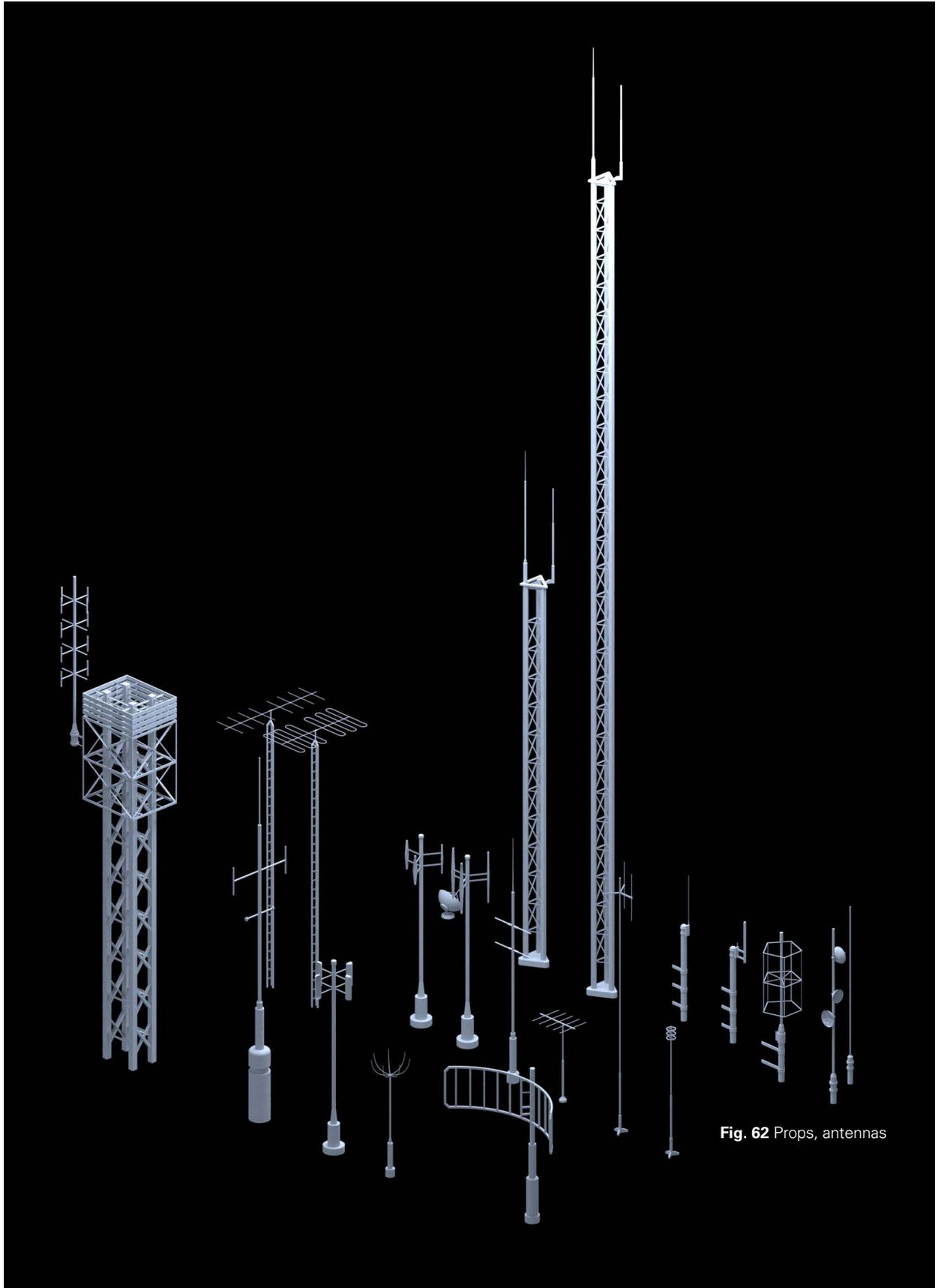


Fig. 62 Props, antennas

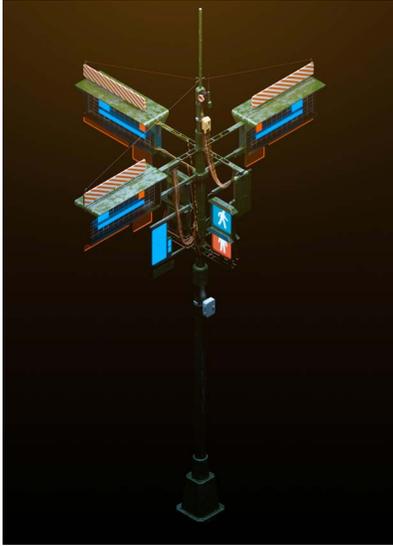


Fig. 63 Props, light post

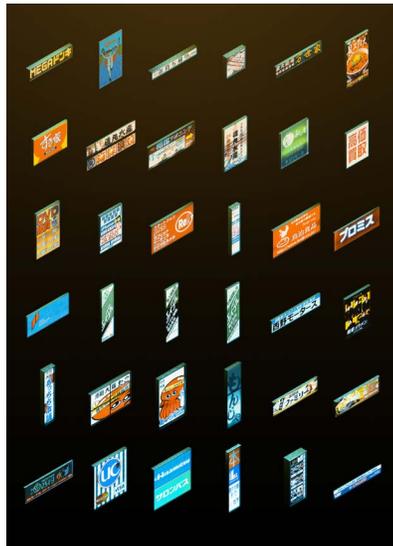
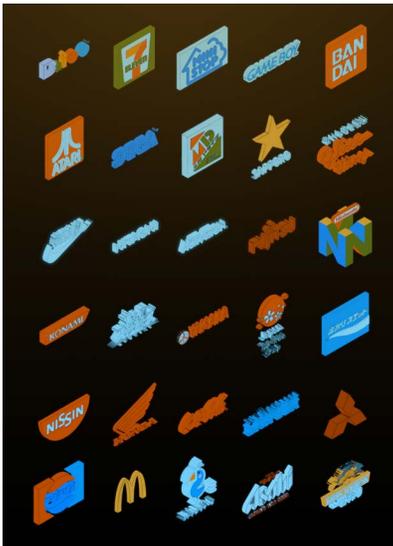


Fig. 64 Props, signs

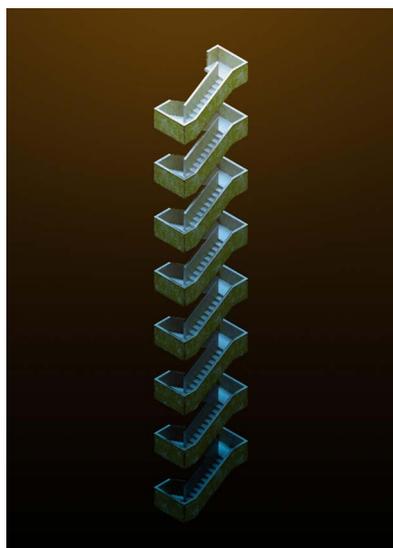


Fig. 65 Props, wires, metal panels, and egress stair

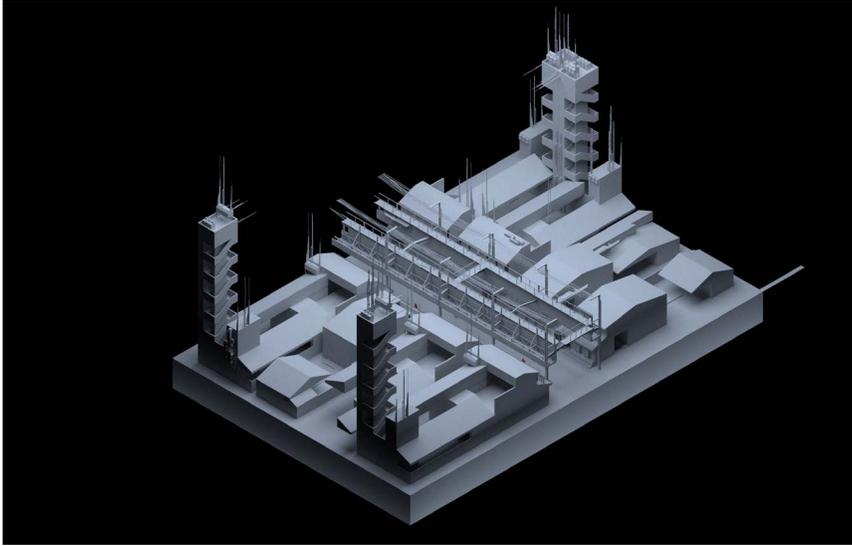


Fig. 66 Set construction, early concept design of shotegnai massing

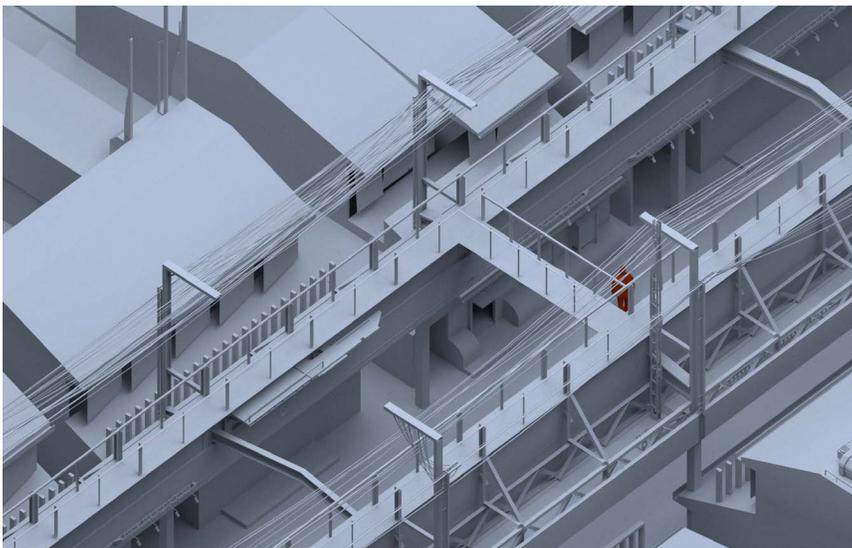


Fig. 67 Set construction, early concept design of shotegnai massing detail

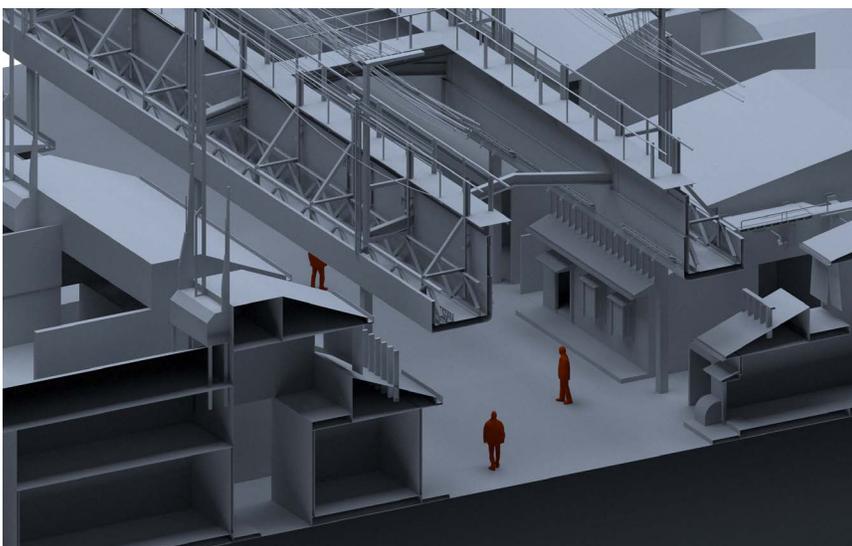


Fig. 68 Set construction, early concept design of shotegnai massing detail

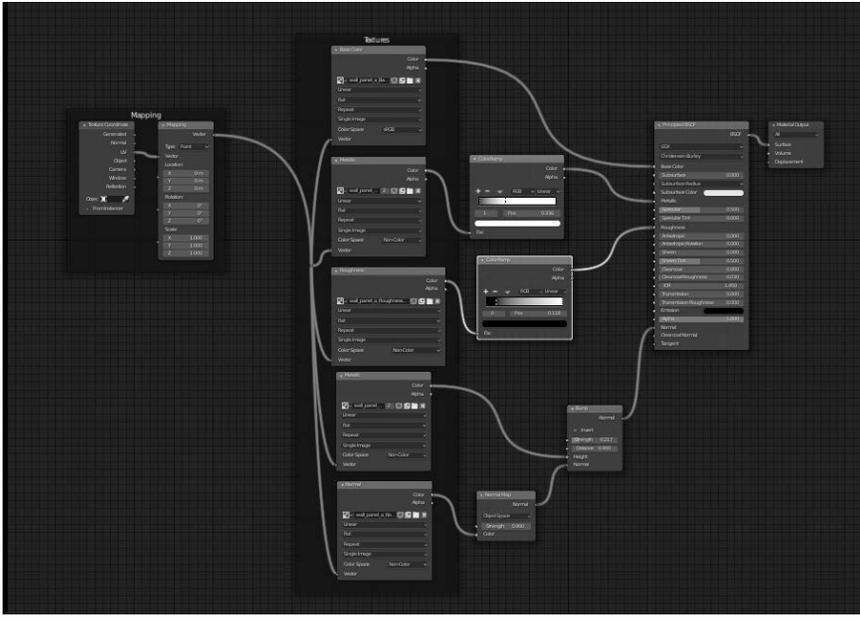


Fig. 69 Texturing, example node set-up in Blender

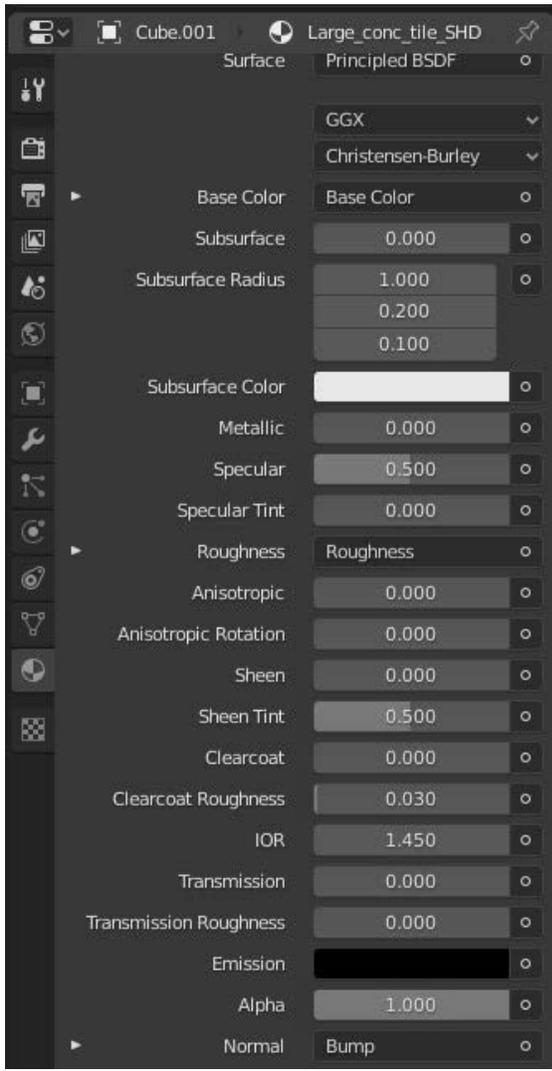


Fig. 70 Texturing, principled shader options in Blender



Fig. 71 Texturing, geometry organization in Blender



Fig. 72 Texturing, rendered view-port with textures applied to geometry

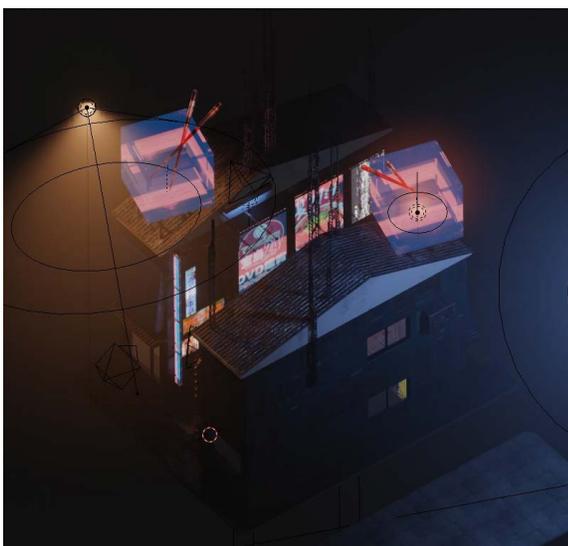


Fig. 73 Texturing, example scene set up with lights and volumetric lighting

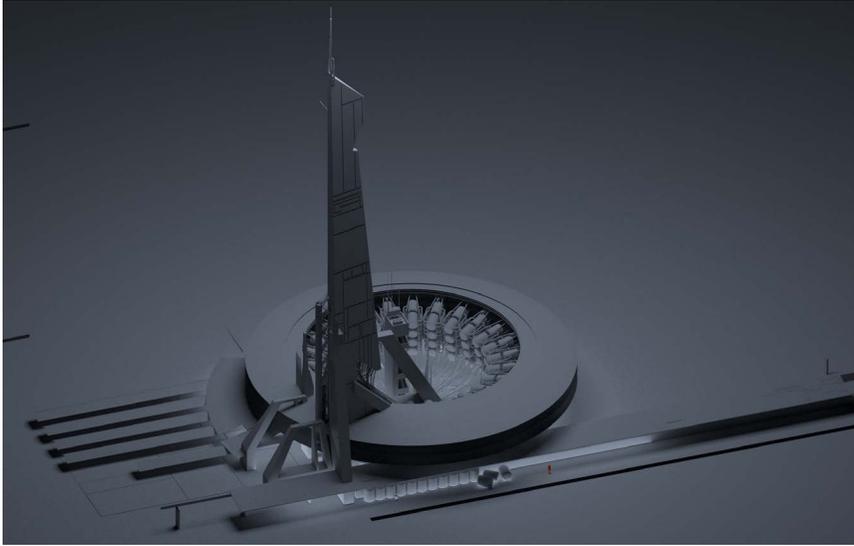


Fig. 74 Set construction, early concept of agricultural factories

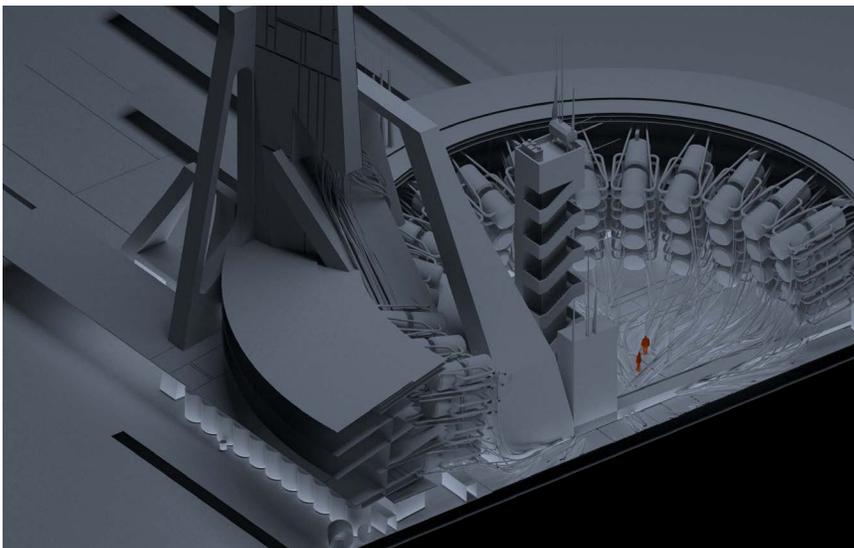


Fig. 75 Set construction, early concept of agricultural factories

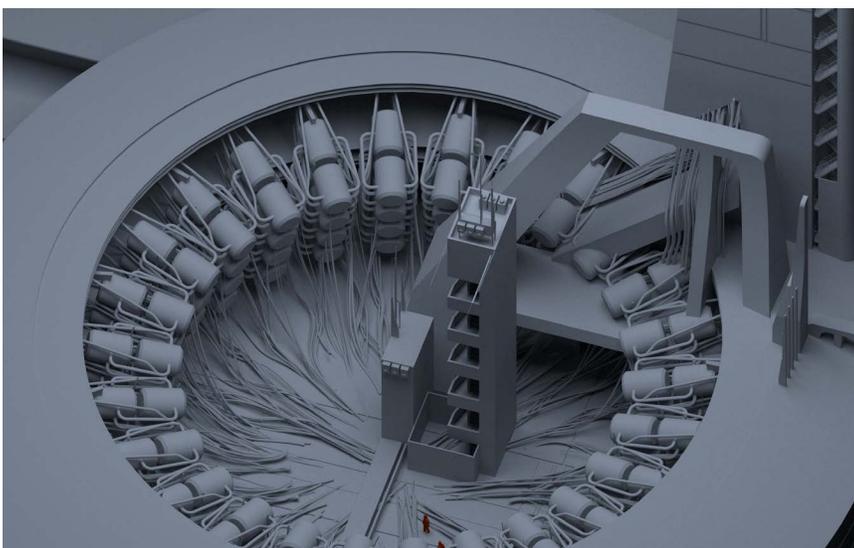


Fig. 76 Set construction, early concept of agricultural factories

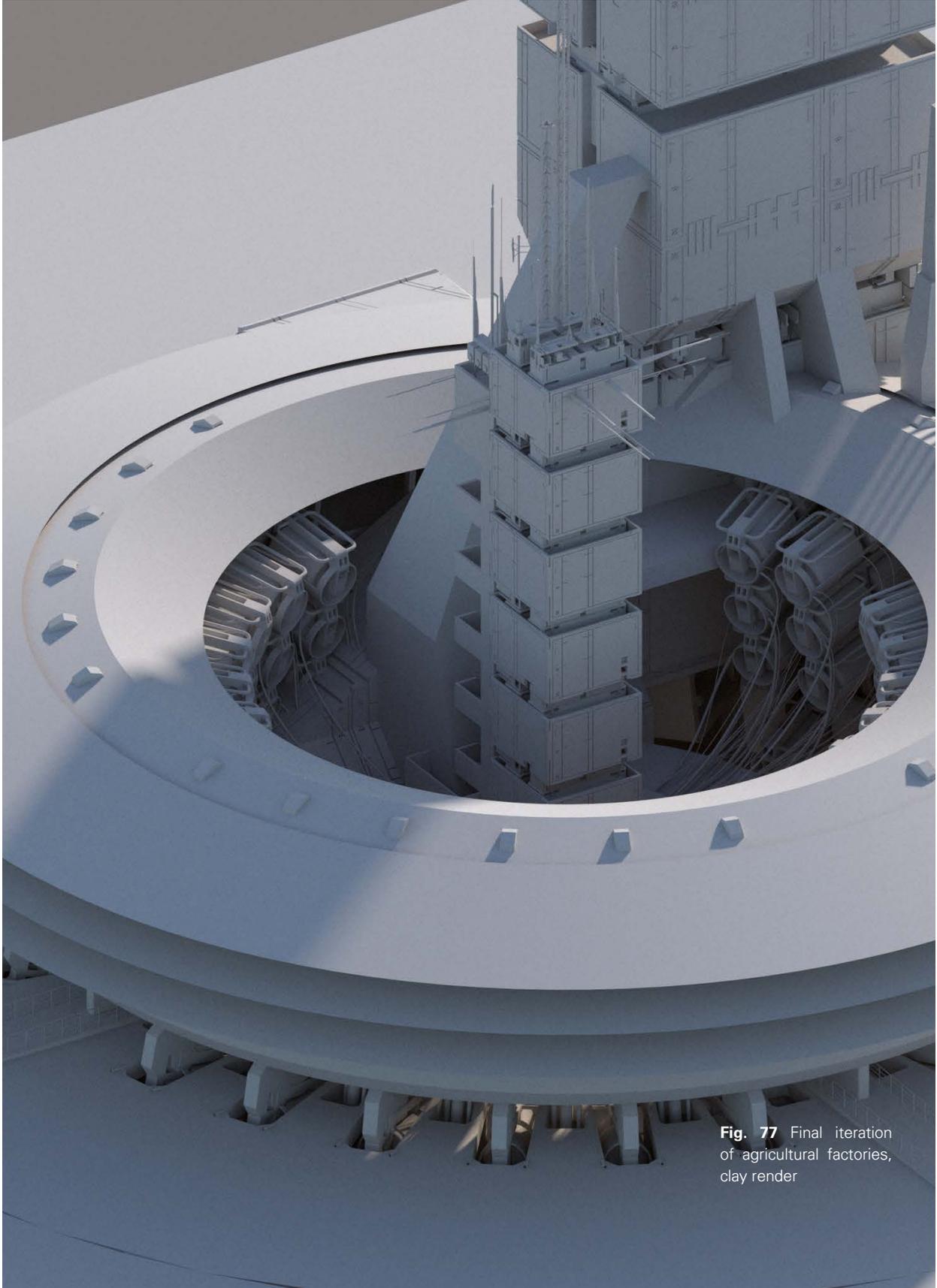


Fig. 77 Final iteration of agricultural factories, clay render

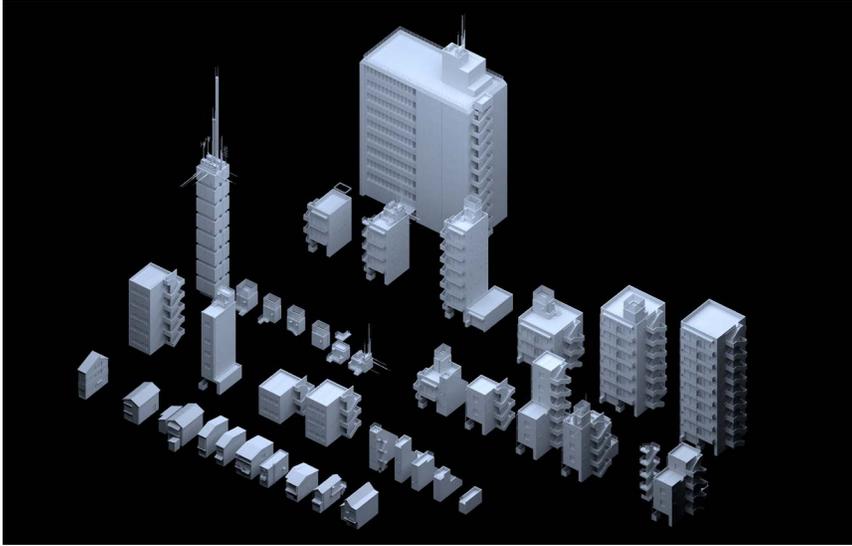


Fig. 78 Assets, buildings, small, medium, large scales

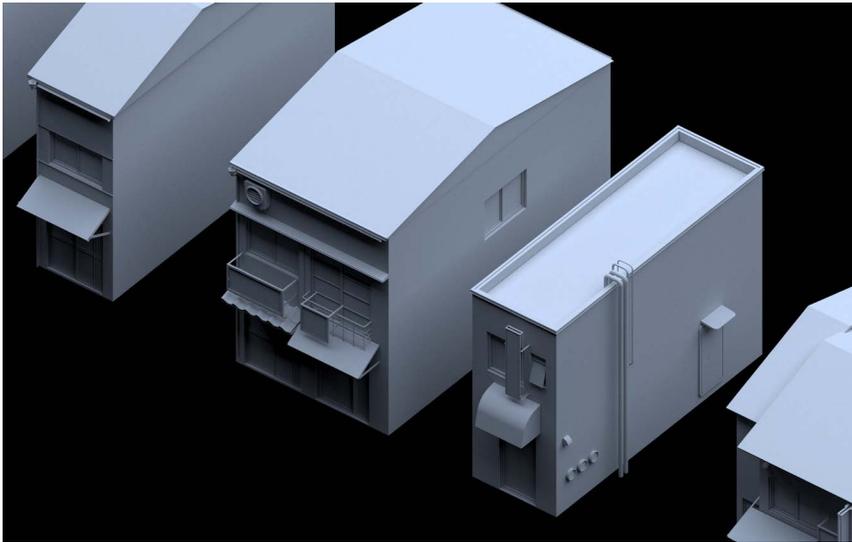


Fig. 79 Assets, small building detail

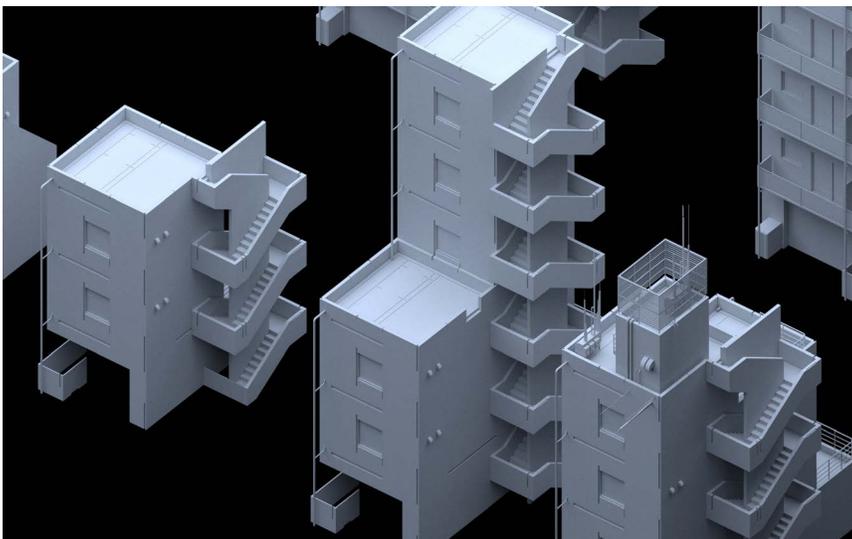


Fig. 80 Assets, small building detail



Fig. 81 Textured building assets in Blender



Fig. 82 Textured building assets in Blender



Fig. 83 Textured building assets in Blender



Fig. 84 Textured assets in Blender



Fig. 85 Textured assets in Blender

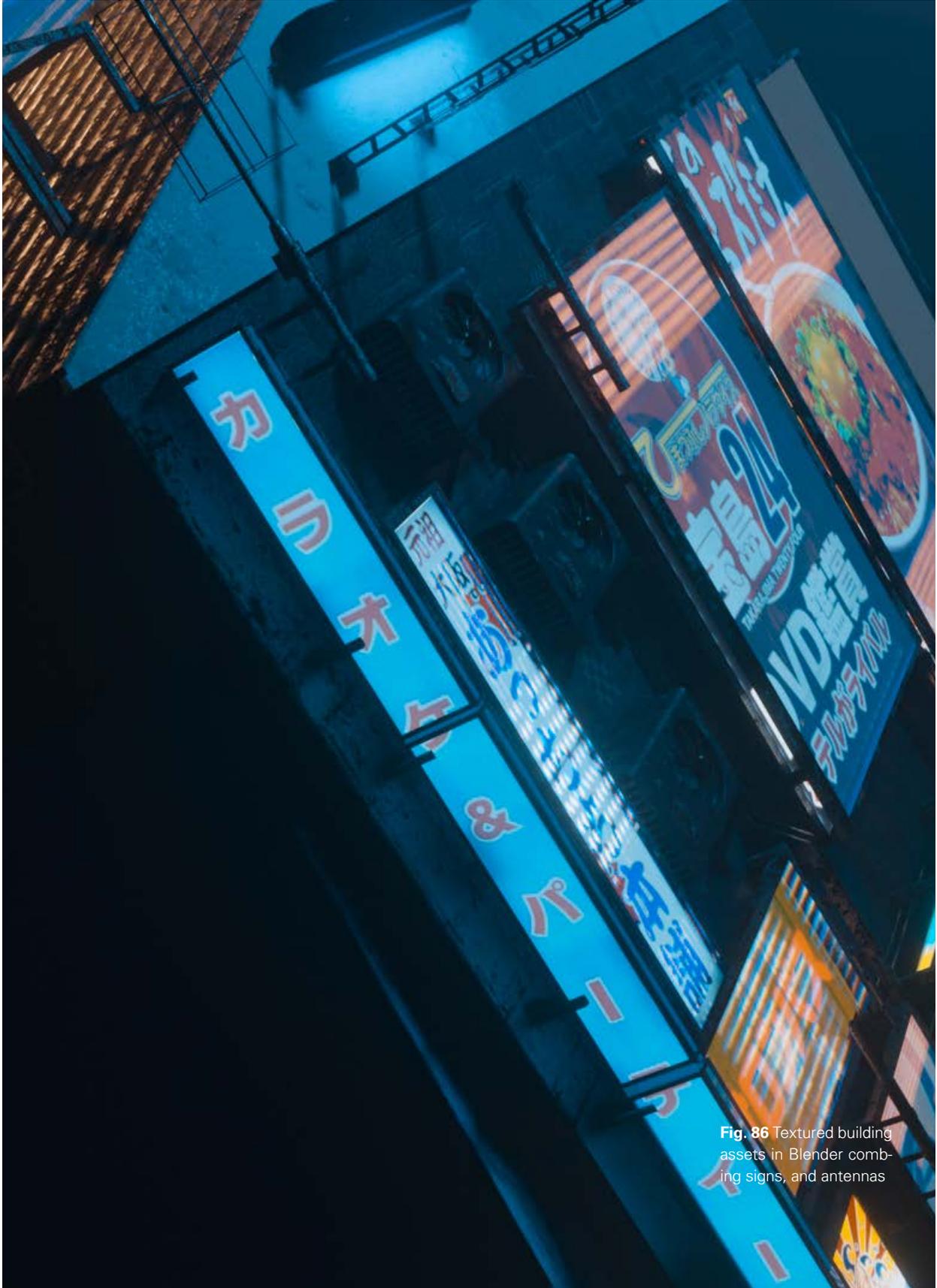


Fig. 86 Textured building assets in Blender combining signs, and antennas

S. C.	PICTURE	NOTE	DIALOGUE	S	M
8		climp caven			
9					
6					

Fig. 87 Storyboard layout

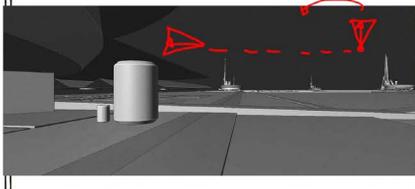
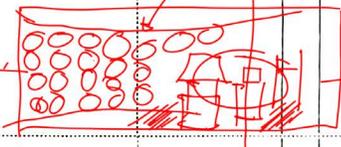
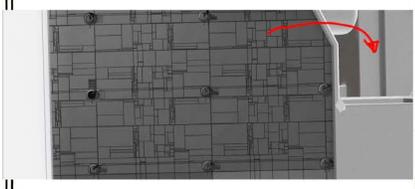
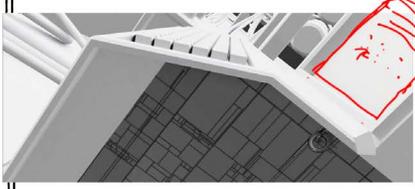
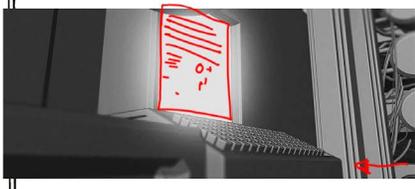
S. C.	PICTURE	NOTE	DIALOGUE	S	M
5					
		<p>fix composition</p> <p>catch sky in comp</p> 			
6		<p>+ tilt +</p> <p>pan</p>			
		<p>-animate screen code!</p>			
7		<p>-screen animation</p> <p>pan left no z shift.</p>			

Fig. 88 Storyboard layout

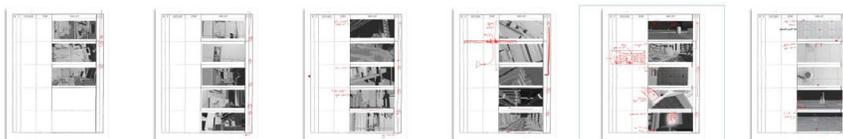




Fig. 89 On site photos, used for story boarding and composition ideas



Fig. 90



Fig. 91



Fig. 92



Fig. 93



Fig. 94



Fig. 95



Fig. 96

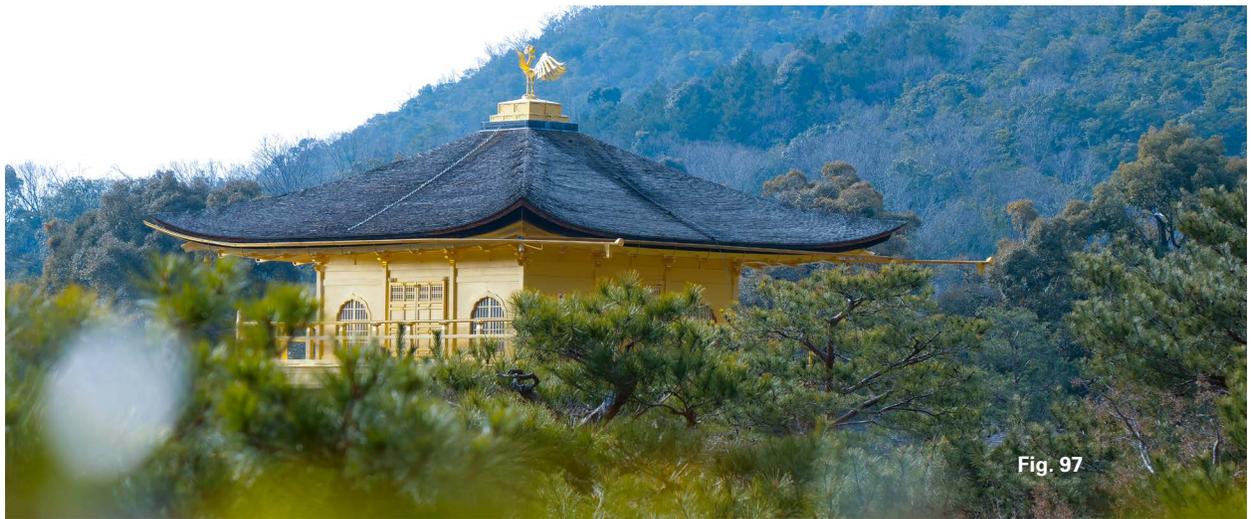


Fig. 97



Fig. 98



Fig. 99



Fig. 100



Fig. 101



Fig. 102

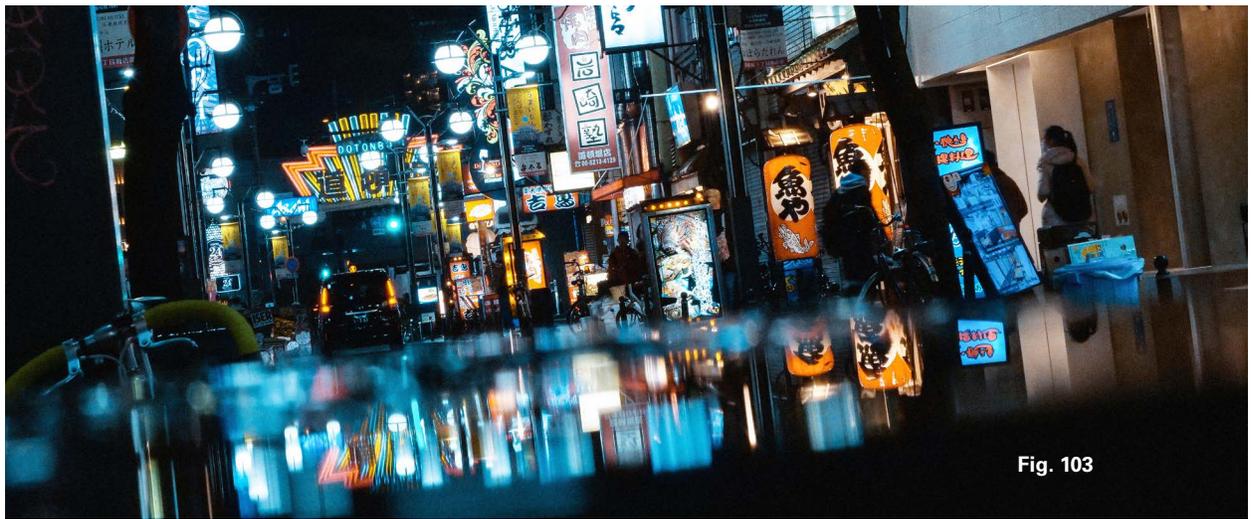


Fig. 103



Fig. 104

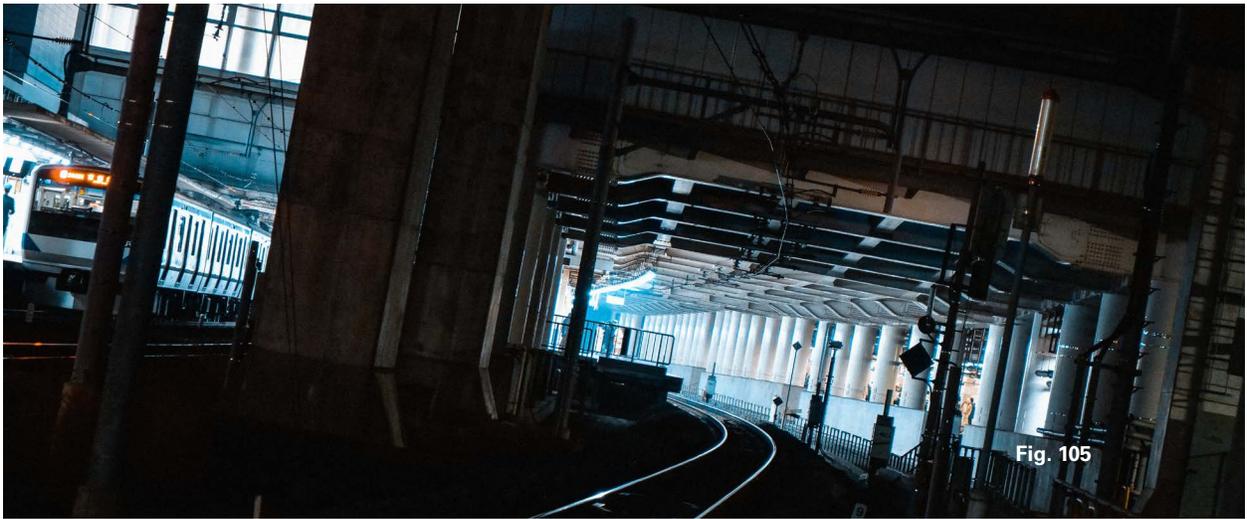


Fig. 105



Fig. 106

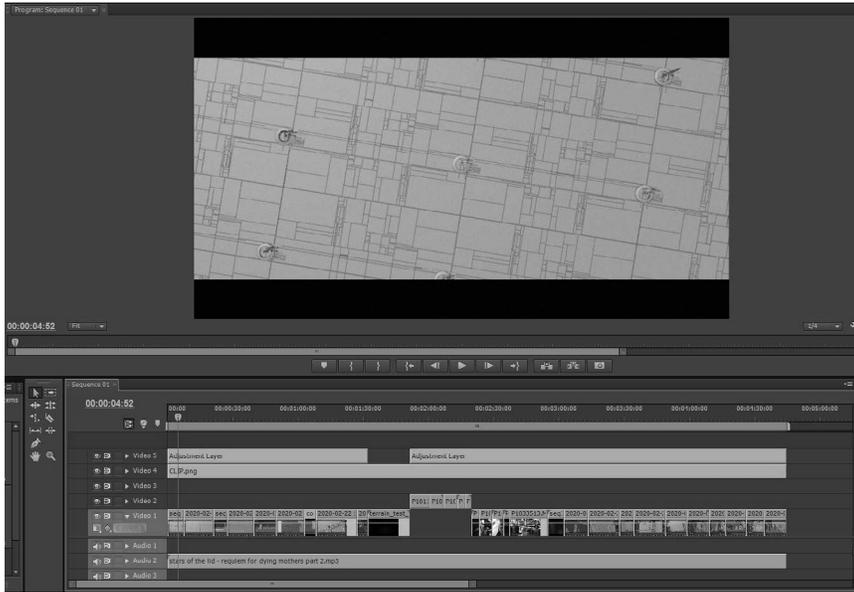


Fig. 107 Pr-visualization, screen recordings were used and compiled in Adobe Premier to layout the animistic

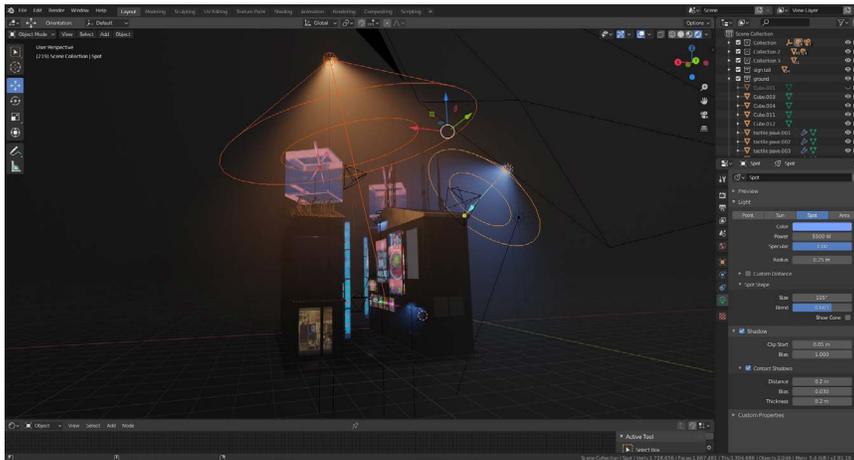


Fig. 108 Lighting, scene in Blender, with multiple light sources, emissive signs, and environmental lights

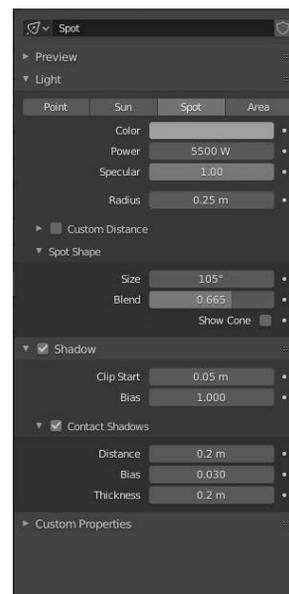


Fig. 109 Lighting, Blender interface for typical light options

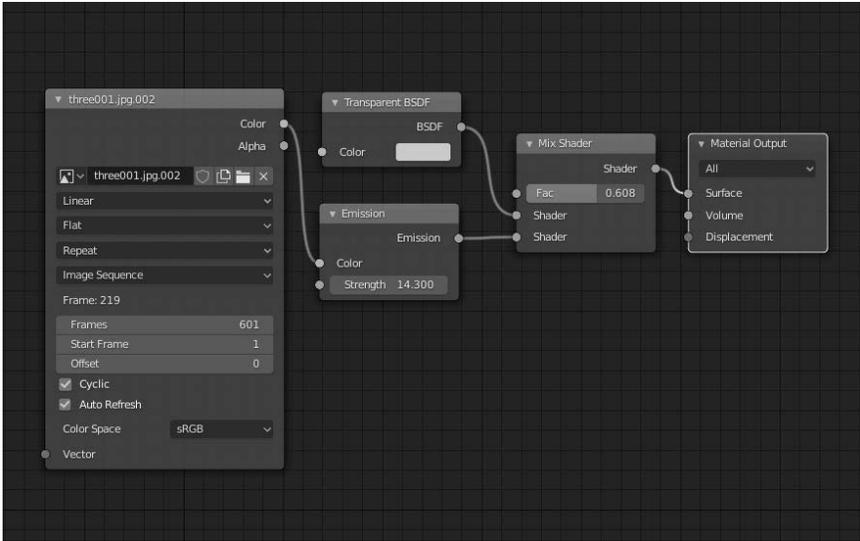


Fig. 110 Effects, A common effect that I used throughout the film was an image sequence imported as a texture. On site video footage was also used as a “video texture” displayed on digital billboards in the scene

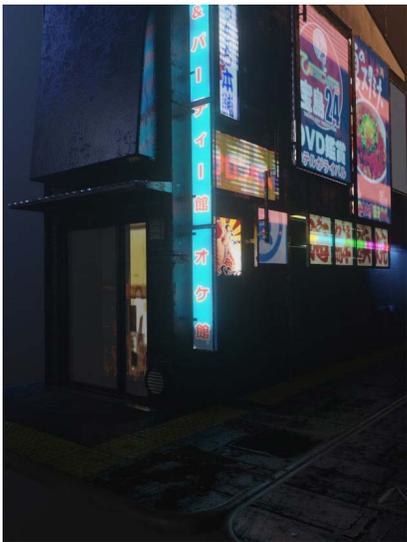


Fig. 111 Movie poster 1



A YOSHIMURA LTD. PRODUCTION "SHOTENGAI" ; MICHAEL YOSHIMURA FILM ORIGINAL BY MAX COPPER VISUAL EFFECTS BY M. YOSHIMURA
 商店街 PRODUCTION DESIGNER M. YOSHIMURA DIRECTOR OF PHOTOGRAPHY M. YOSHIMURA DIRECTED BY MICHAEL YOSHIMURA

15.04.2020

Fig. 112 Movie poster 2



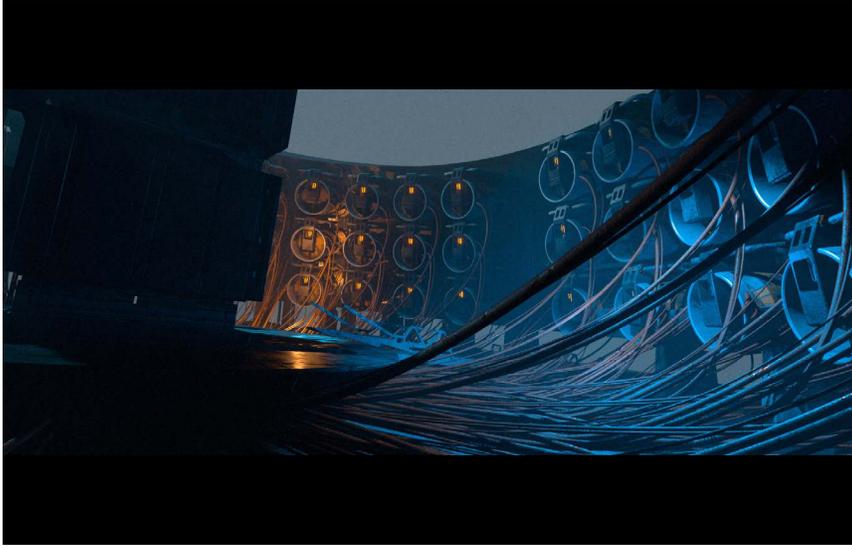


Fig. 114 Pre-final lighting and composition render tests

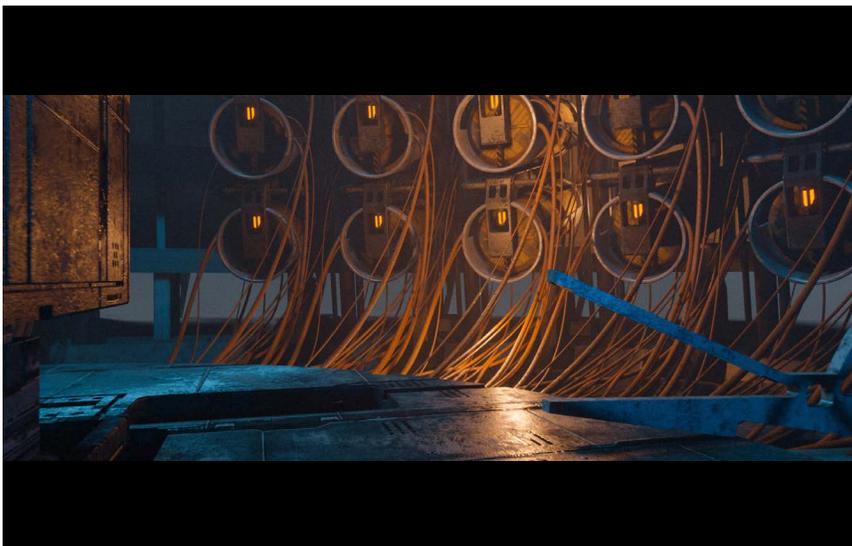


Fig. 115 Pre-final lighting and composition render tests



Fig. 116 Pre-final lighting and composition render tests



Fig. 117 Pre-final lighting and composition render tests

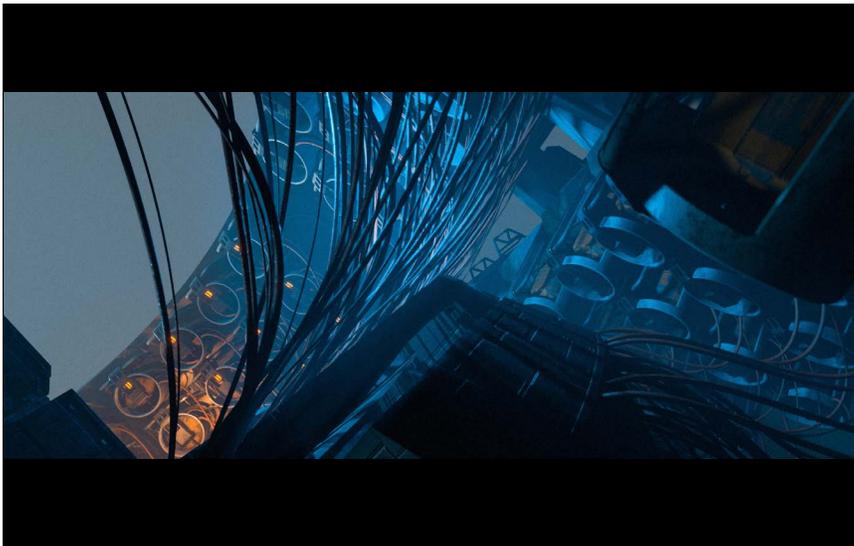


Fig. 118 Pre-final lighting and composition render tests

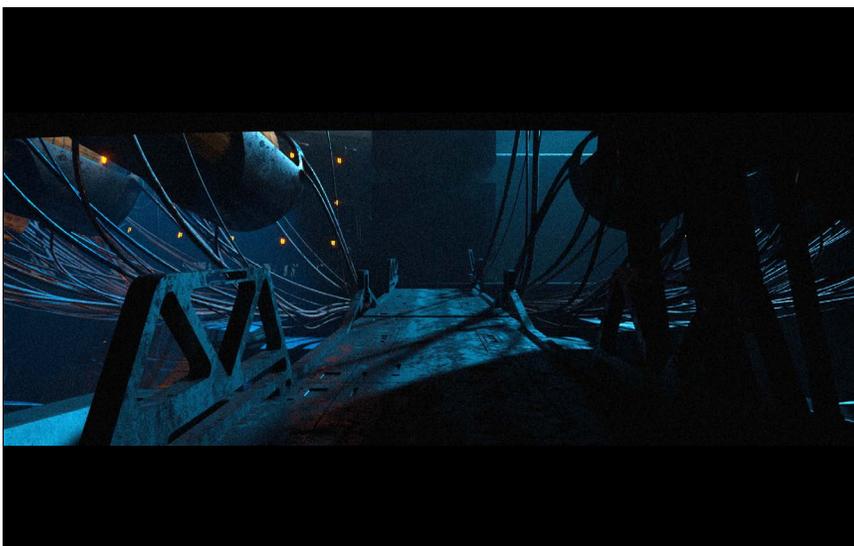


Fig. 119 Pre-final lighting and composition render tests

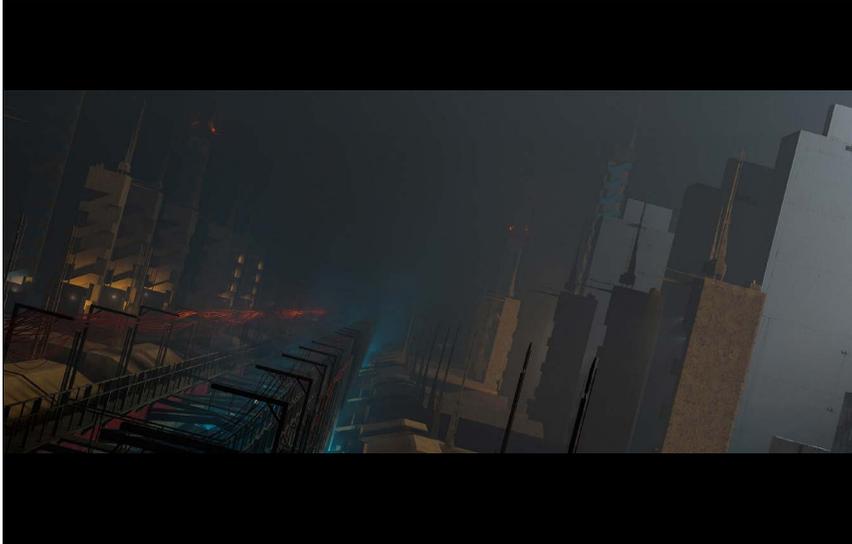


Fig. 120 Pre-final lighting and composition render tests

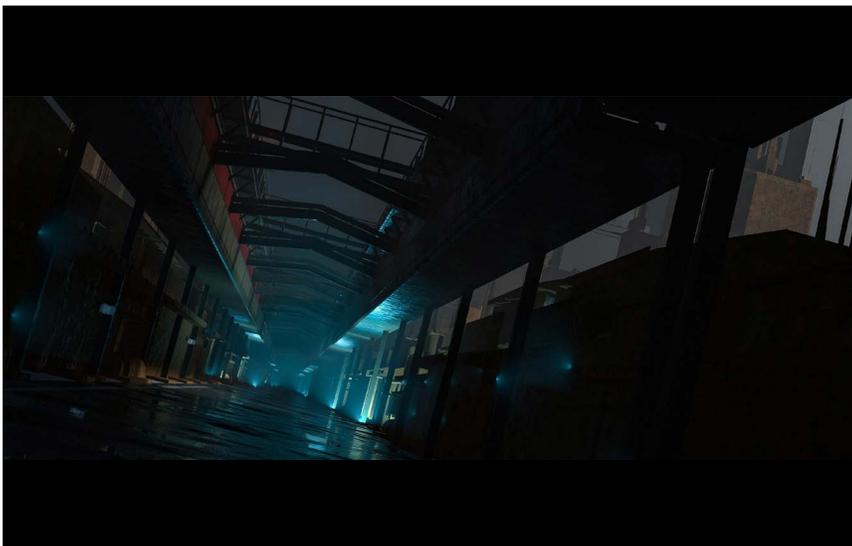


Fig. 121 Pre-final lighting and composition render tests

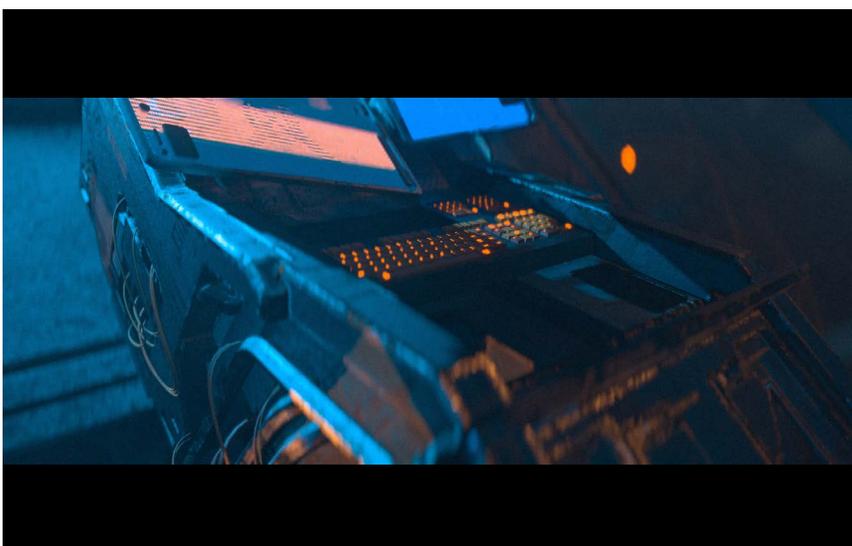


Fig. 122 Pre-final lighting and composition render tests

5.4 Field Notes: On Site Filming, Photography & Computer Animation

The following section of the thesis describes my methodology while filming on location in Tokyo, Kyoto, and Osaka, and computer graphic (CG) animations. The most important aspect that I was trying to capture was the *mise-en-scene* of the location. The *mise-en-scene* is term used in cinema to describe the overall atmosphere, time, and space of a film's visual language. The "atmosphere" of Japanese urbanism, in particular the *shotengai*, was documented through photography and video media. The complex architectural, spatial, and graphic language of Japanese urbanism is dense and ad-hoc. My personal interpretation is that Japanese urbanity creates an intimate yet overwhelming spatial sensation at times. Through the medium of film, it was my goal to capture these nuances in a manner to highlight the spaces unique *animated* and *techno-animistic* qualities.

Equipment Used:

Camera: Panasonic GH5 & Leica 12-60mm lens

Stabilizer: Zhiyun Crane Plus (3 axis gimbal)

Google Maps Street View was an invaluable asset as to finding *shotengai's* and areas of interest for filming. My process of filming and documenting the atmosphere of the site was as follows:

1. Initially I would walk the length of the *shotengai*/shopping street as well as the adjacent areas. This allowed me to essentially scout for locations of interest. During this initial walk-through of the site I would take photographs of either perspectival views, macro shots of unique items such as signs, lights, etc, or orthographic photos of building elevations.
2. Next, I would begin filming spaces of interest which I felt embodied the spatial language of the urban area. I would usually start filming hand held sequences in which I would hold the camera still. Using my artistic judgment, I would experiment with changing the lens length to achieve wider or closer styled shots as desired.
3. The hand held sequences would be followed by stabilized sequences through the use of my gimbal. Much of these sequences consisted of walking through the urban area. I would often pan the camera left/right to document interesting spatial conditions, and also how street intersects the *shotengai*.

4. The framing of each shot was considered through the well-known *rule of thirds* as a basic compositional guideline. To create the illusion of depth other simple techniques such as experimenting with depth of field through aperture size were also used to capture image and video content.

The previous four points describe my technical approach to the shots and their creation. While these metrics are useful when I initially explore the sites they do not describe the methods of capturing intangible elements: most importantly its atmosphere. There are numerous creative instincts which I use when trying to capture atmospheric qualities in a photo, video, and even my computer animations. Next, I will outline some of my artistic positions, and differentiate between creating shots in real-life versus computer animation.

As someone enamored with computer graphic imagery (CGI) techniques, filming in the real world is essentially instant CGI - everything is already there. The humans, the architecture, the lighting, assets, etc. is already laid out with all its beautiful imperfections. When I film in the real world I use a "backwards" approach to what I think about when I use CGI: instead of constructing the atmosphere, I try to extract the atmosphere. The extraction of intangible things such as touch, smell, taste, and sound all contribute to this atmosphere or *mise-en-scene* which allow the space to tell a story.

The plethora of things found when on-location can be used to frame or bring attention to certain elements of a space's atmosphere. In my film *Shotengai*, space in future Japan is infused with technology and as such has an embedded spiritual essence. Communicating these ideas of a *techno-animist* architecture was the key device when creating/filming spaces and sequencing the images within the narrative. In my film, I perceived *techno-animist* space as one which can be vast and also intimate.

When filming in Japan, I sought to engage spaces that have a density and scale relating to its architecture and also its surrounding environments. This density could be achieved by an endless entanglement of utility poles and wires, or advertisement signs at every scale imaginable. These objects are often seen in small narrow streets: types of spaces which are both intimate and labyrinthine in nature. When filming, I zoomed into these spatial clusters of building and infrastructure which allowed for the image to carry an intimate yet observational experience, one in which the viewer could reach out and touch their surroundings. When experiencing these dense cluttered urban spaces in real life (spaces such as seen in figures 101-103) your senses can be over-stimulated at times. The infinite neon signs, wires, smells, cars passing by, and people going about their

business all contribute to this sensory overload. The simple technologies and phenomenon described literally animates the space when observed through the medium of film, and creates the atmosphere which I describe as *techno-animist* space within the context of this thesis. The same elements which contributed to the spatial and atmospheric qualities in the real world footage where also translated to the CGI sequences.

Techno-animist space can also appear as vast and endless. The agricultural landscape and underground infrastructure is depicted from distant vantage points, with slow sweeping pans and tilts. In these sequences of my film, the human body is meant to feel insignificant against the massive scales of infrastructures and land depicted. The rhythm and constant patterns of the architecture combine to create this future landscape which seems to stretch on forever. As these shots were created entirely in CGI, it was important to keep visual continuity with the sequences that were filmed in the real world. I was conscious to refrain myself from “impossible” camera movements, or camera movements that could not be captured with traditional film gear. I used simple pans, tilts, dolly, and truck movements in my animations, all camera movements which are the most basic of real-world filming techniques. As our eyes are trained in viewing these types of movements within the world of cinema, these common camera movements which I use brings a more intimate and ultimately more realistic feel to how the viewer perceives my film.

I have described earlier that *Shintoism* lacks hierarchy, and allows for a blurring of “animated things” especially seen in Japanese fiction narratives. How to depict this constant interweaving of boundaries was a constant question I had to deal with throughout the creation of my film. Through careful choreography of the camera’s movements boundaries and thresholds of spaces within the film are seen as fluid and interchangeable. Spaces and atmospheres conceptually blurred through the relations of how they were captured on film. The camera acted to harmonized each picture, and in its own right was a protagonist of sorts. While the voice of Takaharu narrates the film, it is the camera’s movements which transport and guild the body of the viewer to spaces in future Japan.

In my film *Shotengai*, space and its *techno-animist* atmosphere is the overarching theme which is being constructed. In conclusion the methods and techniques used in both on-site filming and in CGI are congruent in their execution, yet both have their respective differences. On-site filming provides the textural depth of a space. The filming of it extracts its *mis-en-scene* and presents it in a new light within the context of the film narrative. Sequences created in CGI use a set of principles derived from the real-world, even though the computer allows for total freedom and manipulation. Ultimately, as with any film, there are multiple readings

with regards to how one can perceive it. In my thesis, I had the joy and responsibility to play both *auteur* and director to my film. It was my goal to choreograph the cinematic image to display the rich variety of architectural scales in future Japan. As *techno-animism* allows for technology to have a *kami*, the imagery in the film highlights this cultural trope, allowing for the space to take on the role of a character - that of equal importance to Takaharu the narrator. Never revealing itself in entirety, the character of *techno-animist space* ominously appears as ever present, one who's pulse continues to beat on.

Chapter 6

Shotengai - The Film

6.1 Video Link & Film Stills

This section provides stills from my thesis short film in chronological order. Paired with each image is its respective text.



Hyper-link to film - [SHOTENGAJ](#)

Vimeo Link:

<https://vimeo.com/407646594>

YouTube Link:

<https://www.youtube.com/watch?v=KRcIPIUK9c0c>

S H O T E N G A I

Fig. 124 Sequence 01

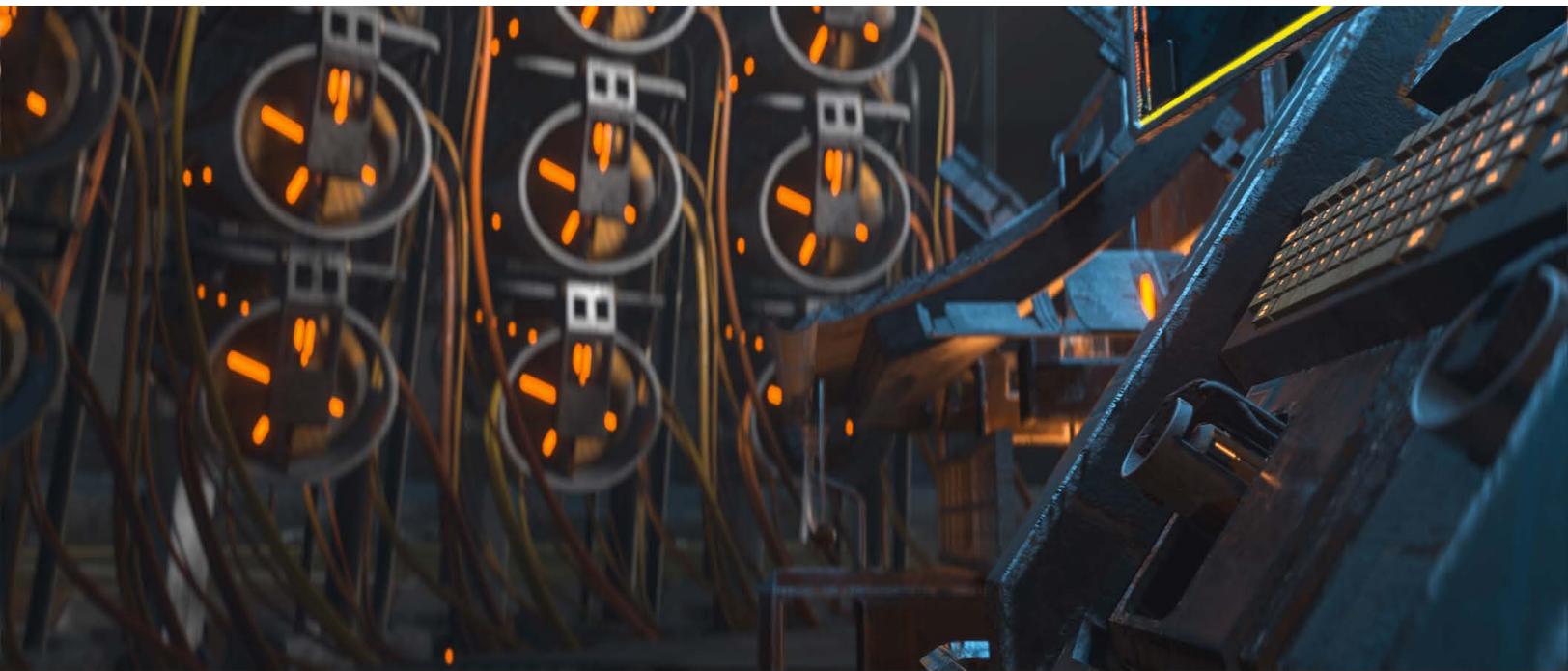


It seems like sameness every day.

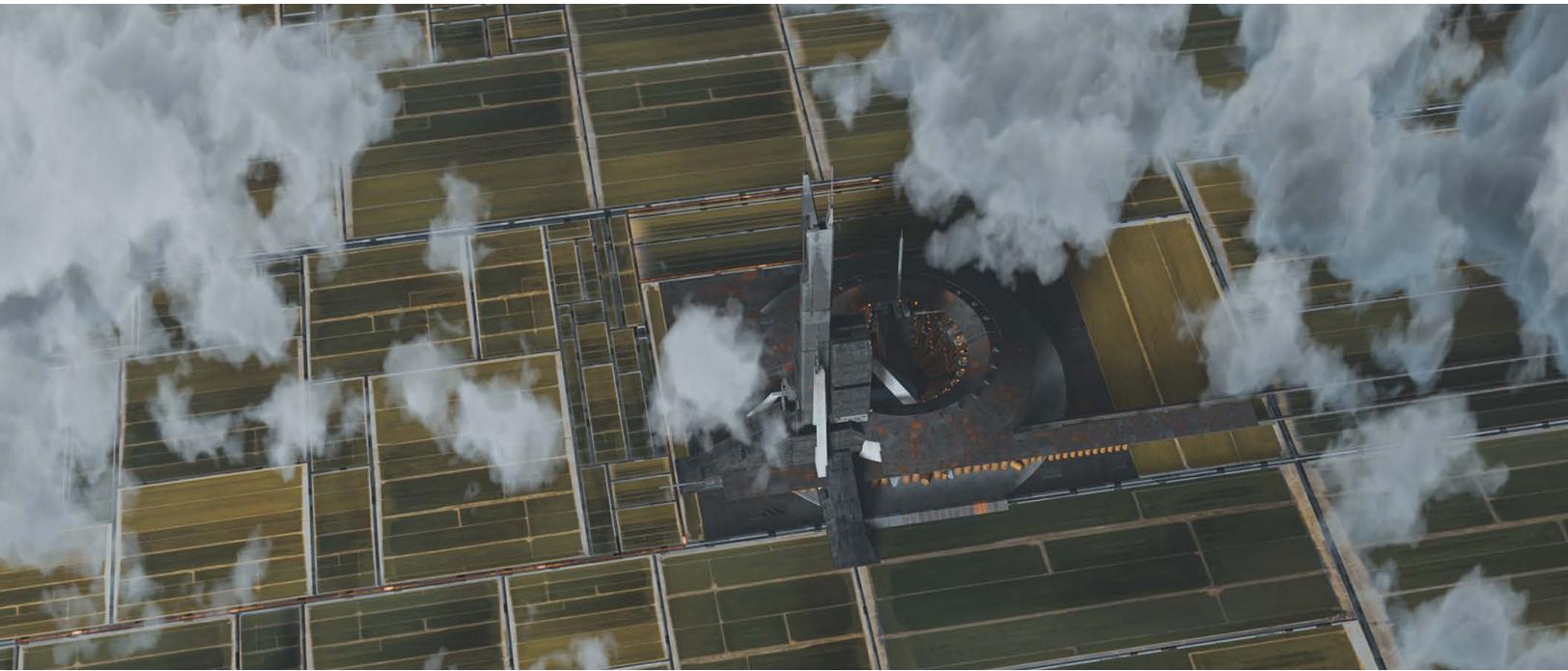
Fig. 125 Sequence 02



Singularities or irregularities within the code keep us busy.



Sometimes days go by without any anomalies happening. It feels mind-numbingly boring and it pays shit, but hey then again were doing next to nothing.



I can't even remember how I got into this job in the first place.



I guess that close call with Kawashima Industries was too close a call to keep doing this for the black market.



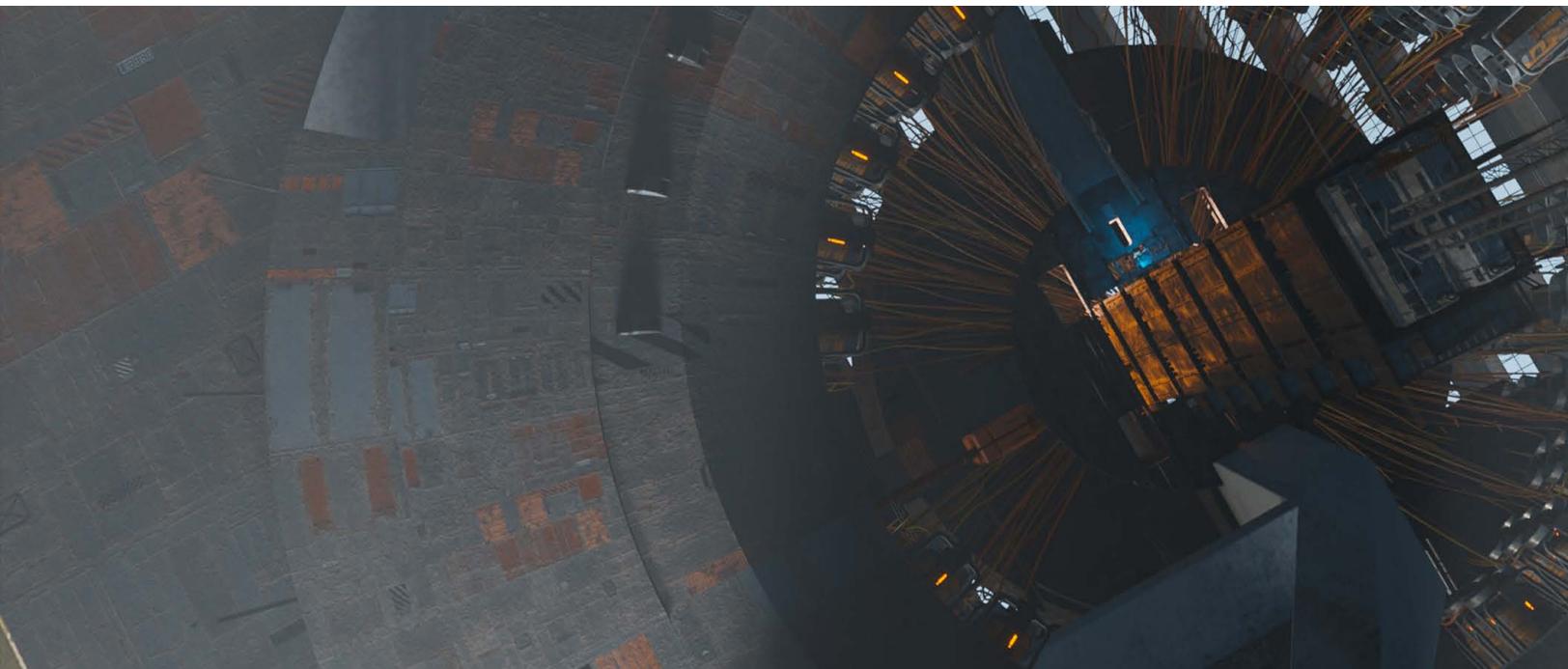
Excitement was always at full tilt and the money was rolling in, but my mind was constantly spinning out of control.

Anxiety...don't get caught...don't get caught



Do I ever wonder if these things even exist?

Fig. 131 Sequence 07.1



...All the time, they seem to keep us alive, and there haven't been any blips in 50 years...



People call them "sentinels" of the land, their hulking bodies a silhouette of over engineering...

Fig. 133 Sequence 09



Everything, engineered, manufactured, produced...

Fig. 134 Sequence 09.1

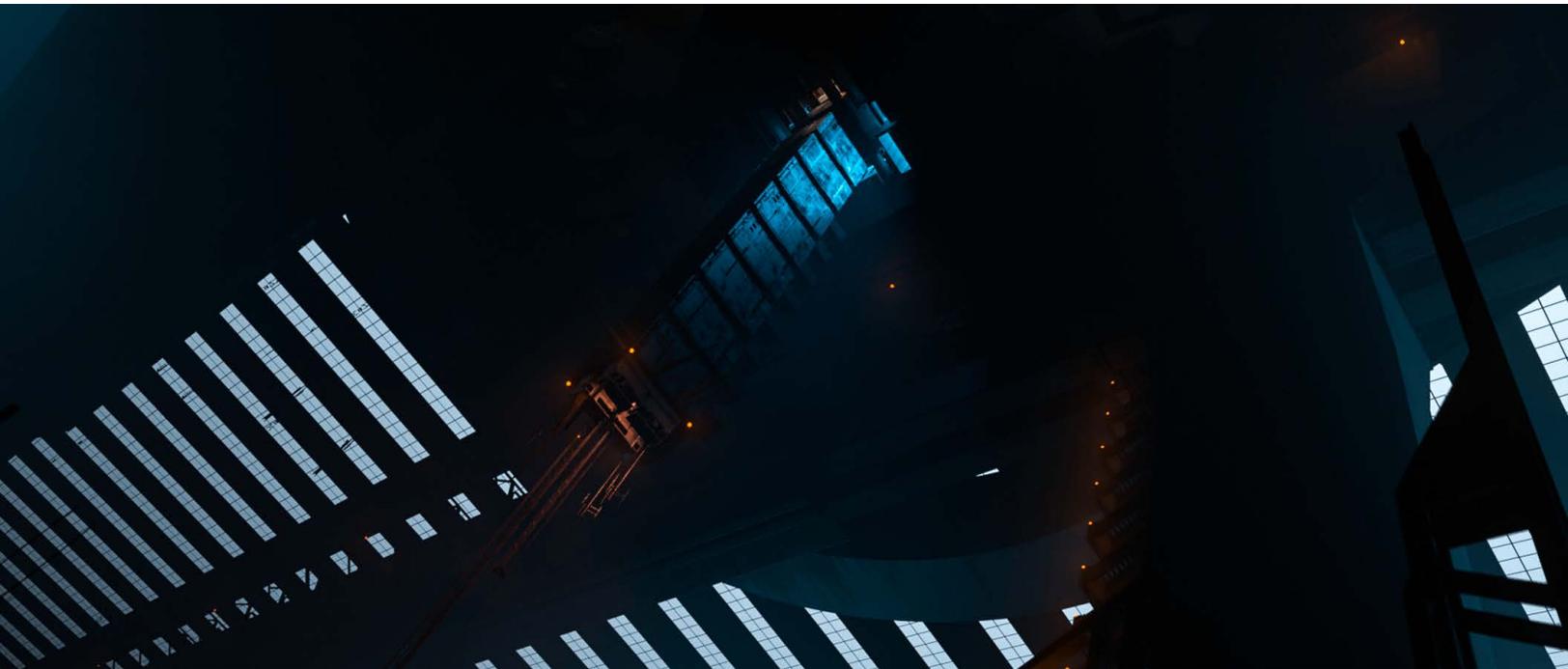


Fig. 135 Sequence 09.2

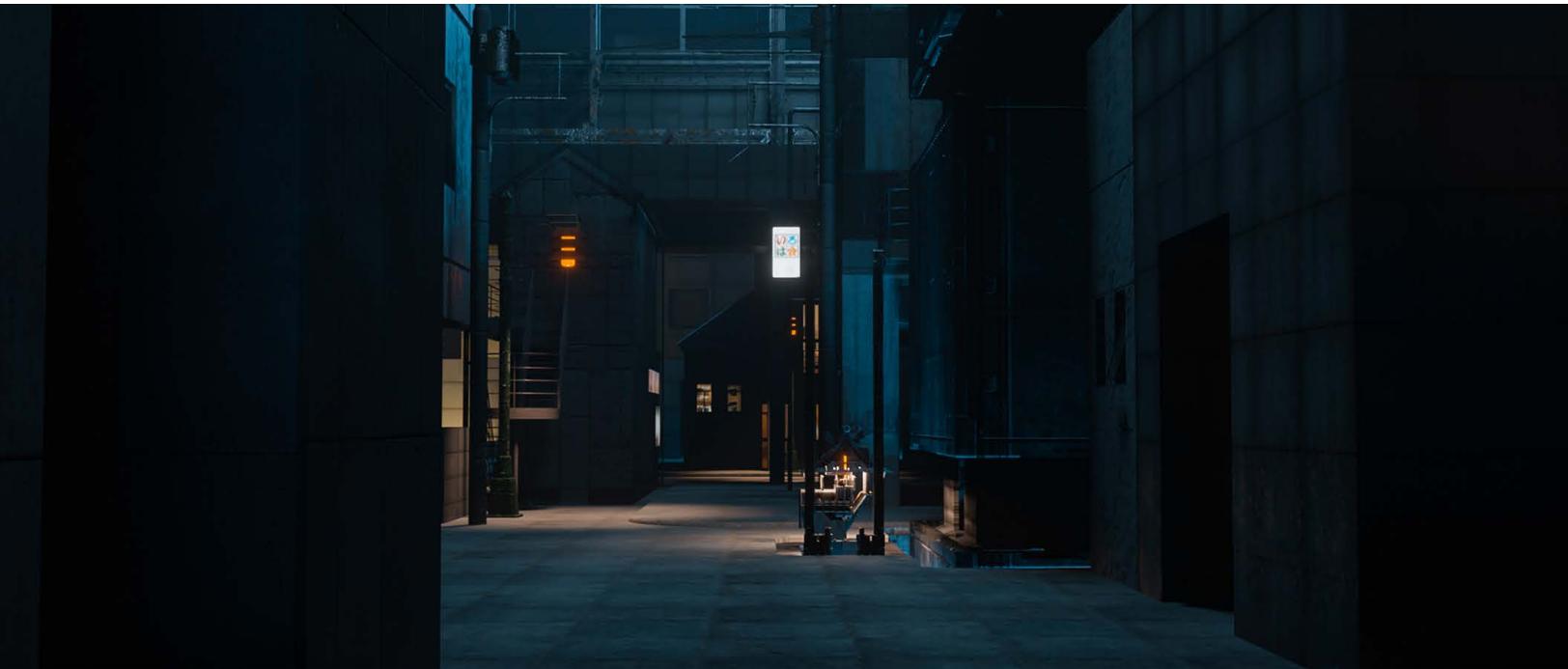




I've never have the chance to see them, but I've spoken to a couple people who have, it's like what they always say, never meet your hero's?



Whatever they are, whatever it is...the underbelly exists everywhere



Everything connected. It stretches for eternity. An endless nexus.

Fig. 139 Sequence 13

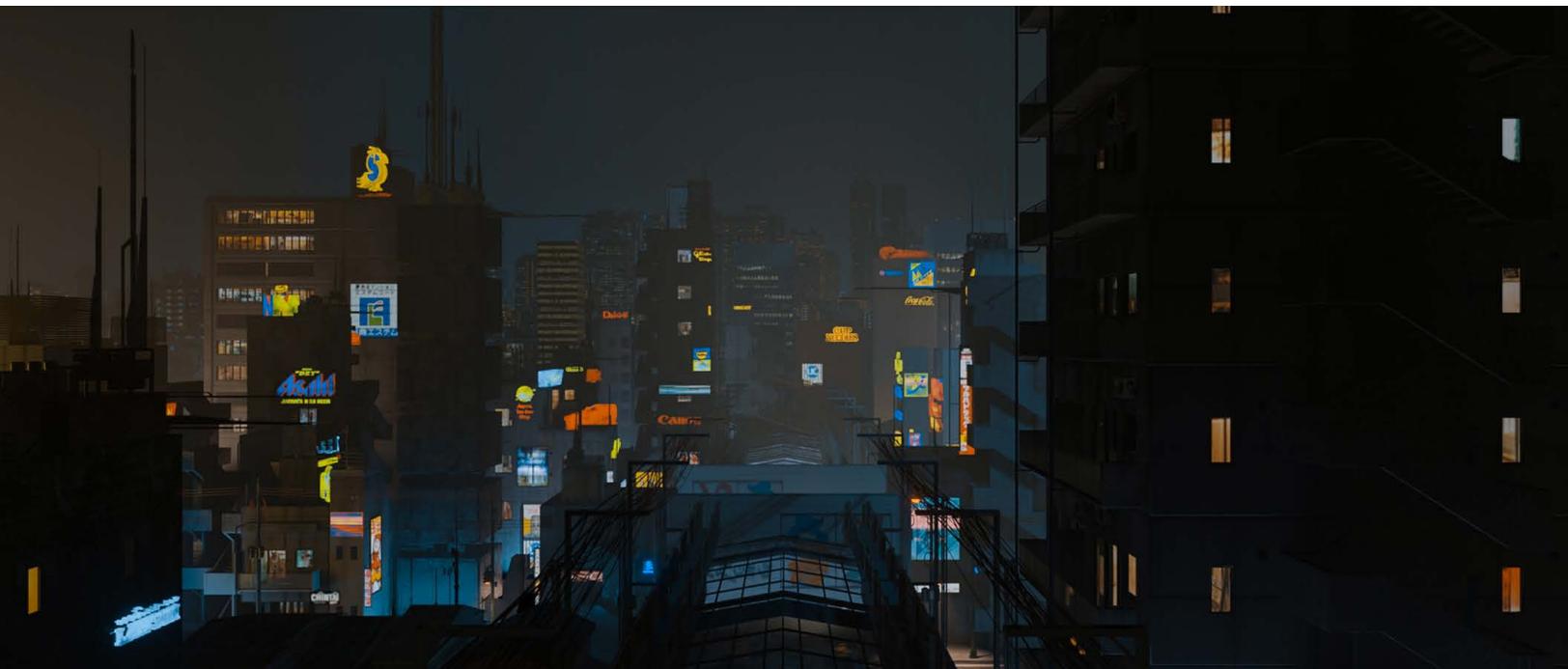
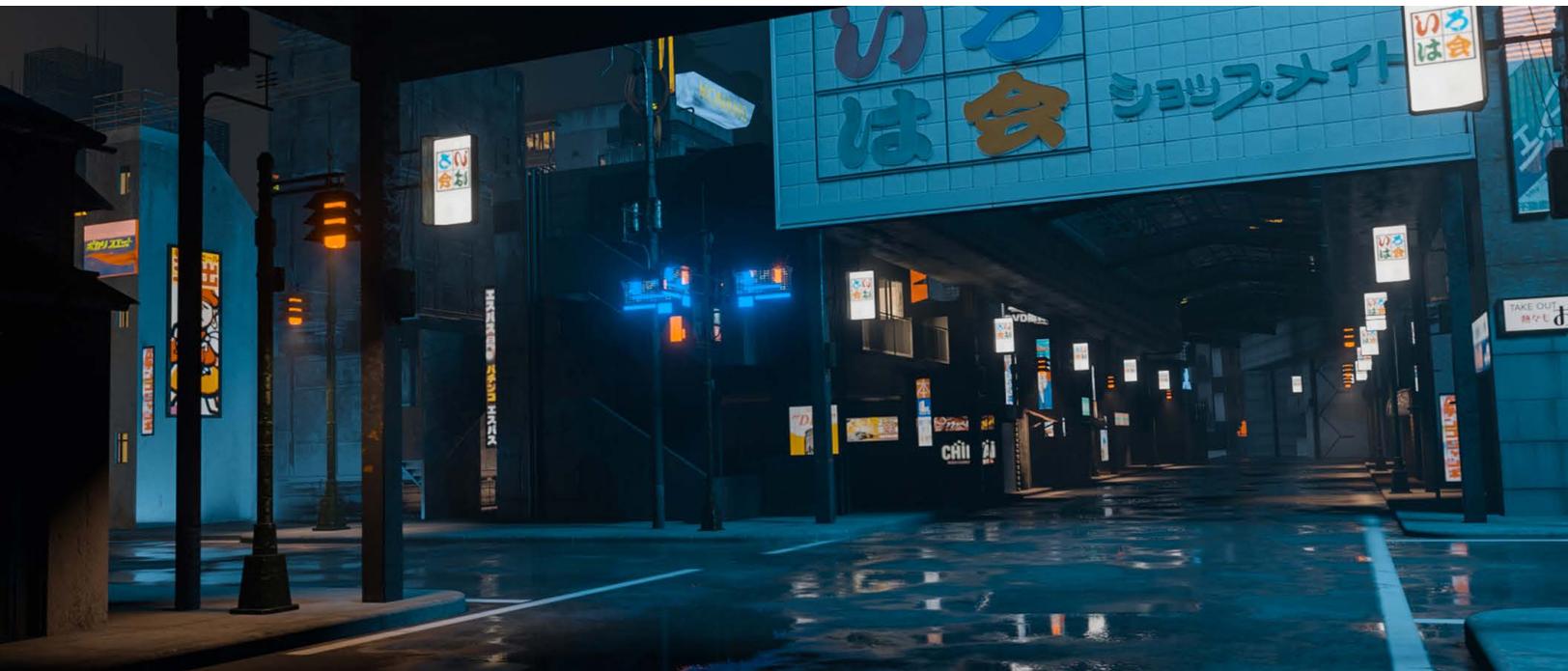


Fig. 140 Sequence 14



It's a miracle if you ask me. This eternity, right under our feet, beating along, interlinked...

Fig. 141 Sequence 15



These big tech gods, cut down anything for progress.



I hated them, I opposed them.

Fig. 143 Sequence 17



But their comfort is undeniable.

Fig. 144 Sequence 18

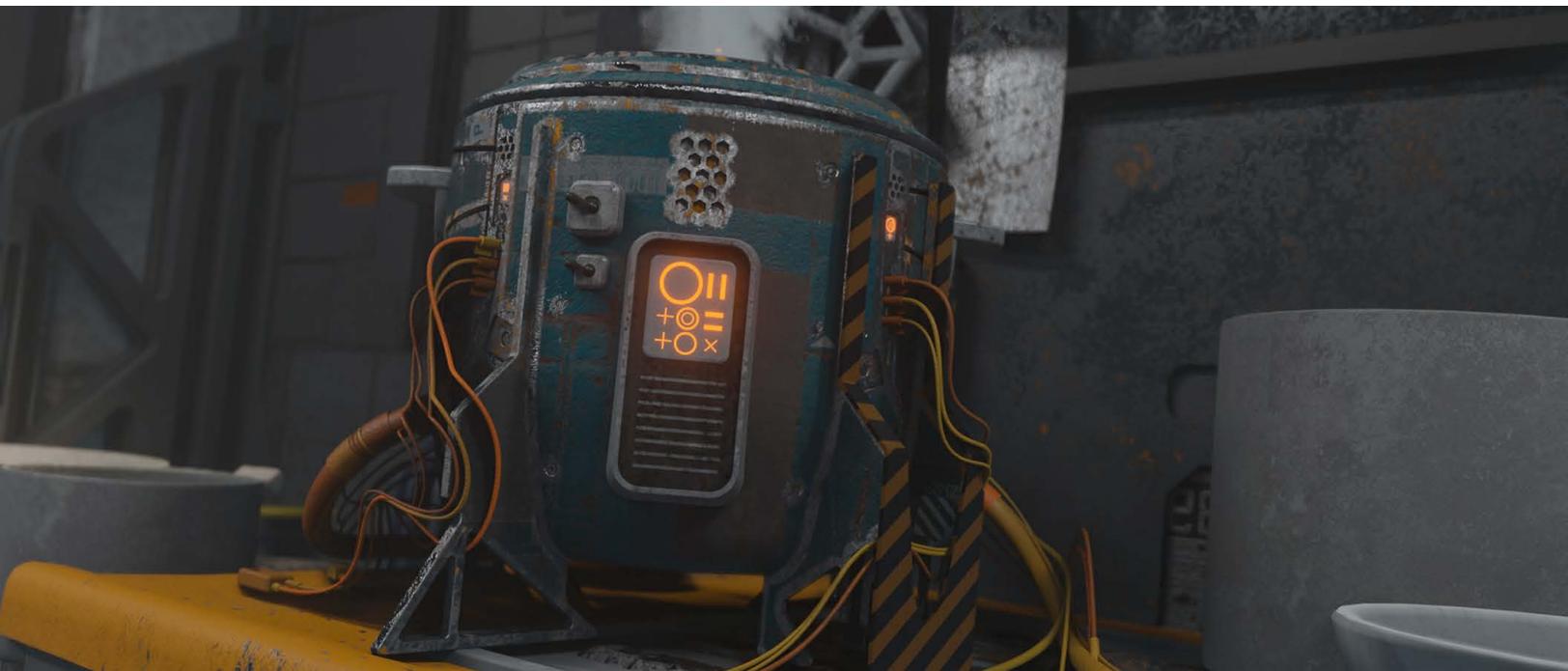


Fig. 145 Sequence 19



Fig. 146 Sequence 19.1

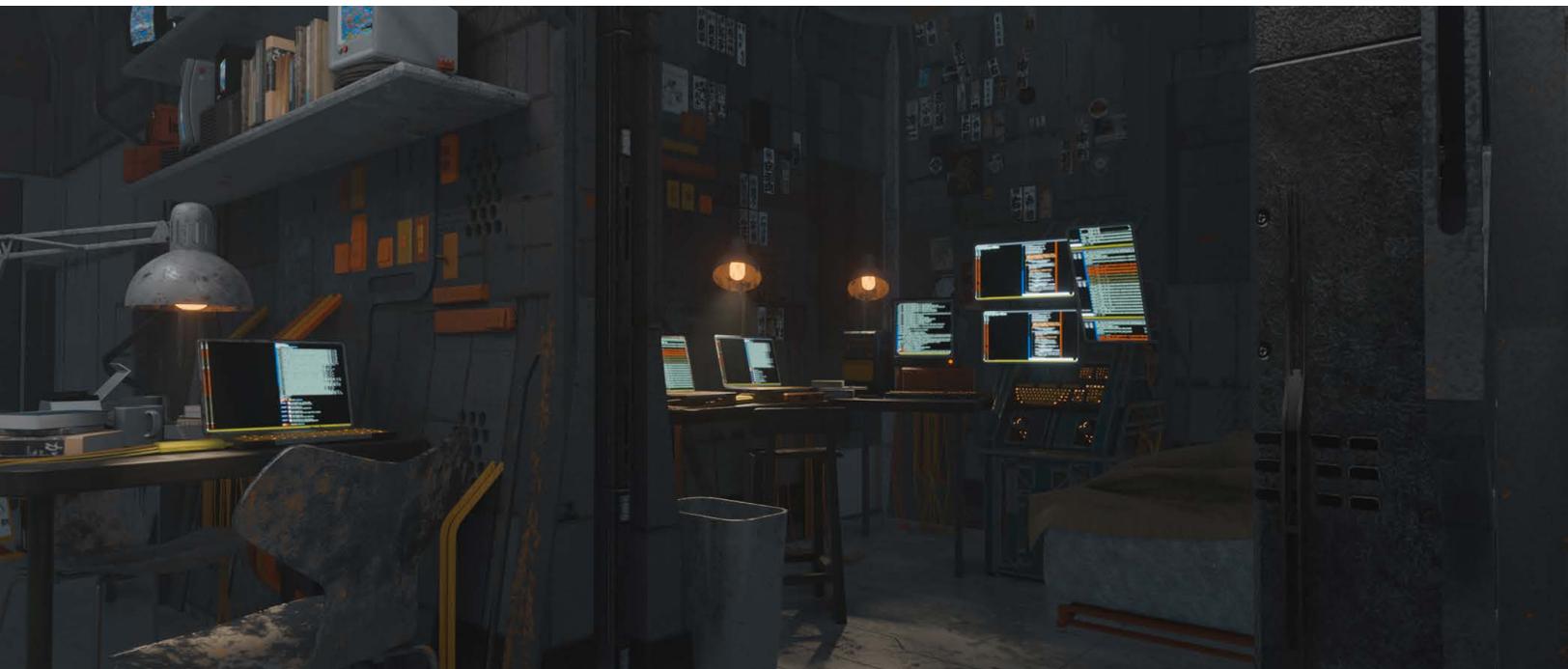
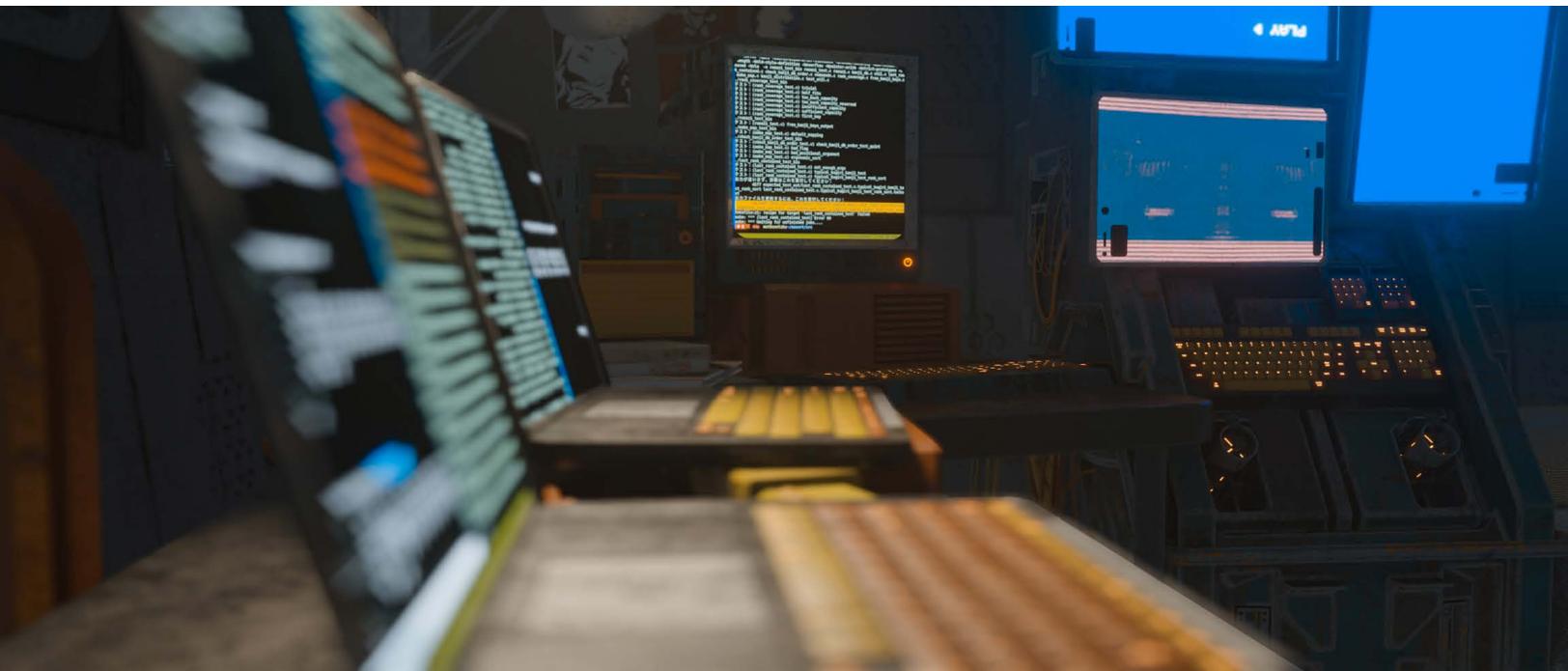


Fig. 147 Sequence 20



Fig. 148 Sequence 21





Its eternity, right under our feet, beating along, an endless nexus...interlinked

Fig. 150 Sequence 23



Fig. 151 Sequence 24



Fig. 152 Sequence 25

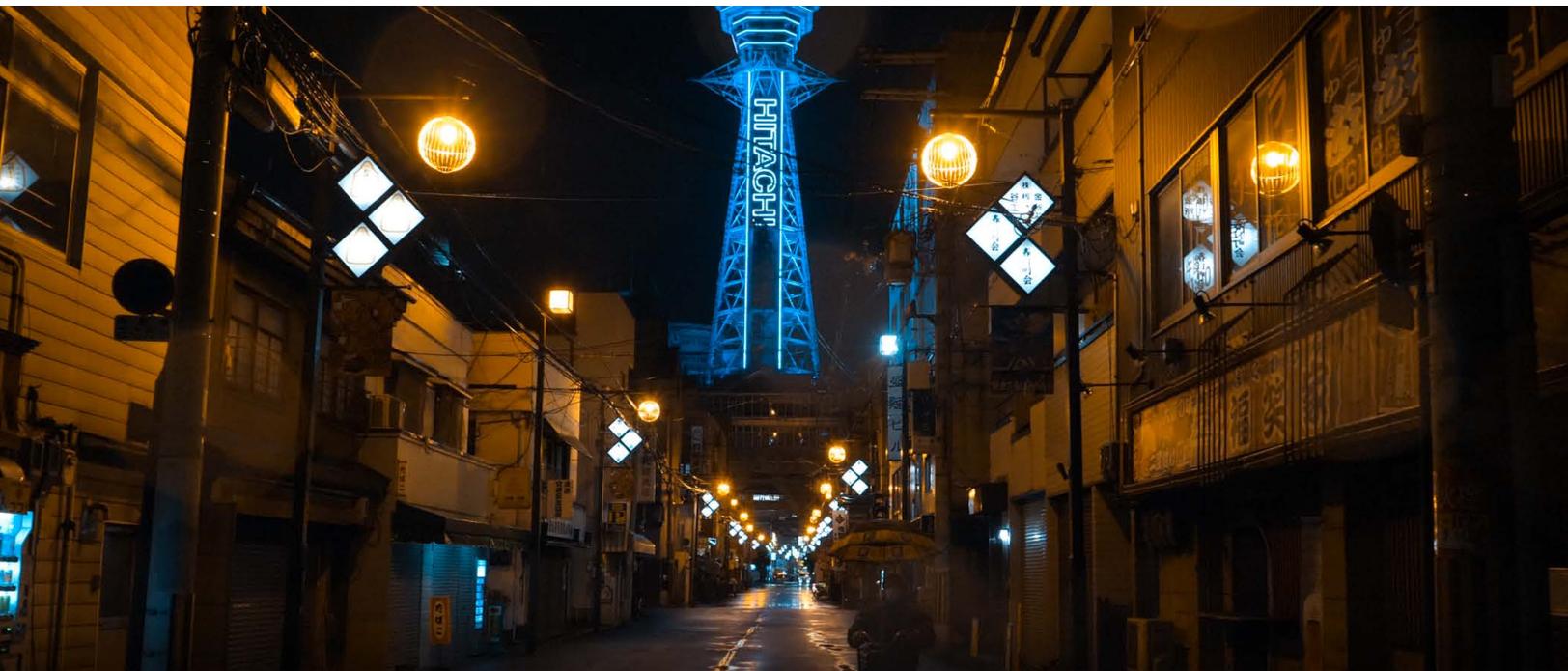


Fig. 153 Sequence 26

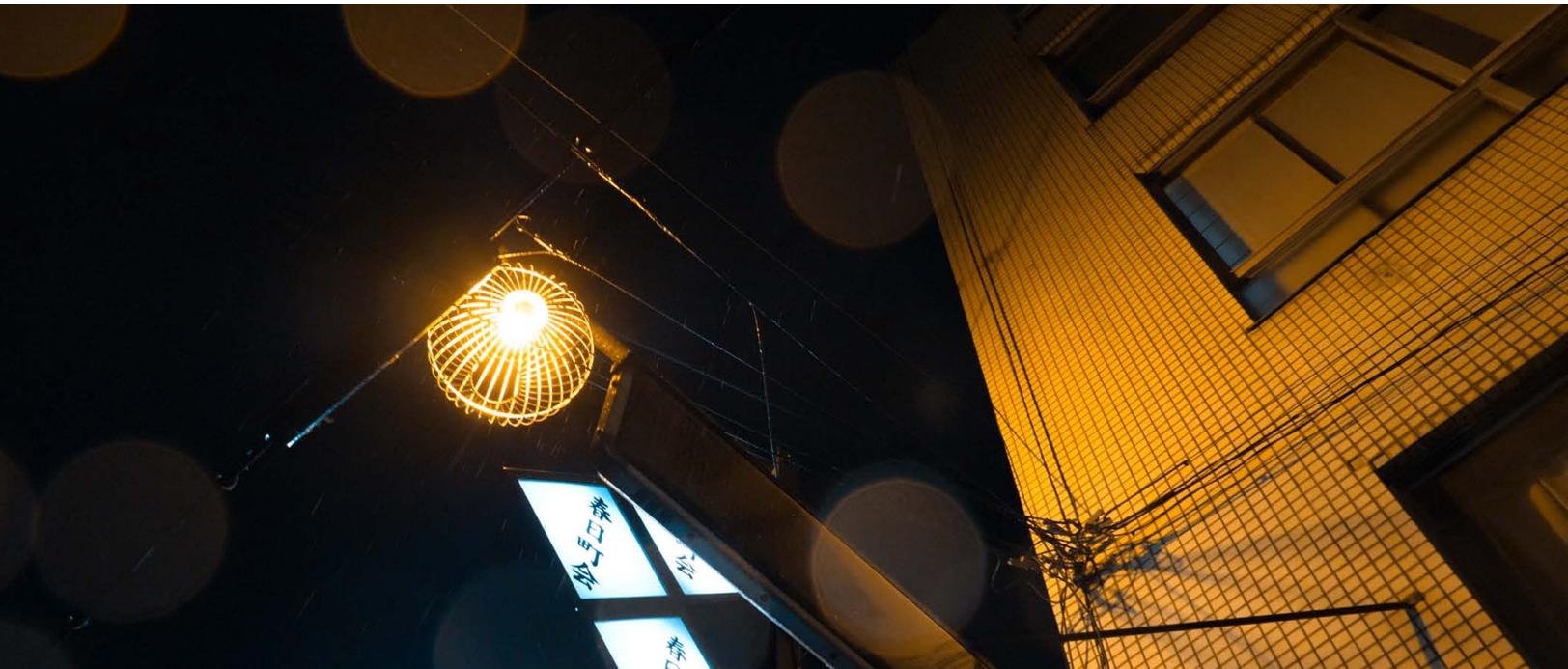


Fig. 154 Sequence 27



Conclusion

The aim of the thesis was never to decipher a strict religious architecture based off *Shinto* principles. Rather the thesis proposes to reveal through a time-based medium how cultural nuances derived from *Shinto-ism* could spatialize in the not-so-far future. How could I speculate on this complex contemporary issue? While architects hypothesize on “very real conditions” science-fiction (and its films) speculate on “future conditions”. The thesis positions myself (the architect) as a world builder, director, auteur, and designer alike, to make a film – as a means to communicate ideas about space, city, spiritual notions, and technology. The science fiction film presented becomes the incubator from which I use to test a single cultural scenario of *techno-animism* and its subsequent infused space.

Postscript

Film is a powerful medium which is a complex construct of many things - time, space, memory, light, and image are just a few devices which make up what it is. Most importantly though, is its ability to tell stories and to connect with the human soul, transporting the mind and body to whatever place is depicted on screen. The thesis aimed at providing a personalized spatial understanding to the opportunities provided by a current cultural trope. Investigation between *techno-animism* and space provided the underlying framework for the short film, however as described above, the phenomenological aspects of cinema were what brought the film to "life". During the discussion of the thesis defense, it were these emotional notions of the medium of film that I struggled to define.

Defining the phenomenon of this future world, and its execution in the film fleshed itself out through embedding each sequence with ideas of the vast and intimate, and the familiar and unfamiliar. The narrative provokes one to reflect on our current conditions, just as Takaharu cannot escape technologies implications, so to does our current world rely on the individual connecting to vast virtual networks which have implicit spatial consequences. In our current world, through what ever interface we choose to use, that interface acts as the catalyst for creating our digital-selves and the unseen infrastructures which supports these networks. The digital orders we place for products, the social networks we use, the code we write, etc, all reflect in someway how the human body and soul interacts with the technology.

My film *Shotengai*, its visual constructs and narrative acts to use "the future" as the "site" of the project. *Shintoism's* mythological structure and cosmology act to frame spatial sequences and the choreography between them. On another level, the fictional spaces depicted act as an origins story of Japan, one that was centered around agriculture and its eventual shift over time into a technology powerhouse. *Techno-animism*, and technology become the devices that frame the viewers perception of space.

The discussion that arose during the defense was of my critical position towards the formation of the cinematographic image. It is using narratives to explore everyday fictional worlds, to reveal specifics of our current world which intrigues me. Science fiction in particular extends "everyday notions" to a heightened state of existence. Just as in life, the medium of cinema allows for a continual change in perception, one that is always in formation.

Figures

Fig. 05 Pokemon, 1996

Pokemon, theverge.com, 25 Jul 2016, [https://cdn.vox-cdn.com/thumbor/8-RdLLiSjxY-t5JkER1-XRzQgYWE=/135x0:2115x1320/920x613/filters:focal\(135x0:2115x1320\):format\(webp\)/cdn.vox-cdn.com/uploads/chorus_image/image/50196859/pokemon.0.0.png](https://cdn.vox-cdn.com/thumbor/8-RdLLiSjxY-t5JkER1-XRzQgYWE=/135x0:2115x1320/920x613/filters:focal(135x0:2115x1320):format(webp)/cdn.vox-cdn.com/uploads/chorus_image/image/50196859/pokemon.0.0.png)

Fig. 07 Sailor Moon, 1992

Lefler Rachael, Sailor Moon, hubpages.com, 31 July 2017, https://usercontent2.hubstatic.com/12620217_f520.jpg

Fig. 06 Kyoryu Sentai Zyuranger, Mighty Morphin Power Rangers 1992

Noboru Sugimura, Kyoryo Sentai Zyuranger, imdb.com, <https://www.imdb.com/title/tt0103463/mediaviewer/rm566438912>

Fig. 08 Mobile Suit Gundam Wing, also known in Japan as New Mobile Report Gundam Wing, 1995. A famous anime in the "mecha" genre.

Masashi Ikeda and written by Katsuyuki Sumizawa, Mobile Suit Gundam Wing, dubbing.fandom.com, https://vignette.wikia.nocookie.net/dubbing9585/images/e/ec/Gundam_Wing_Poster.jpg/revision/latest?cb=20190420061155

Fig. 17 Covers and movie posters for the six case study films and graphic novels.

Otomo Katsuhiro, et al. Domu: a Child's Dream. Dark Horse Comics, 2001

Maruyama Masao, Neo-Tokyo poster, Wikipedia.org, 10 Jan 2018, [https://en.wikipedia.org/wiki/Neo_Tokyo_\(film\)#/media/File:Neo_Tokyo_poster.png](https://en.wikipedia.org/wiki/Neo_Tokyo_(film)#/media/File:Neo_Tokyo_poster.png)

Otomo Katsuhiro, et al. Akira. Kodansha Comics, 2009.

Lawrence Joseph, Ghost in the Shell Blu-ray cover, reelrundown.com, 22 April 2017, https://usercontent1.hubstatic.com/13473374_f520.jpg

Morimoto Koji, Memories Japanese Theatrical Poster, Wikipedia.org, 1 Aug 2017, https://upload.wikimedia.org/wikipedia/en/9/9a/Memories_1995_poster.png

Otomo Katsuhiro, Cannon Fodder 1995, theposterdb.com, 28 Feb 2020, <https://theposterdb.com/posters/56017>

Fig. 19 Domu - A Child's Dream: the apartment complex

Fig. 20 Domu - A Child's Dream: Etsuko harnessing her telekinetic powers

Fig. 21 Domu - A Child's Dream: Old Cho and his tokens from his victims

Otomo Katsuhiro, et al. Domu: a Child's Dream. Dark Horse Comics, 2001

Fig. 23 Neo Tokyo: Construction Cancellation Order, the city as a character .

Fig. 24 Neo Tokyo: Construction Cancellation Order, Tutomo fights back against the robot.

Otomo Katsuhiro, Maruyama Masao, Neo Tokyo: Construction Cancellation Order, Japan: Toho Co. Ltd

Fig. 26 AKIRA, Tetsuo and Kaneda argue

Fig. 27 AKIRA, Neo-Tokyo and its dystopian architecture

Otomo Katsuhiro, et al. Akira. Kodansha Comics, 2009.

Fig. 29 Ghost in the Shell, Major Kusanagi reflects in her apartment unit, looking out to the futuristic city scape

Oshii Mamoru, Yoshimasa Mizuo, Ken Matsumoto, Ken Iyadomi, Mitsuhsa Ishikawa, Ghost in the Shell. Japan: Shochiku Company Limited

Fig. 31 Memories: Magnetic Rose, opera singer

Fig. 32 Memories: Magnetic Rose, virtual projection of a fantasy world created by the on board super computer

Fig. 33 Memories: Magnetic Rose, the crew member destroys the super-computer

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Fig. 35 Memories: Cannon Fodder, the boy and his father

Fig. 36 Memories: Cannon Fodder, the cannons which make up the city

Fig. 37 Memories: Cannon Fodder, the boy and his father discuss events of the day

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Fig. 41 Atsuta Jingu Ise shrine

Tange Kanzo. Ise: Prototype of Japanese Architecture. Pp 18

Fig. 42 Blender Conference 2019 Lecture, titled The Production Pipeline of Spring - Andy Goralczyk. Screen shot of work-flow diagram

Blender, The Production Pipeline of Spring - Andy Goralczyk, YouTube, 40:29, 18 Mar. 2020, https://www.youtube.com/watch?v=aR3yNNGK_sc&t=1458s, 3:36

Note: All other figures, images, renders, photos, and video media included in this document are of my own work.

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Arigatou gozaimasu!