

Anime for Architects: A New Perspective on Architecture

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School of Architecture
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Anime for Architects: A New Perspective on Architecture

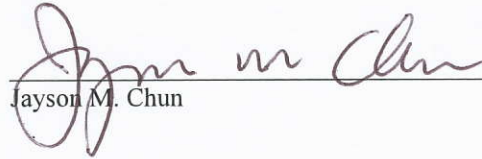
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We certify that we have read this Doctorate Project and that, in our opinion, it is satisfactory in scope and quality in fulfillment as a Doctorate Project for the degree of Doctor of Architecture in the School of Architecture, University of Hawai'i at Manoa.

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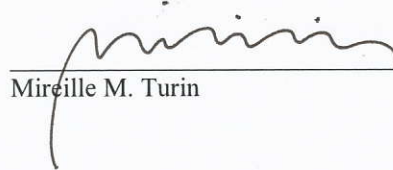

Mireille M. Turin

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Abstract

The primary argument of this study is that the medium of *anime* and *manga*, Japanese cartoons and comics, has the potential to offer a new perspective on the representation of architectural space. This might come as a surprise due to a preconceived notion that cartoons and comics are an immature art form without any value outside of the entertainment realm. Hence it is the goal of this dissertation to reveal how the methodology of manga, in particular, has the ability to enhance architectural representations in terms of the multi-sensory and space-time perception of architecture through characteristics of manga, such as narrative, portrayal of the invisible realm and the expression of both space and time by panel arrangements. To do this, a foundation with the beginnings, development, and basic visual vocabulary and grammar of comics is described and compared to other art forms. Through this comparison, the communicative power of comics is assessed by its combination of picture and word, ability to make visible the invisible through iconic images, and closure, which creates sequencing and narrative.

Next, a comparison is made to show how manga is unique and visually distinctive from Western comics. Manga is found to make more use of the “masking” effect, aspect-to-aspect and moment-to-moment panel transitions, length, hyper-stylization, and minimalist art. In order to argue that these manga differences have a better relationship in representing architectural space, important characteristics of architectural space are identified. These characteristics are the built environments presence in a multi-sensory world, space-time, and its association with experiential and lived space. These are then examined in relationship to the ability manga methodology has in representing these three characteristics. Finally, manga is compared to the current methods of representing architectural space such as conventional architectural drawings and writings, 3d architectural animations, virtual reality, and film. It can be concluded that manga is a more complete way of representing architectural space. As a demonstration of this, a sample manga that focuses on one particular area in Tokyo, Ikebukuro, is drawn to illustrate how this method can work utilizing the characteristics of manga, such as narrative, portrayal of the invisible realm and expression of both space and time by panel arrangements.

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I wish to give thanks to God, first and foremost, for giving me the strength, endurance, courage, wisdom, and guidance throughout all the stages of working on this dissertation. “Commit your work to the Lord, and then your plans will succeed.” Proverbs 16:3.

I want to thank Dr. Marja S. Sarvimaeki, my Committee Chair for giving me free rein to explore my dissertation topic, even when it was unclear where I was going. This dissertation would have remained a dream without the guidance of Dr. Sarvimaeki. In addition, I want to thank her for sharing her time, advice, and knowledge in Asian architecture.

I would also like to thank my other Committee Members. I wish to thank Jayson M. Chun, for his enthusiasm and expertise in anime and manga. I wouldn't have been able to make the connection between anime and architecture without taking his Anime and Manga summer course. In addition, I wouldn't have been able to finish my sample manga without his insightful suggestions and encouragement. I want to thank Mireille M. Turin, for her interest in my dissertation topic even though anime and manga is not her specialization. This was critical in bringing more clarity to my dissertation; and I really appreciated his comments and sharing of architectural knowledge.

I owe my deepest gratitude to my family who has encouraged me throughout my whole academic career. I want to thank my mother, for her letters of encouragement and insightful quotes. I also want to thank my father, for his encouragement and persistence in allaying my fears. I want to thank Jen, for never giving up her academic pursuits.

I cannot begin to express my thanks to my husband for his patience and support through architectural school. I want to thank him for staying up late with me and not letting me give up. I wish to say, “You are the love of my life and best friend.”

Also I want to thank all my friends and church family who have encouraged me and been praying for me. It has kept me pushing forward.

Preface

Fifth grade was particularly memorable for me because it was then that I was first introduced to comics. I made a new friend of an older boy whose family had just moved to my area. He collected Superman, Spiderman, and Batman comics. When he first showed them to me I was amazed at the composition and bold emotion expressed in this art form. I didn't become a collector myself but I tried to mimic their style in my own artwork. Later, when I moved to Hawaii in 2002, I was exposed to manga and anime. At first, I didn't like the minimal style of its characters. I was more into the western style of adventure comics with its more realistic style and color. I felt manga was more for kids and I didn't even give it a chance. Later, I was watching late night television and I turned to a channel that presented the *Inuyashi* and *Bleach* anime series. I watched a couple episodes and I was drawn to the characters and story plots. I noticed how the animation art differed from other comic animations I had seen. I really enjoyed the anime artistic style and story plot. From there I became an anime and manga fan.

Introduction

The summer of 2009 was the first time I made the association of there being a relationship between manga and architecture. I was taking an architectural research methods class, taught by Professor Marja S. Sarvimaeki, to research possible topics for my architectural doctorate project. At the same time, just for fun, I also decided to take a manga and anime class, taught by Professor Jayson Chun. I never imagined where it would lead me. For some reason, I was in the library just randomly pulling architectural books off the shelf and flipping through them. A GA Architecture book was jutting out of the shelf. Due to its large shape, I instinctively grabbed the book. It happened to be an issue featuring Shin Takamatsu's architectural designs. I never remembered seeing any of his architecture, so I decided to flip through it. As soon as I opened the book and saw the drawings, designs, and aesthetics of his buildings, I immediately thought of the art in manga and anime. I was intrigued by this gut feeling and felt compelled to search for evidence that would explain why I made this connection. From this point, it became the goal of my dissertation to uncover the evidence that would explain this connection between anime/manga and architecture.

After my research methods class, I started my research by reading books, articles and online resources. I found that there were not many literary sources on manga and architecture, anime and architecture, or film and architecture. It proved to be a real challenge for me because all I had to go on was a gut feeling with no real direct support. I felt confident that there was something out there and I would have enough time to find it. This caused me to flounder around awhile trying to figure out what it was that I was really after. I finally narrowed down my topic to focus on anime and its relationship to the Japanese streetscape and my initial goal was to find where anime influenced Japanese architecture or vice versa. In my research I didn't really find what I was initially looking for; but I found that anime and Japanese architecture were like two different art mediums that developed side by side, influenced by similar historical events, art and social movements, or economic conditions and war. That semester I took a Japanese Film: Art and History class to learn more about Japanese cinema due to anime being a form of cinema. I also read *The Architecture of Image: existential space in cinema* by Juhani

Pallasmaa, *Rediscovering Japanese Space* by Kisho Kurokawa, and *The Anime art of Hayao Miyazaki* by Dani Cavallaro which became my main sources at that time. The next semester, a professor in the Architecture department, Pu Miao, decided to teach a new class which was titled Architecture and Cinema. I learned about how film directors create space and atmosphere within their story and how we can apply it to architecture. I used my final paper in that class to analyze the anime *Ghost in the Shell 2: Innocence* and compared it to a few Shin Takamatsu buildings. This led me to investigate the Japanese built environment through anime. I couldn't leave it alone; and it evolved into the subject of my architectural doctorate dissertation for Arch 546.

In Arch 546, the title for my dissertation ended up being “Anime for the Architect: Cinema’s connection to Japanese Space.” My first research question was on how animation was a better medium than live action cinema? I concluded that its connection with hand drawing made it more insightful. This then led me to my next question of why I was using anime over other forms of animation. I had to look into the development of manga where anime got its start and style. I concluded that it was the cinematic manga style and visual symbolism that gave it a special relationship to Japanese visual culture. I was still a little unsure about my next questions of how anime relates to the Japanese city and space. There was no question, I realized, I would have to go to Japan to do fieldwork. So during Arch 546, I was preparing for my trip to Japan by coming up with an itinerary and narrowing down what elements and buildings I would be viewing to compare with anime. I was able to narrow my focus down to how eclecticism, symbol, hyper-reality, and layers are used in both anime and Japanese space. It was still a bit broad but I thought I would be able to narrow it down more when I arrived in Japan. What hurt my research at this stage was I could not afford to stay in Japan longer than a month, so I was trying to cram everything into 30 days. I was first going to Kyoto for one week, Osaka for the next week, and then to Tokyo for my last two weeks. I was also planning to go back during winter break for another month to focus on one area and building.

When I finally got to do my fieldwork in Japan, my world was turned upside down. I don't think there could have been anything to prepare me for the Japanese city.

Both my professors Jayson Chun and Marja Sarvimaeki warned me of the visual overload and the confusion of the streets. I did what I could to prepare myself. I watched different anime and movies with Tokyo as the setting. I read books about its chaos and streetscapes. During the first semester of my summer break, I learned to speak some Japanese and took a Japanese cultural history class. Even though I learned a lot and felt prepared, I really wasn't prepared. I don't know exactly what I expected of Japan, but I tried to stay open minded and not be set in my thinking. I was first hit with the visual multiplicity of the Japanese city, and then the vastness of Japan's biggest cities. I had learned a lot about Japanese space, but I came face to face with the fact that there was much more I needed to know. This made me rethink some of the things I was writing about and if I was really ready to analyze Japanese space. I found it was going to be more complicated than I had previously thought.

The following Fall Semester, when I was doing my Practicum, an internship through the School of Architecture at the architectural firm Group 70 International, I explored how manga and anime could be applied more directly to the architectural profession. I examined how manga-drawing techniques could be used to help bridge the gap between architectural drawing vocabulary and that of the client. I also analyzed how architectural presentations could be improved by manga presentation techniques. I found this real interesting and I had lots of fun preparing a manga inspired presentation about architectural space in the anime *Spirited Away* by Hayao Miyazaki.

After discussing with my doctorate project committee about my experience in Japan and my research during Practicum, I decided to continue my focus on manga and show how it can benefit the architectural profession through its unique visual structure of image, word, and sequence. However, instead of looking at it only as a communication and presentation tool for the client, I am also looking at the benefit of viewing the built environment through the medium of manga and how this can be a viable representation and observation tool. With this change in course, I decided to keep the beginning of my title, "Anime for Architects," and change the last half to "A New Perspective on Architecture". I wanted to keep it close to the same title because it was this title that has driven my focus for four years. In addition, many Westerners use the terms "anime" and

“manga” interchangeably because the relationship between anime and manga is so close. Therefore, I use the term “anime” in my title to mean both anime and manga, however, through out the rest of my dissertation, I use the term “manga” to mean Japanese comics and the term “anime” to mean Japanese animation. In a later section, I also describe in more detail the relationship between manga and anime.

Looking back on my fieldwork in Japan, I found that I learned a lot more than I initially thought and this has caused me to discover a greater potential of manga in the analysis, as well as, the practice of architecture. My adventures in Japan and the difficulty I experienced reconciling it to my Western thinking has caused me to search for a visual way of cataloging my experience, in such a way as to help me understand what I saw. The method of aspect-to-aspect panel transitions in manga has provided me with a way to organize what I saw. It has in a way allowed me to see the Japanese city in the Japanese way of seeing “the part” and not my Western way of trying to see “the whole”.

The goals for Arch 548 was to layout a foundation that explains how the different aspect of manga techniques makes it a viable tool for analysis and communication in addition or in place of conventional architectural drawings. The main principles that are all common to comics in general are examined. Then the aspects that make manga unique from Western comics and how this difference makes it valuable to architectural application are examined; like its cinematic qualities and aspect-to-aspect panel transitioning.

My initial audience was those in the educational field of architecture. My goal was to introduce to them a way of using anime as an experiential spatial tool to learn more about how space is used and how it functions. My goal at present is to reach a larger audience, which includes anyone in the architectural field, anyone who wants to find a better way to look at and analyze architectural space in a more visual way, and anyone who wants to visually learn about architectural concepts and theories. Times are changing and how people learn and are engaged is changing. A new generation of students and clients are growing up in a world of multi-media learning and interacting. Manga as a multi-modal medium is a vehicle of learning that they are already using. More and more people are able to understand the visual vocabulary needed to read

manga; and its language is becoming more universal as cities are becoming more global which is conducive to the use of manga techniques in learning, presenting, and engaging.

When I was starting my research, I saw anime and manga as only something that would be used in an educational setting; a way to get non-architectural students interested in architecture. Over the course of conducting research and changing the focus in this dissertation, I have seen my architectural horizons open up with more possibilities. As I worked on my sample manga for this dissertation, I could see myself applying this same visual analysis to different cities and buildings. I also can see myself taking written texts about architectural concepts and theories and interpreting them into a visual manga. I can go beyond that and see myself applying manga techniques to presentations. I had great success doing this for my Practicum research presentation. This type of presentation takes longer to prepare but there was a great response from the audience of architectural principals, partners, and associates. I can also see myself using manga communication techniques to improve way finding in buildings or larger spatial environments. I feel I have stumbled upon something that will give me that specialization in architecture and the manga world that will make my services unique.

Existing Body of Knowledge

The major issue about conducting this research is the limited body of knowledge. There are few examples of comics, let alone manga, use in the architectural profession. This dissertation's materials for its conclusion were pieced together from different works to show the connection of manga to architecture. Personal observation has also played a big part in the formation of this dissertation.

Another challenge that I experienced was that manga, even though greatly influenced by Western comics in its beginnings, is ultimately an Eastern art. This becomes an obstacle to a person who has been raised in a Western culture and taught in a Western way based upon Western thought, theory, and philosophy. Therefore everyone, like me, must be aware of their cultural lens when conducting research related to another culture, while admitting there may be things about the culture they may not fully understand.

Language barrier was another problem. Because manga is part of the Japanese culture, there exist many resources on manga and its application that have not been translated into English. As a result, the books written about manga and Japan that are mainly written by Western authors are this dissertation's main sources. Despite these problems, I know and understand enough to show the benefits of manga techniques to architecture. It is the hope that this research will spark interest in those who may have access to better resources than I have, to continue research and add to or even correct the information and knowledge that has been written here.

1. Visual culture of Comics and Manga

First, the visual culture of comics and manga was the topic of research. This included researching the development of comics and looking at their cultural and historical influences. This is to lay a foundation about the commonalities and differences that could later be drawn to form a connection to the field of architecture. This was an easier area to uncover an abundance of information. Due to the growing popularity of manga and anime outside of Japan, many people have written about how it developed, how it is culturally significance to the Japanese popular culture and what can be learned from it. The main sources for this area are: *Manga: sixty years of Japanese Comics*, *Japanese Visual Culture: Explorations in the World of Manga and Anime*, *God of Comics: Osamu Tezuka and The Creation of Post-World War II Manga*, and *Understanding Manga and Anime*. By conducting research in this area, it was speculated there would be some parallels between cultural and historical events, and social and art movements that would affect both manga and architecture.

Manga: sixty years of Japanese Comics, written by Paul Gravett, is a good overview of the development of manga, its markets, and its many genres. He talks about the argument that is made about historical picture scrolls and wood block prints actually being the origin of manga. He also covers how Western comics had a great impact on manga and how manga developed its own style very different from Western comics. Gravett also dedicates a chapter just for Osamu Tezuka, known as the 'God of Comics' and covers Tezuka's contribution to the popular style of art and story telling that manga is known for.

Japanese Visual Culture: Explorations in the World of Manga and Anime, edited by Mark MacWilliams, is a compilation of essays on Japanese visual culture in regards to manga and anime. The foreword, written by Frederik Schodt who wrote *Manga! Manga! The World of Japanese Comics* discusses the popularity of manga outside of Japan and supports my claim of a growing manga audience. The essay, “Manga in Japanese History,” goes over the historical significance of art and culture to the development of manga. This gives a little more information about the connection manga has with Japan’s earlier art. Of course there is a debate over whether too much credit is given to the connection of modern manga. This does not affect the argument of manga being a viable tool to the architectural profession. However, it is still important to note this connection in relationship to Japanese visual culture. The essay, “Considering Manga Discourse: Location, Ambiguity, Historicity,” touches on points that the book, *Reading Japan Cool: Patterns of Manga Literacy and Discourse*, brings up. However, the essay isn’t an in depth study like *Reading Japan Cool*.

God of Comics: Osamu Tezuka and The Creation of Post-World War II Manga, written by Natsu Onoda Power, is a book that gives a more in-depth analysis about Tezuka’s style of art and storytelling. The most important chapter for my dissertation is chapter 3, Movie in a Book. Where Paul Gravett dedicates a couple pages to Tezuka’s influence of cinema and aim to give his manga cinematic energy, Power is able to expound upon it in one chapter. In this chapter there is evidence given that cinematic techniques in comics already existed before Tezuka started using them himself. Power records Tezuka as saying, ‘Many cartoonists before me used cinematic techniques [...] I made a big impact because I was so conscious of it.’¹ Power also goes further to describe Japan’s film culture, which had an influence on making Tezuka’s cinematically styled manga successful. This cinematic technique in manga is important to my dissertation because it shows how the illusion of space and movement is used on paper. This type of information would be useful to portray in architectural drawings. People would be able to grasp the concept of how space functions, is used, and how that effects the mood and atmosphere of the built space.

¹ Natsu Onoda Power, *God of Comics: Osamu Tezuka and The Creation of Post-World War II Manga*, edited by Thomas Inge (University Press of Mississippi, 2009), kindle edition, location 631 of 2561.

Understanding Manga and Anime, written by Robin Brenner, is quite a long text just under 400 pages. Therefore, it is packed with a lot of information. Like *Manga: sixty years of Japanese Comics*, Brenner gives an overview of manga. She goes into its history and talks about its influences and how it is perceived in the West.

2. Vocabulary and Grammar of Comics and Manga

When the dissertation's focus was changed from anime to manga, the research on the vocabulary and grammar of both comics and manga was more closely examined. This research looked at the fundamentals of comics and how it visually communicated. This is where it became obvious what was missing in traditional architectural drawings. As the iconic art, the composition of word and picture, and the cinematic quality of manga was examined, there was seen a correlation between how these areas could improve communication in the architectural community. The key sources for this research were as follows: *Understanding Comics: The Invisible Art*, *Reading Japan Cool: Patterns of Manga Literacy and Discourse*, *Understanding Manga and Anime*, and *The Architecture of Image: existential space in cinema*.

Understanding Comics: The Invisible Art, written and illustrated by Scott McCloud, is a key text for the research on the particular vocabulary and grammar of comics. What makes his book so valuable is that he breaks down the fundamental techniques of comics and then from that basis describes how manga are different than Western Comics. This really shows clearly the difference between the two. The main difference is the use of the masking effect and aspect-to-aspect panel transition techniques. Also what makes this book unique is McCloud actually explains comics through a comic book format. This in itself supports my argument that the visual format of comics can bring a clearer understanding of a subject or at least provide another way of seeing that could be more insightful. This book has helped to promote understanding of the "masking" effect and aspect-to-aspect panel transitions so that they could be incorporated into the sample manga.

Reading Japan Cool: Patterns of Manga Literacy and Discourse, written by John Ingulsrud and Kate Allen, is another unique text that was very valuable to this research. Their research is also a fairly uncharted area. They are looking at the study of manga in

its literacy. They also did this study not as one looking at only manga literacy as meaningful in Japan but how it resonates with those in a different cultural context. This text examines the benefits of manga outside of Japan and sparked the idea of manga serving as a great medium to look at other architectural spaces outside of the Japanese context. It also serves as a great medium to look at other architectural spaces besides just those in a Japanese context. This book also supports the theory of a growing culture that is familiar with reading manga. This study was actually prompted as a response to the reading patterns of college students outside of Japan. These students were not only currently reading manga but had been since their childhood. This study had been done about eleven years ago, so just imagine now how many children are reading manga.²

Understanding Manga and Anime, written by Robin Brenner, goes into the vocabulary, symbols, layouts and formatting of manga in which she quotes McCloud. She even talks a little about manga literacy but not to the extent of *Reading Japan Cool: Patterns of Manga Literacy and Discourse*. Brenner's book is one that encompasses just about all the information that is out there on manga, making this book a good supporting source of concepts brought up in *Reading Japan Cool: Patterns of Manga Literacy and Discourse* and *Understanding Comics: The Invisible Art*.

The Architecture of Image: existential space in cinema, written by Juhani Pallasmaa, is a book that explores the realm of architecture in cinema. This was a very important book for research connecting architecture to anime. There were no books that directly discussed the relationship between architecture and animation so this book was used to talk about the existential space in film and then animation could be tied in to this category. This book was still used when the focus of this dissertation was changed to manga. Manga uses cinematic technique so some of the information that related to anime could also be applied to manga. This book then became the main support for how the cinematic technique used in manga can be applied to the existential use of architecture.

² John E. Ingulsrud and Kate Allen, *Reading Japan Cool: Patterns of Manga Literacy and Discourse* (Rowman & Littlefield Publishers Inc., 2009), kindle edition, location 51-62 of 3285

3. Background research for Kyoto, Osaka, and Tokyo Field work

Looking at the existing body of knowledge about Japanese architecture helped me to see the similarities in how manga and Japanese architecture are influenced by the Japanese culture, and then how that is translated allowing for manga to reflect on how Japanese space and architecture functions in the Japanese society.

Tokyo: a view of the city, written by Donald Richie, is a book about the experience of a foreigner living in Japan for over 50 years. Donald Richie is a well-known Western writer about Japan and Japanese film. There is one benefit to reading a book by a Western writer especially one like Donald Richie. Because he has been studying and writing about Japanese culture pretty much the whole time he has lived in Japan, he has the ability to explain things in such a way that is easy to understand the significance or difference in Eastern concepts.

Empire of Signs, written by Roland Barthes, is written very poetically. His creativity added to the knowledge of linking Japanese past of traditions and cultural rituals to their functioning city. He highlights how signs and symbols function in the culture and therefore is translated into everyday life.

Both *The Hidden Order*, written by Yoshinobu Ashihara, and *Rediscovering Japanese Space*, written by Kisho Kurokawa, are books written by Japanese architects. These have been really useful in describing Japanese architecture. They seek to make known what is Japanese about Japanese contemporary architecture. Both these sources help to see beyond the chaos of the Japanese city. They also allowed me to make the connection between how the Japanese see “in part” and how the manga panel and transition style help to break down its scenes into parts.

4. Conclusion

The use of comics and manga in the architectural field is where the former research is lacking in information. The only example that was found was BIG Architects using a Western style comic format for a book about their firm’s projects. However, they used this format in a more cosmetic way to represent the character of their firm. I also found an architectural student blogging about how the clarity of panel layout in comics could help in architectural presentation. In both these instances, it was the Western comic

book that is being examined. Therefore it is in this area that this dissertation will add a more in-depth study of the role that manga can play in the architectural profession.

Architectural professors and students have been thinking about how the communication and narrative in comics can help in the presentation of architecture, but that is as far as it seems to be applied. It is unknown whether this has also been the case about manga because no sources, in English, have been found. It does not mean that there are no sources out there. There have not been any papers or research in the architectural profession that has broken down the technique of comics to show, psychologically, how and why it works in architectural presentations. Also, there is nothing written about using the comic medium as a tool for the analysis of existing architecture and space. Manga also has not yet been applied as a visual interpretation tool of architectural or urban design theories. This dissertation does all these things and even points out how the unique characteristics of manga can better benefit the architectural profession and community. To my knowledge, there has also never been suggested a manga or anime aimed at the architect. Unconsciously, comic artists have been creating architecture within their comics to support the storyline and reflect the mood and atmosphere. It would be great to showcase architecture within the comic where storyline and character supports it. Like in *Oishinbo*, a manga series that served as inspiration for my sample manga, where food is the main focus, everything about the panel layout, drawings, character interaction, and storyline is about the food. Right now it is popular to use comics to look at pop culture and it is valuable in that respect, but this dissertation is going beyond this to look at how a manga works on its basic level and how that can be used to see and analyze architecture.

The key hypothesis is that manga can be a viable analysis and presentation tool for anyone in the architectural community. The popularity of manga is projected to spread and the percentage of people familiar with its visual language will continue to increase, allowing for its acceptance in the architecture profession. Clients and architectural professionals will benefit from its balance of image and word, its sequential cinematic technique, and reader involvement.

1. Comic's Visual Culture

Manga and anime has become well known globally and many books have been published about its cultural significance to the Japanese. In its beginnings after WWII, Western comics and cinema influenced its content and presentation. It then evolved on its own to become something that is seen purely as Japanese. From its subject matter, pacing, artwork, and arrangement, it has become all its own. Now, as its popularity has risen in the west, it has come full circle and is currently influencing western comics and cinema.

There are three reasons why manga was chosen above other art forms to look at architecture. It is because of its use of iconic art to portray an idea or deeper meaning, its panel transitioning and combinations of word and picture to produce more understanding, and its cinematic quality through its sequencing. No other art form combines these elements and it is because of this combination that it can help engage the audience and portray the deeper meaning of urban space with its connection to time. Even though manga shares these same components with the whole world of comics, this study looks particularly at the differences in manga that gives it even more potential in its visual ability to depict the built environment. It explains first how comics in general work in these three areas and then highlights the difference in manga and how it creates a better medium to portray the built environment than other Western comics.

1.1 Start of Comics

Scott McCloud a comic book artist and author of *Understanding Comics: The Invisible Art*, claims that the idea of comics has been with us since ancient times. He did this after stating his definition for comics.

Com-ics (Kom`iks)**n.** plural in form, used with a singular verb. **1.** Juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer.³

³ Scott McCloud, *Understanding Comics: The Invisible Art* (Kitchen Sink Press Inc., 1993), 9.

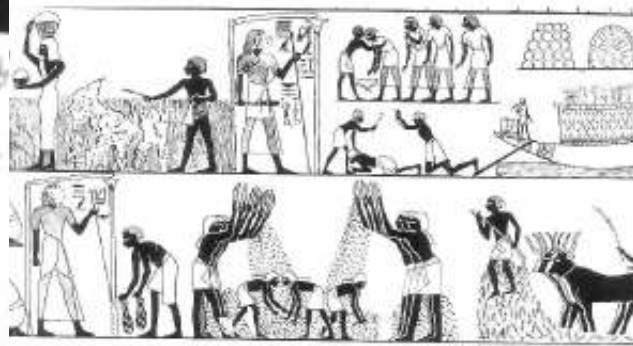
McCloud physically drew an example of “Pre-Columbian *picture manuscript* ‘discovered’ by Cortes around 1519,”⁴ as well as one of the *Norman Conquest* of England. The later is a 230-foot long *Bayeux Tapestry* that began in 1065. The last example that he drew was a sequential scene painted for the tomb of *Menna*, an ancient Egyptian scribe. It was painted over thirty-two centuries ago. He also talked about religious art of the church on stain glass windows and sequential painting.⁵ This definition could also be used to include Japanese picture scrolls where Japanese trace manga back to. This allows the conclusion that most cultural civilizations have a form of visual culture.⁶



a)



b)



c)

Figure1: (a) A section of a continuous scene from the *Bayeux Tapestry*. The conquest story runs in chronological order over a continuous background. (b) A section of a Pre-Columbian picture manuscript screen fold. It tells a story of a hero. (c) A painting in the *Menna* tomb that depicts the functioning of different castes in Egyptian society.

⁴ McCloud, *Understanding Comics*, 10.

⁵ *Ibid.*, 10-15.

⁶ Paul Gravett, *Manga: 60 Years of Japanese Comics* (Collins Design, 2004), 18-20.

1.2 Start of Manga

After doing research and visiting Japan, I found the current contemporary Japanese culture continues to have a great link to their past visual culture. This could be a possible reason that manga and anime are becoming popular worldwide. Kids are growing up with multi-media learning and gravitating toward Japan's unique way of creating narrative in a very visual way. The Western comic that once influenced the Japanese comic is now looking to the Japanese comic to influence its' own story telling.

First, it is important to establish the background for manga's narrative in art and visual culture. According to the *Japanese Architecture and Art Net Users System*, JAANUS, the term *manga* 漫画 was first used for "Edo period [1600 - 1868] sketches usually done impromptu or in fun, often of unusual or humorous subjects. In 'Hokusai's Caricatures' (*Hokusai manga* 北斎漫画), the first volume of which was published in 1814, the painter Katsushika Hokusai 葛飾北斎 (1760-1844) claims that he 'freely drew pictures of images that were seen or occurred in his mind'."⁷

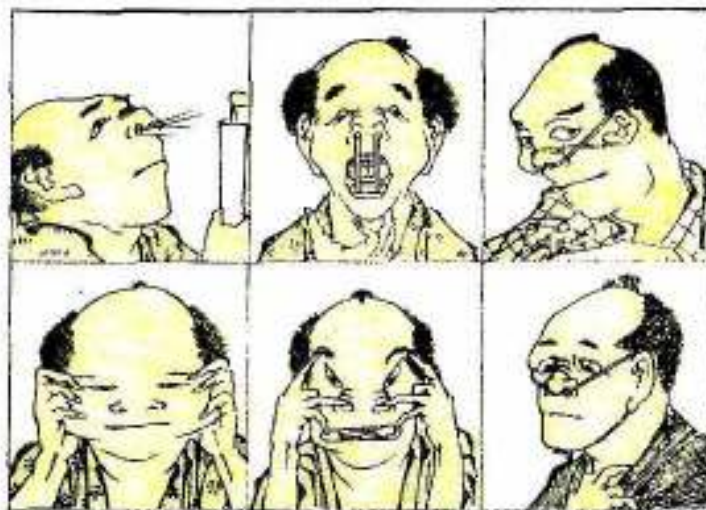


Figure 2: Hokusai manga showing sketches of humorous facial deformations.

Paul Gravett, author of *Manga: Sixty years of Japanese Comics* says that Hokusai was actually the man who invented the term.⁸ Garrett also quotes comic critic Fusanosuke

⁷ *Japanese Architecture and Art Net Users System*, s.v. "manga," accessed April 28, 2011, <http://www.aisf.or.jp/~jaanus/>.

⁸ Gravett, *Manga*, 21.

Natsume (born 1950) by claiming that ‘pre-manga’⁹ works dated back to the 12th century when artist priest drew or painted picture scrolls. Visual stories of religious concepts or scenes pertaining to the everyday life were depicted on these scrolls. These stories would be read by un-rolling the scroll as the story progressed. This provided fluidity to the narrative similar to the visual flow of manga.¹⁰ According to JAANUS, “In modern times *manga* has come to mean specifically comic or satiric pictures, often in book form.”¹¹

The next important printed development is *ukiyo-e* 浮世絵 which literally means “pictures of the floating world.”¹² These are “wood block prints of genre themes developed from the mid-Edo (1600 - 1868) to early Meiji (1868 - 1911) periods, supported by the people in the middle class of society (*shomin* 庶民, or common people) mainly in the city of Edo [now Tokyo].”¹³ During this time there was a rise in the middle class and people flocked to live in the city of Edo. “The world’s largest metropolis”¹⁴ of that time. “As papermaking and wood block printmaking techniques developed, an incredible amount of popular literature burst forth in the forms of romances, humor, erotica, and several varieties of picture books.”¹⁵ This is when wood block prints, like manga, were mass-produced to meet high demand, and hence became the first mass-produced art in Japan.

⁹ Ibid., 18.

¹⁰ Ibid.

¹¹ *Japanese Architecture and Art Net Users System*, s.v. “manga,” accessed April 28, 2011, <http://www.aisf.or.jp/~jaanus/>.

¹² *Japanese Architecture and Art Net Users System*, s.v. “ukiyo-e,” accessed April 28, 2011, <http://www.aisf.or.jp/~jaanus/>.

¹³ Ibid.

¹⁴ Gravett, *Manga*, 18.

¹⁵ Kisho Kurokawa, *Rediscovering Japanese space*, (New York and Tokyo: John Weatherhill, Inc., 1988), 49.

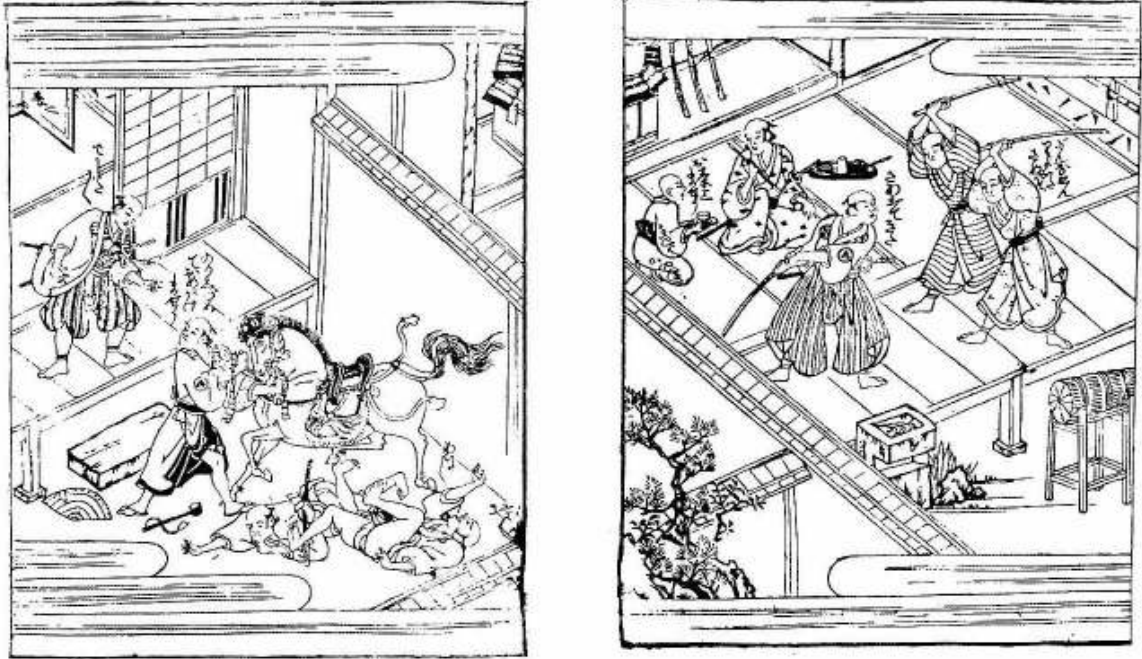


Figure3: Wood Block prints of scenes from *Characters of Worldly Young Men* with dialogue written near the characters.

The role of western comics cannot be denied in manga's development. According to Gravett, "manga might never have come into being without Japan's long cultural heritage being soundly disrupted by the influx of Western cartoons, caricatures, newspaper strips and comics."¹⁶ In 1862, Charles Wirgman, a British army officer, first brought the Western single-frame political cartoons to Japan.¹⁷ Then it was Honda Kinkichiro who first combined the Western cartooning method with "traditional Japanese references and puns."¹⁸ These comics were nicknamed *ponchi-e* ポンチ絵. The Katagana written for punchi indicates that it is a foreign term. According to JAANUS, "The term was used generally for Western-influenced joke pictures [...] The word '*ponchi*' was borrowed from the English weekly magazine, *Punch*, which began publication in 1841."¹⁹ *Ponchi-e* was then changed to the term *manga* in the 1890s.²⁰

¹⁶ Gravett, *Manga*, 18.

¹⁷ Gravett, *Manga*, 18.

¹⁸ Ibid.

¹⁹ *Japanese Architecture and Art Net Users System*, s.v. "ponchi-e," accessed April 28, 2011.

<http://www.aisf.or.jp/~jaanus/>.

²⁰ Gravett, *Manga*, 21.

Between the 1900s and 1930s, there wasn't much development in the manga world. While Western cartoonists were starting to explore 'cinematic techniques' within their comic strips, Japanese cartooning kept its old more theatrical approach, "as if the reader was watching actors perform on stage."²¹ The characters were drawn from head to toe, "rarely in close-up or from unconventional viewpoints."²² Any further developments in manga were postponed by World War II (1939 - 1945). The Japanese were cut off from the Western world and manga artists were ordered by the Japanese government to produce war propaganda. Only after World War II ended, did manga go through some revolutionary changes led by Osamu Tezuka that helped shape its unique attributes that are popular today.²³

2. Comics and Manga Visual Language

2.1 Iconic Art (Vocabulary)

Scott McCloud, the author who was mentioned earlier, does a great job breaking down the essential elements of a comic. He does this by creating a comic explaining the icons, empty space, transitions, picture and word combinations, time, and motion the artists use for constructing comics. McCloud states that comics are made up of iconic images. He is using the word icon to mean, "Any image used to represent a person, place, or idea."²⁴ He admits that his definition is broader than what is found in a dictionary but it works well with what he is trying to explain. He suggests that he would use the word symbol in place of icon but claims the term "is a bit too loaded,"²⁵ and instead he describes symbol as one of three different icon categories. The first is the "images we usually call symbols...these are the images that represent concepts, ideas, and philosophies".²⁶ It is understandable why this term would be pretty weighty due to the nature of some of the images it could represent. The second group of images he calls "the icons of language, science, and communication."²⁷ These are the most abstract of the icon

²¹ Ibid., 24.

²² Ibid.

²³ Ibid.

²⁴ McCloud, *Understanding Comics*, 27.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid..

images and usually have a fixed meaning.²⁸ The final category he calls pictures which are images that “actually resemble their subjects.”²⁹

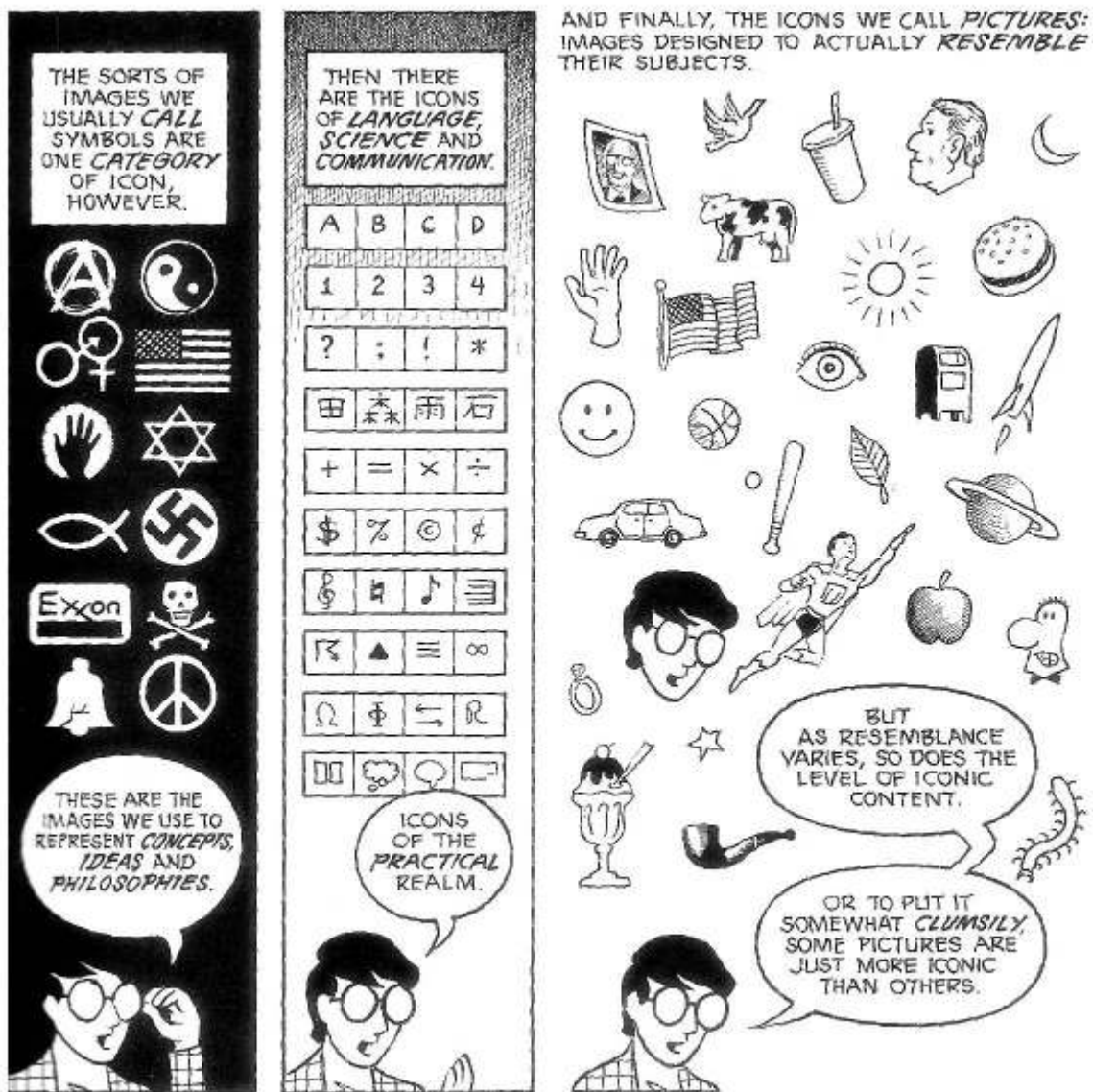


Figure 4: McCloud’s Three Icon Categories

Icons can come close to resembling reality; “The Real McCoy” as McCloud puts it, or being so abstract that there is no resemblance whatsoever. Words are totally abstract but pictures can vary. Words as a non-pictorial icon hold a fixed meaning but picture icons are more fluid and variable in their meaning. Along with pictures their meaning is

²⁸ Ibid., 28.

²⁹ Ibid., 27.

fluid and variable according to their appearance. The more cartoony and less real-life the pictures appearance the more iconic they become and the more invisible their meaning.³⁰

Icons are important to comics because it conveys information more visually. McCloud wrote, “Comic artists have a universe of icons to choose from! And it’s expanding all the time! Society is inventing new symbols regularly, just as comics artists do. Ours is an increasingly symbol-oriented culture.”³¹ There is a global culture that is uniting symbols and manga is helping to do this. As more people globally read manga they are learning more about Japanese symbols. And as Japan imports ideas from other cultures they are learning other cultures symbols. In a way, it allows comics to be able to be read more universally. Pictures that hold meaning do vary in its interpretation from culture to culture so it is not a totally universal language. However, as the world becomes more global, this gap of interpretation will get smaller.

2.1.1 The cartoon

The cartoon, due to how it carries meaning visually, can therefore carry hyper-real information. This hyper-reality actually transcends the world of the real and gives comics their power. McCloud claims, “When we abstract an image through cartooning, we’re not so much eliminating details as we are focusing on specific details. By stripping down an image to its essential ‘meaning,’ an artist can amplify that meaning in a way that realistic art can’t.”³² He continues to say, “Cartooning isn’t just a way of drawing, it’s a way of seeing.”³³ Cartooning or manga can be a different way of seeing architecture. One of the most vital things about the architecture is the idea or concept behind it. Looking through manga at architecture will bring attention to the idea or concept that is behind it. McCloud states, “the ability of cartoons to focus our attention on an idea is...an important part of their special power.”³⁴ This important part is also what makes it a viable tool for architects to employ.

³⁰ McCloud, *Understanding Comics*, 27-28.

³¹ *Ibid.*, 58.

³² *Ibid.*, 30.

³³ *Ibid.*, 31.

³⁴ *Ibid.*, 31.

2.1.2 Two Realms

The next point is how iconic imagery creates two realms, the inside (concept) and outside (sensory), and how our minds allow us to step into a comic and experience it by our senses. When we look at ourselves, we see ourselves as a concept. We know we are holding things without having to look to see if we are really holding it. In other words, we are aware of ourselves without having to look at our own faces or bodies. We are not, in the same way, aware of other things outside of ourselves. We have to use our senses to know about the other things that are not apart of us. We see, hear, smell, touch, and taste to know details about things around us. So, the outside world, apart from us, becomes a sensory world. This is how we can identify ourselves more easily with a cartoon because it represents a concept.

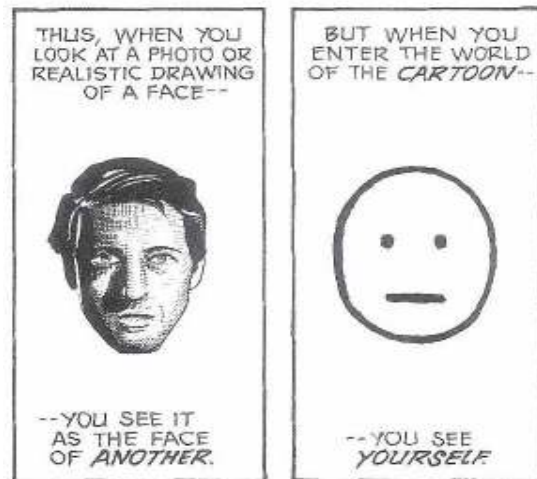


Figure 5: Seeing others as realistic representations and yourself as concept

McCloud goes further to explain that cartoons can be more universal in what they represent. "The more cartoony a face is, for instance. The more people it could be said to describe."³⁵ The more real it looks the more we identify the cartoon as someone else that belongs outside of use. But the more cartoony it is, the more universal it is. This allows more people the chance to identify with the character as them selves and, in turn, this allows us to step into the comic world in a mental sense.³⁶

³⁵ Ibid., 1993, 31.

³⁶ McCloud, *Understanding Comics*, 34-40.

2.1.3 Masking Effect

Comics that use the “masking” effect take advantage of the combination of the iconic cartoon and the more realistic backgrounds. McCloud explains it as readers “masking themselves in a character and safely entering a sensually stimulating world.”³⁷ The reader’s ability to mask himself or herself has to do with the concept of the cartoon that was discussed in the last section. With the masking effect, the artist is purposefully combining a very cartoony character with a very realistically drawn background. The purpose is to engage the reader in the created comic book world.

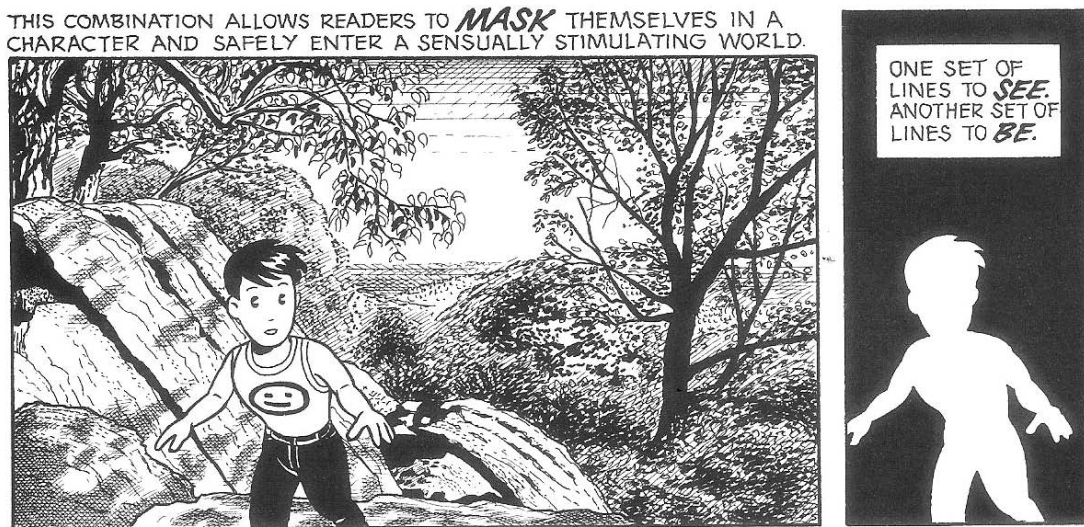


Figure 6: The realism of the background contrasts with the cartoon character to create the “Masking” effect. It allows readers to enter the world the character is in and visually stimulates our other senses.

This happens because people tend to look at the surface value of photo-realistic drawings. McCloud puts it simply by stating “one set of lines to see. Another set of lines to be.”³⁸ I didn’t fully understand how this worked until I came across another book with a similar format to McCloud’s book. This book, *Perspective! For Comic Book Artists*, written by David Chelsea, is a comic about comic art perspective drawing (Fig. 8). This was harder to read because the character teaching me was more realistic than McCloud’s character. I found myself focusing on the character instead of what concepts it was trying to teach

³⁷ Ibid., 43.

³⁸ McCloud, *Understanding Comics*, 31.

me. McCloud recognized this possibility and wanted his character to resemble an empty shell; one that a reader wouldn't question its cloths, background, political views, etc. (Fig. 7).³⁹



Figure 7: It is easier for a person to listen to McCloud's cartoon character as the narrator explaining the fundamentals of comic books than a more realistic version.



Figure 8: It is harder for a person to listen to Chelsea's character as narrator explaining perspective for comic books because the character is too realistically detailed.

Before I knew what Japanese manga really was or what the masking effect did, I didn't like the very cartoony style of the characters. At the time, I really enjoyed examining the more photo-realism art of western comics, such as Spiderman. I also didn't

³⁹ Ibid., 36-37.

like how the cartoony style of manga characters contrasted with the more realistic style of the backgrounds. It seemed that the characters and backgrounds were drawn by different artists who didn't try to mesh the drawing styles. At the time, I felt that the art in a comic book should be cohesive and styled the same. However, when I actually read a manga, the characters and story line intrigued me. It was easier to relate to the emotional states of these characters, and easier to focus more on the narrative and concepts being presented. It made the narrative of the manga feel more engaging. If an architect can get his/her audience to identify with a character in a manga that is showing his designs, then he will have a more engaged audience that can visually step into his design. The term of "engaging" the client is being thrown around by architectural firms and professors. Manga could be a very effective and largely inexpensive way to engage them.

2.2 Closure (Grammar)

Our perception of the world around us is not only affected by the information our senses send to our brain, but by what we already know. The human brain is constantly trying to seek out patterns from what we see, hear, feel, smell and taste. It identifies these patterns by comparing it to what we already have seen or experienced before. In this way the brain can bring meaning and significance to new information. If we are faced with unknown information our brain tries to categorize it. This categorizing is influenced by our own preferences. An example of this is how each individual sees a figure and ground illusion (Fig. 9).

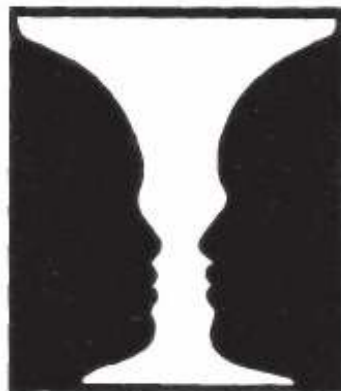


Figure 9: A popular Figure/Ground drawing of a vase and two faces. Depending on each person who views this picture, either the faces or vase will be dominate. It depends on

how the brain categorizes what it sees.

Depending on their preference, the black or the white becomes dominant to them. If the black is dominant, they see faces on a white background. If the white is dominant, then they see a vase or cup with a black background. There is no wrong or right way of seeing this. It just shows that a person's perception is affected by what they already know and how they categorize information. This is something that happens automatically and is analyzed further by Gestalt psychology.⁴⁰

It is by this phenomenon, of the brain receiving parts of information and making it into a meaningful whole, that comics are able to work. Scott McCloud calls this "closure" and refers to it as the grammar of comics. Comics depend on closure to work in between the panels; in the area called the gutter. Each panel is seen as a fragment that is linked to each other as a single idea through the gutter. Because there is nothing seen in the gutter but emptiness, the imagination of the reader is then called upon to fill in the blank.



Figure 10: The space between two panels is called the "Gutter." This is where a reader's imagination is most active and provides closure, which links the two panels into a coherent sequence.

Comics are the only medium where the reader is most conscious of closure and is an active participant. It is also through this act of closure that time and motion is stimulated

⁴⁰ Leland M Roth, *Understanding Architecture: Its Elements, History, and Meaning*, 2nd ed. (Westview Press, 2007), 67-71.

in a comic. For example, if one panel shows a character holding a dish and the next panel shows it broken on the floor, the reader is the one who imagines the plate falling in between panels.⁴¹

2.2.1 Panel Transitions

It is up to the audience's imagination to make connects from panel to panel, however it is the work of the comic book artist to decide what kinds of transitions to use from panel to panel. These transitions will also determine how much effort the audience will need to put into creating closure. Scott McCloud pointed out six categories of panel-to-panel transitions from which most artists choose. Which transition method an artist uses is all dependent on what affect the artist is trying to achieve. The first category is the moment-to-moment panel transition. This one works the most like film because the audience doesn't need to put a lot of effort into closure (Fig 11).⁴²

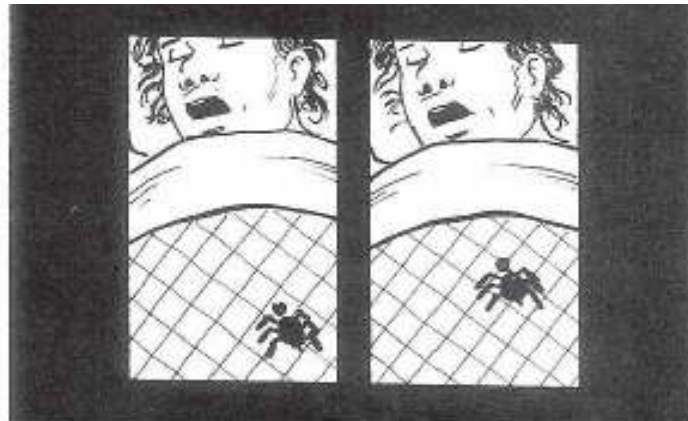


Figure 11: Moment-to-moment panel transition

The second category is the action-to-action panel transition that shows a character or object progress through an action (Fig. 12).⁴³

⁴¹ McCloud, *Understanding Comics*, 62-69.

⁴² *Ibid.*, 70.

⁴³ *Ibid.*

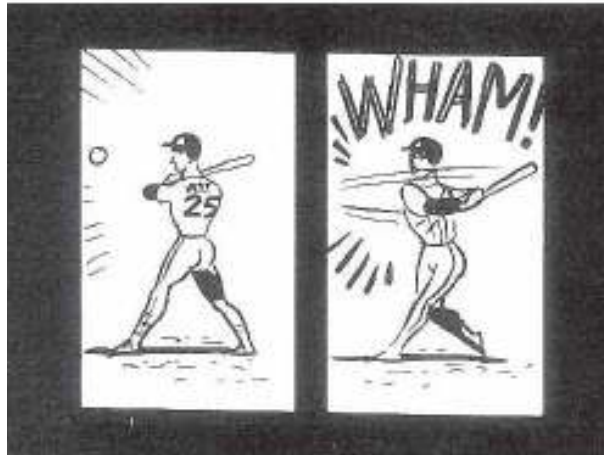


Figure 12: Action-to-action panel transition

The third category is the subject-to-subject panel transition. The advancement of this transition stays within a single scene or concept. However, the audience must put in a little more effort to create closure between the two panels (Fig.13).⁴⁴



Figure 13: Subject-to-Subject panel transition

The fourth category is the scene-to-scene panel transition. Now the reader must think harder about the connection between these panels because one panel could show a person in California and another in New York, or the span of time from one panel to the next

⁴⁴ Ibid., 71.

could be really long. The reader would have to find out what is the correlation between them within the stories context (Fig. 14).⁴⁵

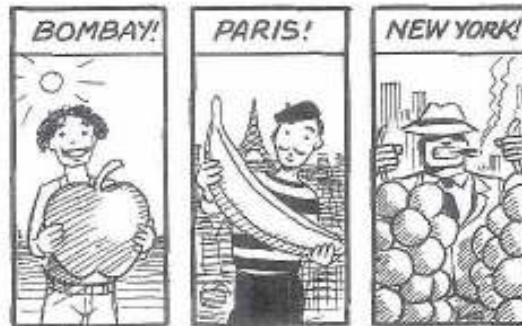


Figure 14: Scene-to-scene panel transition

The fifth category is the aspect-to-aspect panel transitions. This panel transition type makes the reader work the most. Usually no progression of the narrative is desired when using this method because it is the intention to create a mood or sense of place. The artist gives the reader fragments from a place, idea, or mood. It is up to the reader to put these fragments together (Fig. 15).⁴⁶



Figure 15: Aspect-to-aspect panel transition

⁴⁵ McCloud, *Understanding Comics*, 71.

⁴⁶ *Ibid.*, 72.

The last category is a non-sequitur panel transition. In this transition there is no logical or rational relationship between the panels. However, because these images are put together there is a suggested relationship, which makes the viewer look at the group of images as a whole (Fig.16).⁴⁷



Figure 16: Nonsequitur panel transition

By looking at different comics and categorizing what transitions they make use of, a trend can be seen in a particular artist or group of artists' method of storytelling. When the mainstream comics of America and Europe (Fig. 17) were compared, they were found to use, for the most part, the same transitions with the same proportional use. As can be seen by the graphs, there is a staggering difference between how often action-to-action is used compared to the rest and subject-to-subject comes in as the second most used transition. Moment-to-moment and aspect-to-aspect transitions barely make it onto the graphs of some artists work. Non-sequitur transitions are usually never seen in mainstream comics or even experimental comics.⁴⁸

⁴⁷ McCloud, *Understanding Comics*, 72.

⁴⁸ *Ibid.*, 75.

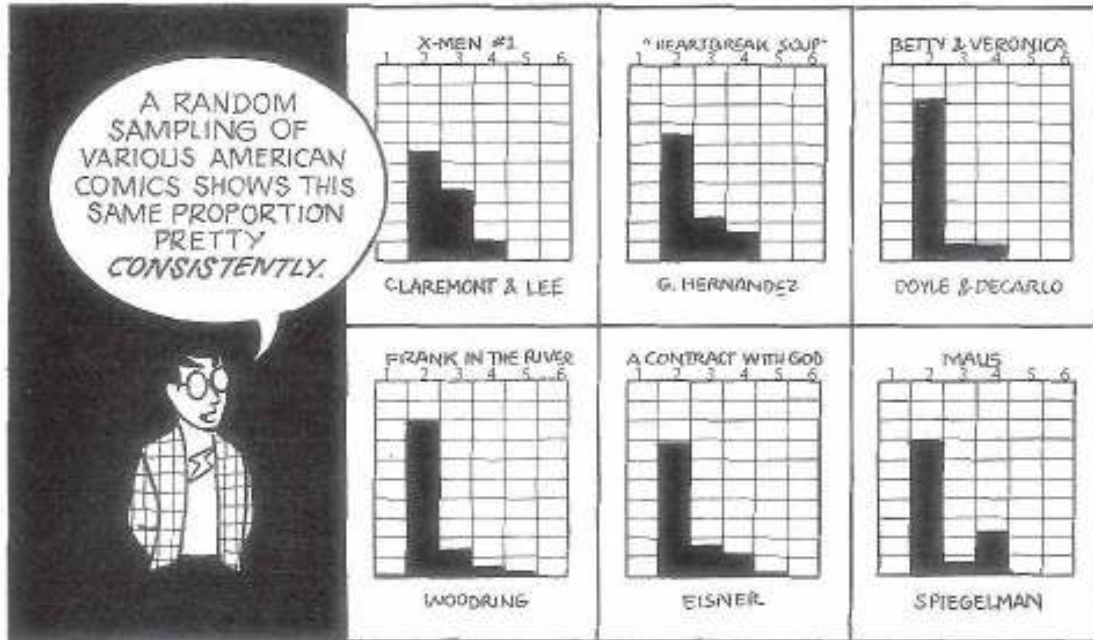


Figure 17: These are graphs comparing American and European comic book panel transition. Each column in the graph represents one of the panel transition categories.

1= moment-to-moment, 2= action-to-action, 3= subject-to-subject, 4= scene-to-scene, 5= aspect-to-aspect, 6= non-sequitur.

The first column represents category one and from there counts up to category six. Each horizontal line represents 10 % increments starting from zero. This indicates how often the transition is used in comics.

It is only when we compare the American and European artists to the Japanese artist do we see a big difference in transition use (Fig. 18 and 19). Even though action-to-action transitions are still used the most in Japanese mainstream comics, there is considerable more use of aspect-to-aspect and moment-to-moment transitions. In a way, this gives Japanese comics a more balanced graph than the American and European comics.⁴⁹

⁴⁹ McCloud, *Understanding Comics*, 77.

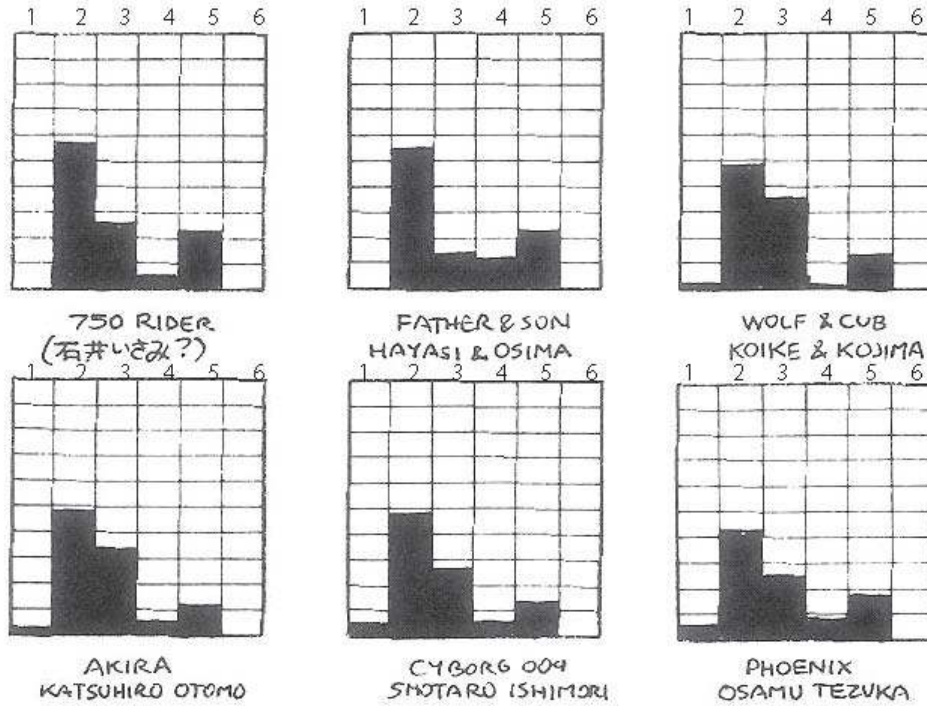


Figure 18: Like the Western graphs, these are graphs comparing different Japanese manga panel transition using the same method that is used in Figure 17.

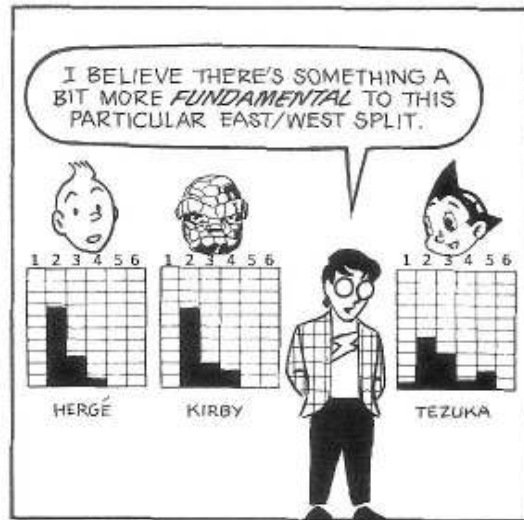


Figure 19: These graphs show the difference between the popular comics artist of the Western comics and Japanese comics, manga. Manga has more use in **1= moment-to-moment** and **5= aspect-to-aspect**.

Aspect-to-aspect is a transition method that is most important to this dissertation because this is one of the most defining transitions that makes manga different from western comics. This transition takes a scene and isolates different parts or elements of that scene. This fragments the scene and creates a mood or atmosphere (Fig. 20). There are many other ways to create mood and atmosphere, but this method literally stops time. This apparent stopping of time is what gives this method its strength in setting a mood or atmosphere. Because the reader must now mentally assemble these fragments, it makes them stop and contemplate that moment. In this type of transition, sequence, which involves time, becomes less important.⁵⁰

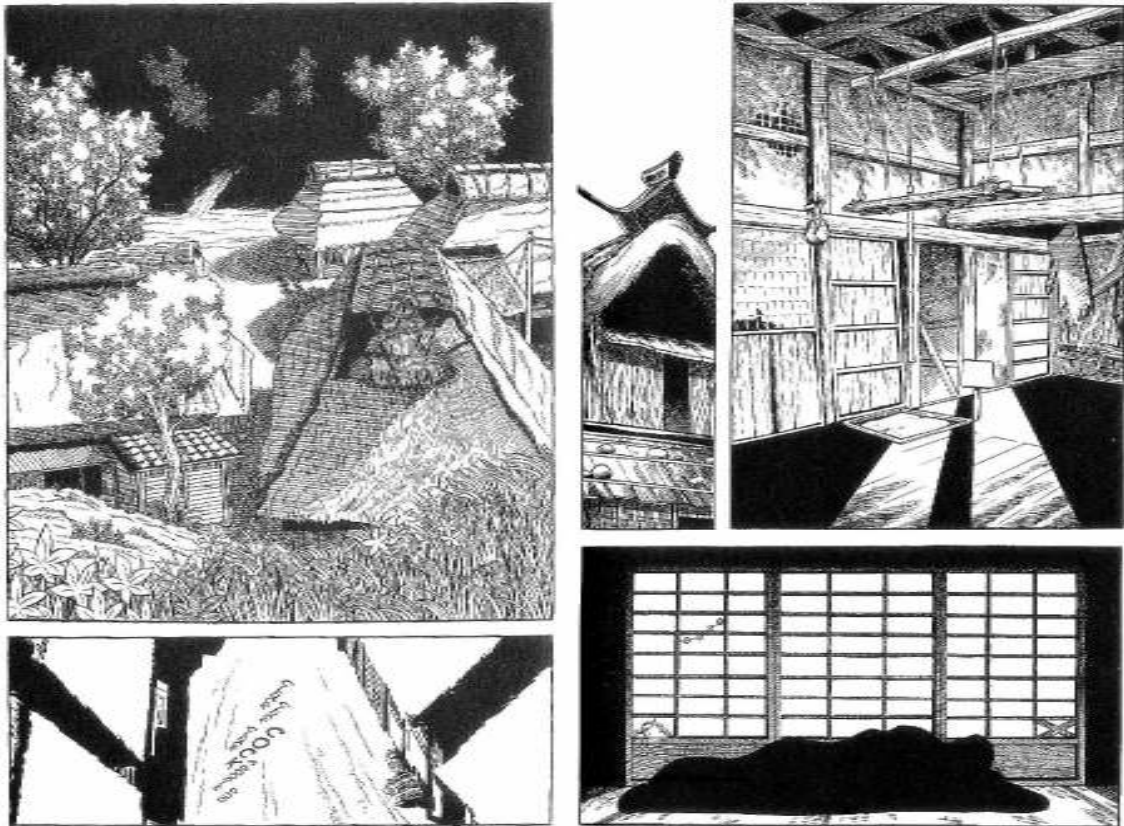


Figure 20: Aspect-to-aspect panel transitions from *Ode to Kirihito* that uses fragments of a traditional Japanese village and house.

One reason why this method appeals to a greater audience in Japan is the emphasis on the moment. As a generalization, the Japanese put more value in being in a

⁵⁰ Ibid., 79.

place or moment than getting there. On the other hand, most Western thinkers would be more concerned about getting somewhere than contemplating the here and now. This idea of being in the moment is ingrained in Japanese Zen Buddhism. Their focus is on emptiness; and Zen teachers used methods like riddles which are referred to as Koans, that made no logical sense to help their students to meditate on this emptiness. This meditation on emptiness then leads them to being in the moment. It is the here and now that is important; not the past, which cannot be changed or the future which has not arrived yet and cannot be controlled. It is this point of aspect-to-aspect that is important to Architecture. Architecture is an experience and creates a mood and atmosphere. This aspect-to-aspect method is a great way to portray this experience but most importantly provide a way to look at, break down and analyze the space as well.

2.2.2 Time Frames

What makes comics unique from other fine art forms is the presence of time in its pages. In order to see time in comics, it has to be perceived spatially. For example, when a reader's eyes scan across the page, it takes time to do this. This type of time is then separated between the panels as well as in them. Closure, which was introduced before, creates the time between panels. Time that lapses in the gutter can pass slowly or quickly depending on the content present in the following panel. Time that lapses in the panel is affected by the width of the panel, character placement in a continuous background, sound, or movement lines.⁵¹

The panel helps shape and divides spatial time. Sometimes it is hard for a reader to tell how much time has passed between the comic panels. For example, if there is a period of silence between two people having a conversation, a "pause" panel can help determine the amount of time passing. More pause panels of the same width can be added to make the silence last longer (Fig. 21), or the space between the panels could be widened to indicate a longer silence (Fig. 22). Even the panel itself could be widened to have this same effect (Fig. 23).⁵²

⁵¹ McCloud, *Understanding Comics*, 94-117.

⁵² *Ibid.*, 100-101.



Figure 21: Multiple pause panels for lengthening pause time between the action of asking a question and the reaction of answering the question.



Figure 22: Widening the length of the gutter between panels also adds a lag time between action and reaction.



Figure 23: Widening the panel, itself, lengthens pause time between action and reaction because a readers eye must span the pause panels length before seeing the reaction panel.

This silent pause panel can also take on a timeless feel if it does not give any clues as to how long time has lapsed and doesn't have the same relationship as the example that was just showed. Also if this silent panel "bleeds" off the page, time is no longer contained by the panel and it takes on an even stronger timelessness. The aspect-to-aspect panel

transitions that were discussed earlier make great use of this type of silent pause panel to help create a mood or a lingering presence in the reader's mind.⁵³

Just as time and space are linked so is time and sound. It was mentioned in the paragraph above how silence can help make a pause panel timeless which hints that sound can give a panel a certain duration of passing time. Words and sound effects in their very nature take up time and can only exist through the progression of time. Also, the action of one character speaking and the reaction of another character answering add to the span of time within a panel or across a sequence of panels.⁵⁴



Figure 24: Word balloons and sound effects

Lastly, motion and time have a relationship similar to time and sound. In order for an object or person to be in motion, there must be a passing of time. As was touched upon before, closure between panels is perceived by the viewer as motion usually in the panel transition types of moment-to-moment and action-to-action. The time span of motion can also happen within a panel. One way this is accomplished is through the motion line. This line indicates a path of movement.

⁵³ McCloud, *Understanding Comics*, 102-103.

⁵⁴ *Ibid.*, 95,116.

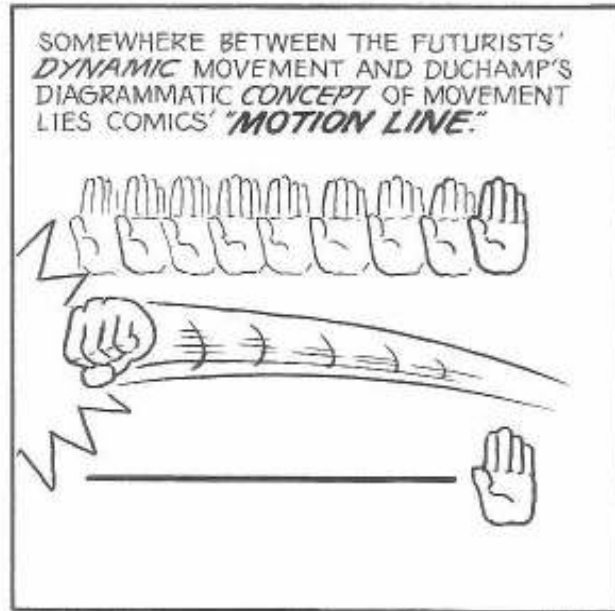


Figure 25: Motion Line Conveys Time Passing

Using the “Polyptych” effect can also create motion in a comic. This effect is produced by having a continuous background that a moving figure or object is placed in a sequence traveling through that background.



Figure 26: Figure moving through continuous background

Another way for time to happen is to have a scene that shows a change happening through a sequence of panels. This calls on a reader's memory to make this method work.⁵⁵



Figure 27: Motion through memory

2.2.3 Cinematic Quality in Manga

Osamu Tezuka (1928 - 1989), also known as the ‘God of Manga,’⁵⁶ experimented with creating the illusion of cinematic movement in his drawings. He was a great fan of cinema and was captivated by Disney and Chaplin. He is recorded as saying ‘Why are American movies so different from Japanese ones? How can I draw comics that make people laugh, cry and be moved, like that movie?’⁵⁷ It was this idea that sparked his imagination and transformed manga. Tezuka gave manga its flow of images, which are key to its style today. MacWilliams argues that “According to Arnold Rommens, the storytelling [of manga] relies upon an ‘analytical montage,’ which means that there is a sequence of images that scatters the narrative action over several frames [the borders that hold one drawn scene] through a flexible page layout.”⁵⁸ Also, because manga uses a variety of camera angles and other cinematic techniques of fading in and out “manga can mimic a cinematic style by creating a seamless visual continuum that turns the act of

⁵⁵ McCloud, *Understanding Comics*, 107,110-115.

⁵⁶ Gravett, *Manga*, 24.

⁵⁷ *Ibid.*, 26.

⁵⁸ Mark W. MacWilliams, ed, *Japanese Visual Culture: Explorations in the World of Manga and Anime* (New York: M. E. Sharpe Armonk, 2008), Ebrary Reader ebook, 7.

reading into a scanning of images.”⁵⁹ This is how manga became known as the poor man’s cinema.⁶⁰

It was the cinematic quality that I first noticed about Tezuka’s manga, *Ode to Kirihito*. The dynamic drawn lines and picture frame placement created the feeling of movement. Also, the placement, size and shape of the frames, which generate a sequence of images, create an equally stunning visual continuity. This sequence and continuity made me feel like I was watching a film instead of reading a manga.



Figure 28: A cinematic style chasing sequence from *Ode to Kirihito*. The top panels switches between the two men running which acts like a camera panning in and cutting between the characters.

⁵⁹ Ibid.

⁶⁰ Gravett, *Manga*, 38-42.

Depending on the speed I could visually take in, the sequence and the amount of words on a page, I was flipping through pages surprisingly fast. “Since manga contain less text than Western comics, they are extremely fast to read, with reader-viewers consuming a 320-page comic book in twenty minutes, or scanning a page every 3.75 seconds.”⁶¹ McCloud explains, “Most Japanese comics first appear in enormous anthology titles where the pressure isn’t as great on any one installment to show a lot happening [...] As such, dozens of panels can be devoted to portraying slow cinematic movement or to setting a mood.”⁶² This accounts for why manga uses more subject-to-subject and moment-to-moment panel transitions. Because of this difference manga appears to be more cinematic than western comics and represents more closely the experience of space. It is because of this close link that manga offers a unique way to visualize the built environment.

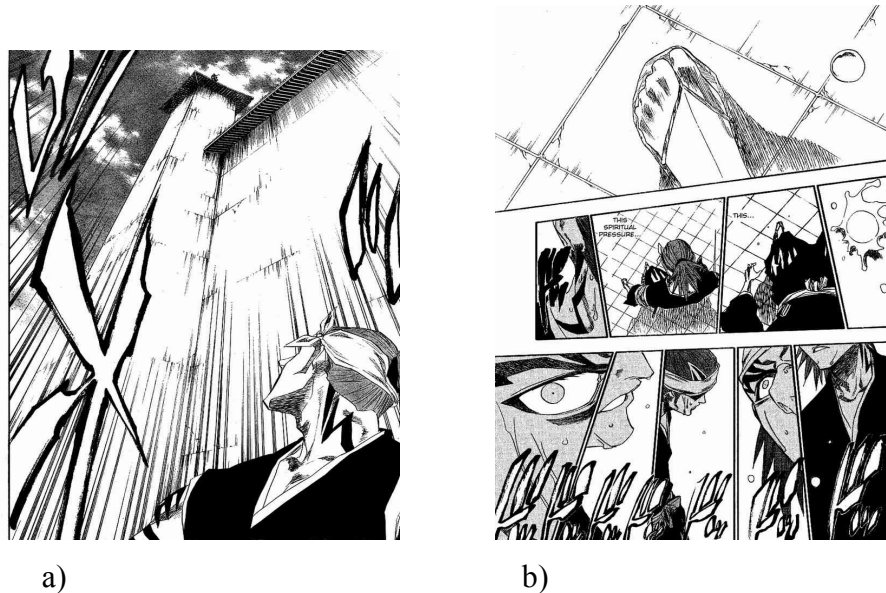


Figure 29: View the above panels from right to left (b) to (a). The different camera angles drawn in this *Bleach* manga uses moment-to-moment panel transitioning emphasize a shift in the atmosphere and draws suspense

⁶¹ MacWilliams, *Japanese Visual Culture*, 7.

⁶² McCloud, *Understanding Comics*, 80.

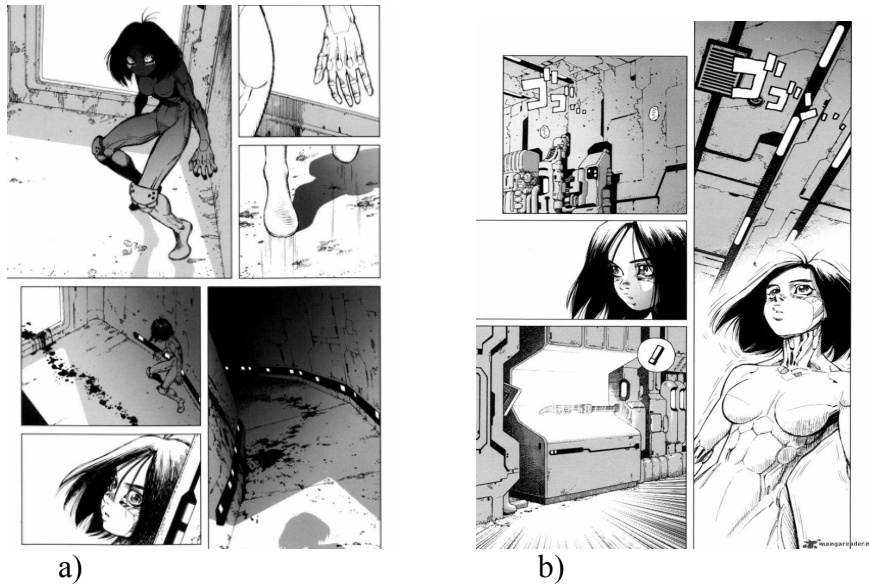


Figure 30: View the above panels from right to left (b) to (a). The different camera angles drawn in *Alita: Last Order Angel Reborn* manga uses a mixture of moment-to-moment and aspect-to-aspect panel transitioning emphasize a shift in the atmosphere and draws suspense.

2.2.4 Close Relationship Between Manga and Anime

The link between manga and anime resulted from Tezuka's work in the two mediums. Based on his manga, *Astro Boy*, Tezuka created the first television animated series, *Astro Boy*, in 1963. Due to no experience in animation, no experienced animator working with him, and the time constraints of producing a weekly 30-minute episode, Tezuka's animated movements and frames were very limited which gave the animation a more static feel to the motion of the characters. However, because he was a well-known manga artist, and his animation bore the same characteristics of his manga, people reacted positively to his animation. It was his original narrative and the collection of established characters, along with the pre-existing drawn cinematic panel pictures that were reflected in the audience's minds. Other rival television networks, seeing Tezuka's

success, took on these same methods of manga to animation and “limited animation” technique.⁶³

“Limited animation” is a term that refers to animation that uses three frames of film per drawing. This is a contrast to “full animation” which refers to animation that uses eight or more frames of film per drawing. In the United States, the use of “limited animation” started in the late 1940’s as a reaction to the realism of Disney animation. Artists felt this type of animation medium could provide more opportunity for expression. It wasn’t until Tezuka Osamu made the animation *Astro Boy* that “limited animation” was adopted in Japan as a necessary application to make the production of TV anime faster and more cost-efficient. However, the “three frames per drawing” technique wasn’t the only method used to achieve these fast and cheap results. Another method used was recycling cells which included storing cell pictures in a “bank system” and reusing the same cell with minor alterations, such as, changing only the character’s lips to portray talking.⁶⁴

Tezuka’s popularity as an artist wasn’t the only factor that made this style popular. Tze-Yue Hu’s research concluded that its acceptance and response of the viewers was based on their cultural memory. “How viewers accept and respond to a ‘new’ genre involves experiences of the past, which include the pre-existing array of literary forms and art forms that are available and active in cultural memory and practice.”⁶⁵ Tze-Yue suggests that the stiff movements associated with limited animation reflect the slow movements of a Noh actor. “Although anime may harness modern technology to perform, how the audience makes sense of the performance is another important consideration.”⁶⁶

Today, the method of manga to animation continues to be popular and is still used by Japanese television networks. Not only was the artistic style of manga used in animation but its symbolic characteristics that expressed emotion and movement were

⁶³ Tzue-yu G. Hu, *Frames of Anime: Culture and Image-Building* (Hong Kong University Press, 2010), 98-99.

⁶⁴ Hiroki Azuma, *Otaku: Japan’s Database Animals*, trans. Jonathan Abel and Shion Kono (University of Minnesota Press, 2009), Ebrary Reader ebook, 42-43.

⁶⁵ Hu, *Frames of Anime*, 100.

⁶⁶ Ibid.

also used. Yonezawa Yoshihiro (1953 - 2006), a popular manga critic, when talking about anime, is referenced as saying, “one is watching ugoku manga (meaning ‘moving manga’).”⁶⁷ Hence, anime along with manga, “assumed a unique role and became a distinctive stylistic representation in Japanese popular culture.”⁶⁸ In other words, basically manga is anime but without any of the filler drawings between the actions.



a) b)
 Figure 31: (a) An action scene in the *Bleach* anime series reflects the same action scene being depicted by (b) the *Bleach* manga series. By comparing (a) and (b) the same framing from the manga is being used in the anime. Also the motion lines used to emphasize the kicking action in the manga are used to do the same thing in the anime.



a) b)
 Figure 32: (a) a scene in the *Bleach* anime series reflects the same scene being depicted by (b) the *Bleach* manga series. By comparing (a) and (b) the same snowflake background is used. Also the same hyper-stylized facial expression is being used.

⁶⁷ Hu, *Frames of Anime*, 101.

⁶⁸ *Ibid.*, 78.

2.3 Words and Picture Balance

Comics are unique because it combines both mediums of pictures and words. It is this combination that gives comics an advantage over film. How the pictures and words are balanced is up to the artist and there is an unlimited variation of ways to do it. It all depends on what the comic artist wants to achieve. Even though the combination of pictures and words seems limitless, the combinations can still be categorized. There is the Word Specific category where the words are dominate but the pictures don't add that much more to the narrative (Fig. 33).



Figure 33: Word Specific Combination Example

Opposite of this category is the Picture Specific; here the pictures are dominate and move in sequence with very few intertwining words that are used for sound effects or short phrases. The words don't add much to progress the narrative as the pictures did in the last example (Fig. 34).⁶⁹

⁶⁹ McCloud, *Understanding Comics*, 152-160.

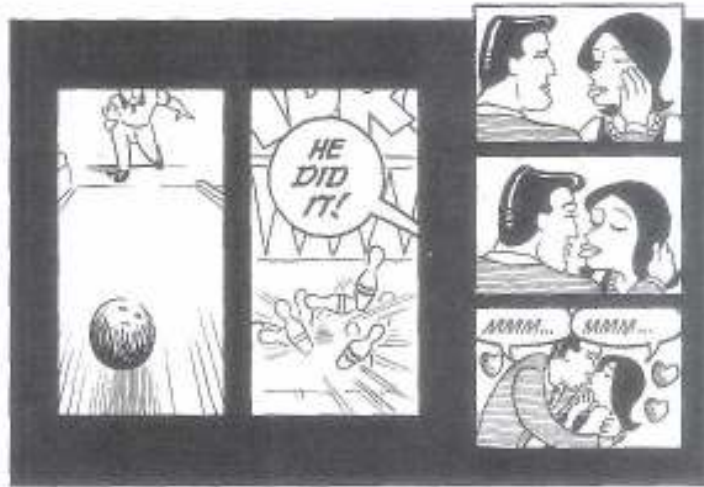


Figure 34: Picture Specific Combination Example

One manga series, that utilized this combination well, is *Blame!* In this comic the main character, wanders the ruins of a futuristic city virtually in silence because he is alone. There also are not many thought balloons so you are paying more attention to the landscape. Later on there is more dialogue as he meets people who explain what has happened to this massive city that seems to float in space. This combination worked well with the many aspect-to-aspect transitions which established a distinct mood and emotional state of detachment and loneliness (Fig. 35).

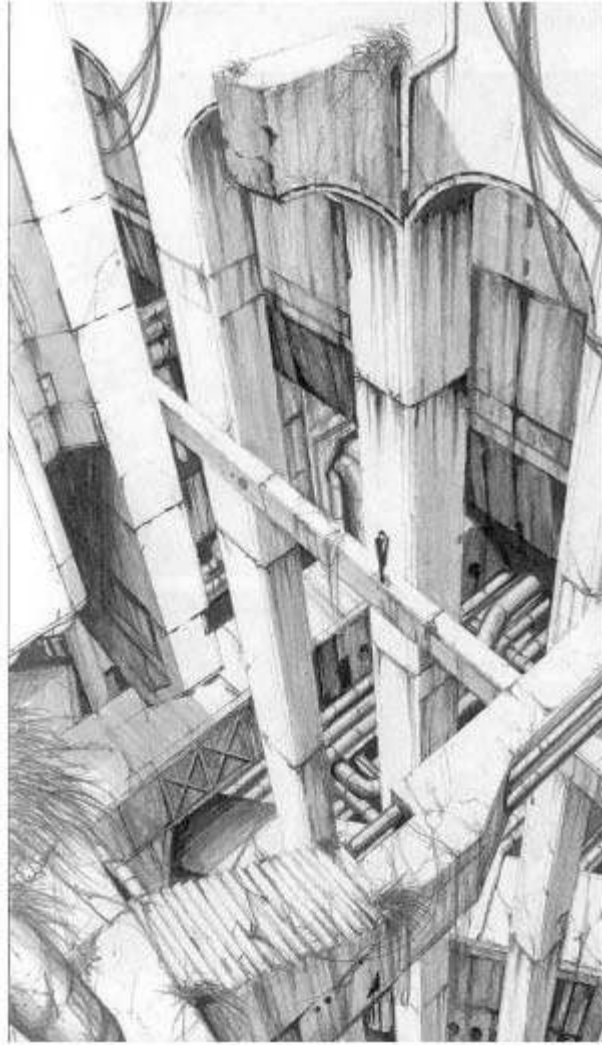


Figure 35: The *Blame!* manga makes good use of the picture specific combination. In the beginning and many times throughout *Blame!*, the character Killy walks through silent landscapes of an endless city.

The next category of picture and word combinations is called Duo-specific. In this category, the picture and words that occupy the same panel say the same thing. There is a 100% overlap of the information given by both (Fig. 36).⁷⁰

⁷⁰ McCloud, *Understanding Comics*, 152-160.



Figure 36: Due-Specific Combination

There is the Additive combination. This category normally uses words to relay more details than can be seen in the image or intensify an images effect. This can also be done the other way around where the picture relays details that the words did not express or intensify the meaning of the words (Fig. 37).⁷¹



Figure 37: Additive Combination

⁷¹ McCloud, *Understanding Comics*, 154-160.

The parallel combination category is where the pictures and the words have no relationship. However, they move along in their own separate narratives and never touch like parallel lines (Fig. 38).⁷²



Figure 38: Parallel Combination

Next, is the Montage option, which uses words and pictures in such a way that they are intertwined into a whole. The sound effect words tend to fall into this type of category because they are drawn in a stylized manner and integrated into the composition drawing as well (Fig. 39).⁷³



Figure 39: Montage Combination

⁷² McCloud, *Understanding Comics*, 154-160.

⁷³ Ibid.

Lastly, there is the Inter-dependent combination category. This is the most commonly used combination. In this combination the words and pictures are dependent on each other. If one or the other was taken out of the equation, then neither would make sense (Fig. 40).⁷⁴



Figure 40: Inter-dependent Combination

This category in itself has different combinations in how the pictures and words are balanced. Depending on the domination of the picture or the word, more freedom of abstraction is given to the other. For example, if more of the narrative is held in the sequence of the pictures that gives the audience all the information they need, then the

⁷⁴ McCloud, *Understanding Comics*, 155.

words can be a little more ambiguous or reflect internal thoughts or emotions. The same could go for the picture, if the words carry the narrative.⁷⁵

Mainstream manga tends to be in this inter-dependent category that gives manga its strength in clarity and expression. This helps make reading and comprehension fast and easy. When I first encountered a 400-page manga, I was amazed at how fast I could read it. Even though there was little text compared to western comics, I didn't expect my mind to scan through the pictures so fast. As I am a slow reader, I was surprised at my ability to speedily comprehend the story's environment, characters, and story line. How was I able to accomplish this? It is because the brain can take in visual information faster than it can comprehend written text. I learned about this in my American Sign Language course. Sign language is a visual language. Deaf people who are native sign language users watch the shapes and movements of the hands along with the signer's facial expressions. They see in linguistics of shapes, space and time, making their signing and comprehension faster than I can interpret what they are saying. According to *Reading Japan Cool* research, "part of the accessibility of manga is that readers consider them easier to read than books because of the textual and visual clues."⁷⁶ Also, through interviews with high school students it was found they were "attracted by the graphics, not so much by the style but more because they facilitated an understanding of the story."⁷⁷ Drawings help clarify an idea in a simple and visual way. Some things just can't be explained in words, but can be seen visually. For someone not familiar with a subject, illustrations can help him or her understand the subject better. In regards to Systemic-functional linguistics, media, such as text and graphics include two different modes that communicate meaning to a reader. The way manga combines these modes allows it to be termed a multimodal media. It also communicates meaning through different levels in its graphics.⁷⁸ Three different ways that manga uses its graphics are:

⁷⁵ Ibid., 155-160.

⁷⁶ Ingulsrud and Allen, *Reading Japan Cool*, location 2254-56.

⁷⁷ Ibid., location 2250-54.

⁷⁸ Ibid., location 143-47.

1. The arrangement of panels on a page, depending on its size, shape, and number of panels, emphasize the ideas or emotions the artist is trying to portray.⁷⁹

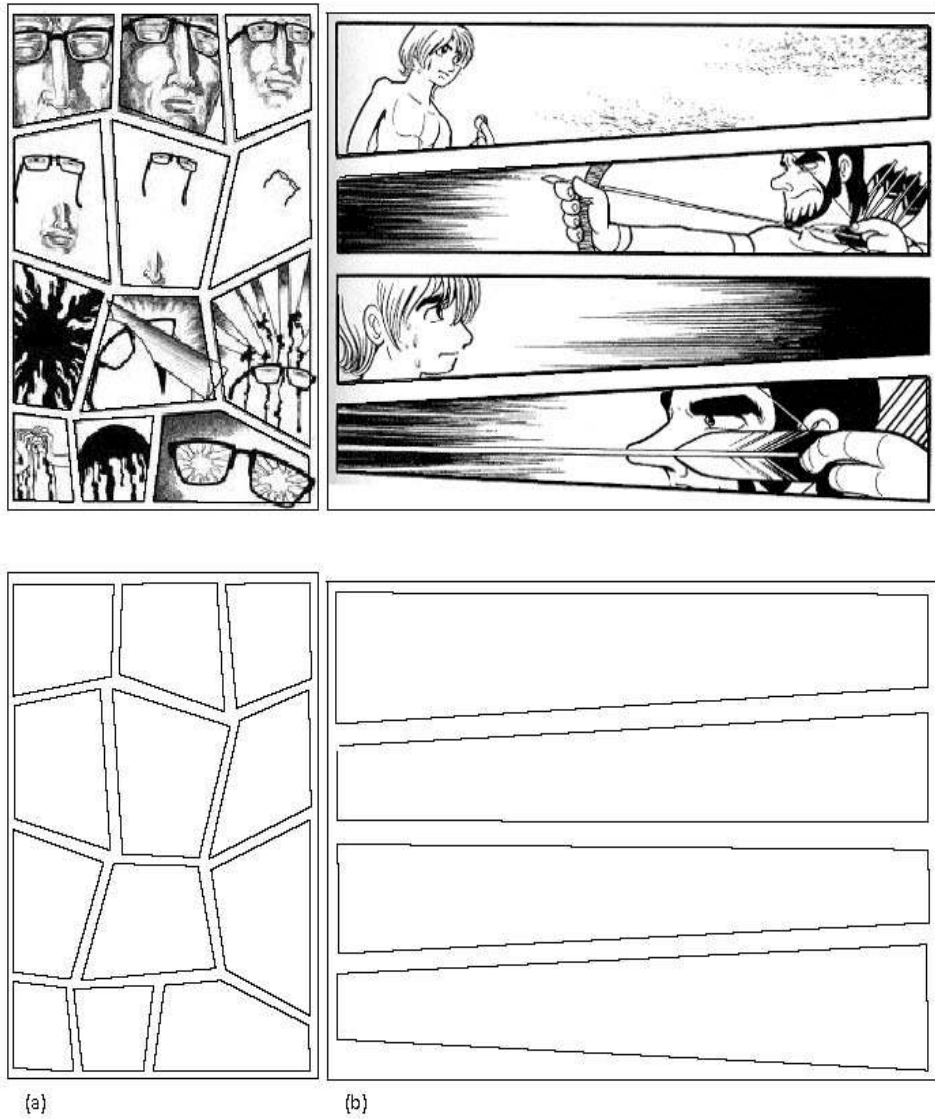


Figure 41: (a) The shape and relationship between the panels reinforce the mental state of Dr. Urabe (b) The length and dynamic angle of the panels dramatize the aim and intended motion of the arrow.

⁷⁹ Ibid., location 167-71.

2. Different graphic symbols indicate movement, sound volume, tactile qualities, and emotional states.⁸⁰



a)

b)

Figure 42: (a) Motion lines symbolize movement and become apart of the composition. (b) The bold and large scale of the word “skree” symbolizes a loud and defined noise. The word’s sketchy and loose writing style symbolizes the uneven consistency of the noise.

3. Speech Balloon Shapes indicate the nature and intensity of the message.

(a) Sharp = Shock or surprise

(b) Size and font in relation to the balloon = volume of speech or intensity of thought

(c) Curved or Jagged and the number of lines = depict movement and psychological states⁸¹

⁸⁰ Ingulsrud and Allen, *Reading Japan Cool*, location 167-71.

⁸¹ *Ibid.*, 175-79.



Figure 43: A speech balloon depicting shock and a shouted response.

In design studios, professors tell their students that the design needs to speak for itself. But if someone like a client doesn't understand that language, they won't understand what the design is saying to them. It might tell them something totally different than what the designer intended. So finding that balance between text and graphics is important to architects and their clients. As an architectural student I have been faced with many literary architectural textbooks that have been very intimidating to read. In an attempt to read these daunting scholarly books, it was hard to understand the theory and sometimes what visual components they were talking about. So, they have remained on the shelf unread and gathering dust. Their value can be intellectually understood but at times it felt like they are in another language, comparable to the books next to them written in Japanese.

As I have gained knowledge in architectural terms and theory, these texts don't look as scary. I have started reading one and rereading another. However, it is still hard to decipher some of their meaning. In contrast, a couple of weeks before I left for a trip to Japan, I learned to appreciate Japanese cuisine by reading a manga called *Oishinbo*. I also looked at the functioning of Japanese business through a compilation of short manga stories. These were things I would have never picked up an ordinary book to read about. This prompted the idea that other people not in the profession of architecture could learn to appreciate architectural theory and design through the medium of manga.

McCloud's book, *Understanding Comics*, proves to be a good example to support the idea of how a writer can't really explain architecture, a visual art, with only writing and few pictures. Also how can architecture be explained through only pictures? It can't. Architecture is an art that is full of meaning, from its exterior presents, to its color, and spatial arrangements. However, a layperson can't always decipher these meanings or know all the reasons why different architectural elements make him/her feel the way s/he does. This awareness leads to the conclusion that the balance between words and pictures in comics can help architects with their communication of architectural language.

2.4 Influences on Manga development

2.4.1 Manga Length

It is very important to talk about the length of manga books compared to Western comics. This length has allowed for the development of the word and picture combination, masking effect, aspect-to-aspect transitions, and the cinematic quality of manga bringing as much clarity and insight as it does of the visible and invisible worlds. But how could manga publishing companies afford the cost? Printing costs are kept low due to serialized manga being printed on really cheap paper which is meant to be thrown away after being read. The serialized manga that are the most popular are later compiled into a large book that is sold to fans that want their own copy of the series.



Figure 44: On the left-hand side of the left panel, is a Western comic called *X-MEN*. The comic book to the right is a Japanese manga. It is very thick compared to the Western comic.

This way the cost of printing is less and they get to sell the series a second time to fans. Manga is also printed in black and white instead of color like most Western comics. This cuts the price considerably. It is also less labor intensive to work in black and white than with color, so manga can be drawn more quickly and saves money in labor. Most Western comics are in color, so it takes longer to finish a page and therefore it costs more and takes more time to produce. This makes western comics shorter and more expensive. To keep prices down, the artists have to put as many words and pictorial detail into the panels as they can. In other words, they don't have the luxury of taking up too many pages with aspect-to-aspect and moment-to-moment transitions; and as a result, the comic becomes more word dominant. Labor costs are also kept low by the Japanese focus on Minimalism and Hyper-stylization. These two processes of simplifying a drawing cuts down on the amount of drawing it would take to complete a 25 page serialized manga in a week.



a)

VS



b)

Figure 45: (a) A scene from Jack Kirby's *Fantastic Four* comic. Dr. Doom is planning a trap for the Fantastic Four super heroes. Western comics, like this one, use color and has a more realistic drawing style (b) a scene from Osamu Tezuka's *Astro Boy* manga. Astro Boy is being brought to life as a robot. Manga doesn't use color and has less realistically drawn details.



Figure 46: (a) A more current Western comic, *Spiderman*, shows how much detail is used in its coloring. (b) A more current manga, *Bleach*, shows how black and white shading is still used. Its characters are still very stylized with fewer details. It can also be seen in this comparison how more information is put into the Western comic page and less information is shown on the manga page.

2.4.2 Minimalism in Manga

One of the things that influenced and helped cut the time in manga production is the idea of sparseness. With sparseness, is meant the necessity to draw only one short line or dot to convey to a viewer, for example, that the object being drawn is a mouth. Due to its placement and relationship to the whole, it needs no more detailed definition. It is broken down and abstracted so much that it almost seems insufficient to count as representing a mouth. A line or a dot on its own could be anything.

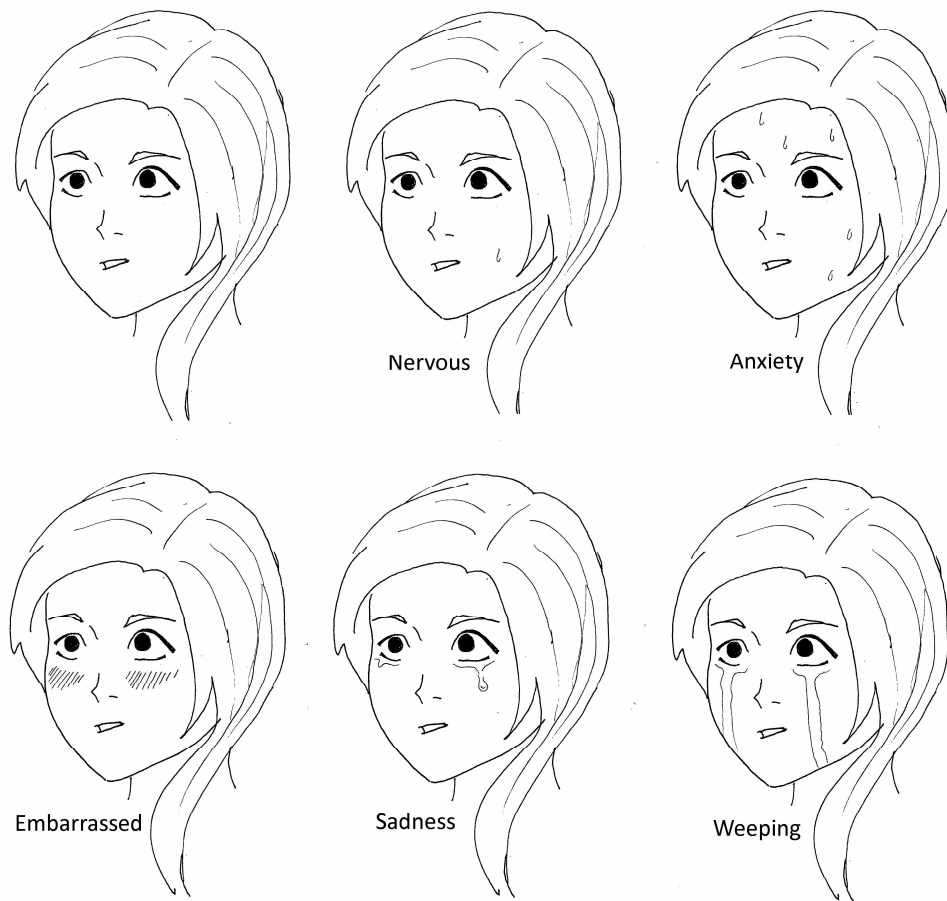


Figure 47: The drawing shows how simple lines placed strategically on a facial image can change the emotion being portrayed even if the facial features aren't changed in anyway.

Robin E. Brenner writes, “Manga presents a more visual story than Western comics, and much of the depth and detail of the stories arises from visual signals.”⁸² These visual signals are suggested emotions or actions through a pen stroke or symbol. According to Kisho Kurokawa (1934 - 2007), “Art, and the art of architecture, is the process of revealing that hidden reality with the absolute minimum expression.”⁸³ Even though the terms minimal and sparseness are associated with the absence of intricate and lavish details, these details are not left out, they are freed to be used in areas where they would hold more meaning in relationship to the narrative’s focus and setting. This allows the

⁸² Roland Barthes, *Empire of Signs*, translated by Richard Howard, (Farrar, Straus and Giroux, Inc., 1982), 75.

⁸³ Kisho Kurokawa, *Rediscovering Japanese space*, 125.

manga artist the time to visually convey the character's emotion and development, which means more drawings. Because the Western comics have continuous detailed drawings for each panel, they can't produce the same amount of pages in a short amount of time. This means they have to convey character development and setting through words, which makes the comic less cinematic and causes the reader to move more slowly through the pages. Also, Western comics use an impressive color palette throughout the issue which means they need more staff and the cost of printing increases. Manga artists don't usually use color in manga, except for maybe the first few pages. This along with the use of cheap paper lowers the cost of printing allowing it to be affordable. Manga printed for the mass culture is then possible without breaking the pocket book.

This idea of sparseness in manga is grounded in a Japanese cultural aesthetic of *wabi* 侘 also written as 侘. In *JAANUS*, it is described as "An aesthetic ideal that finds surpassing beauty and deep significance in what is humble or commonplace and appears natural or artless. This conception of beauty as simple and austere is found in poetry, and came to be the dominant philosophy in the practice of tea *chanoyu* 茶湯 often called *wabicha* 侘茶 (*wabi* style tea)." ⁸⁴ However, it is more complicated than this definition. To understand this concept more, it would be helpful to look at the minimalist movement and see how Japanese architects interpret it. James Steele, a journalist, says that for minimalists, Mies van der Rohe's famous dictum 'less is more' is seen as "a mantra to be repeated daily as they pursue their quest to strip away unwanted detail." ⁸⁵ Steele says that Tadao Ando, a well-known Japanese minimalist architect, approaches minimalism in a way that relates to his cultural background. Steele continues to define minimalism as an abstraction and reductionism that seeks to find the true essence of a piece and its construction no matter where or what it is. It is this process that is seen as a reaction upon the representational. However, Ando throws another element in the mix. "Like minimalist artists, he seeks a reaction and sets up the spatial conditions to get it, but rather than calling the value of representation into question, he focuses on nature itself as

⁸⁴ *Japanese Architecture and Art Net Users System*, s.v. "wabi," accessed April 28, 2011.
<http://www.aist.or.jp/~jaanus/>.

⁸⁵ James Steele, "Minimalism," *Architecture Today* (London, 2001): accessed May 5, 2011.
<http://www.zoulias.com/articles/article005.html>.

the historical focus of Japanese architecture.”⁸⁶ Steele then quotes Ando as saying, ““Abstraction is an aesthetic based on clarity of logic and transparency of concept, and representation is concerned with all historical, cultural, climatic, topographical, urban and living conditions. I want to integrate these two in a fundamental way.””⁸⁷ Ando puts together the representation that minimalism avoids. This is very reflective of the Japanese wabi aesthetic. wabi, which has been over simplified as only a minimalist and renunciation of flamboyant or worldly show by modernists, has more depth and implication than that. Kurokawa claims that “The more we look into the subject of wabi, the more we see its larger implications. We discover a whole aesthetic tradition of substance coexisting with non-substantiality, undecorated simplicity alongside flamboyant embellishment, darkness in symbiotic union with light.”⁸⁸ It is almost like saying you can’t enjoy one without the other. Japanese minimalist architecture with its crisp and smooth straight lines is often offset by a crooked and naturally rough branch which acts as structure to a wall (Fig. 48).

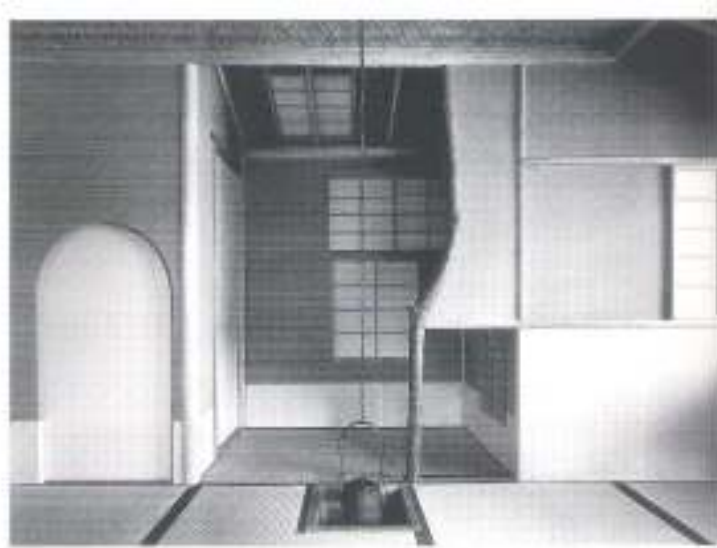


Figure 48: Picture of the hearth area of Yuishikian (Designed by Kisho Kurokawa)

This same coexistence is seen in manga and anime. Abstracted drawings are paired with representations in the form of symbols, which are filled with meaning. Mamoru Oshii’s

⁸⁶ Steele, “Minimalism.”

⁸⁷ Ibid.

⁸⁸ Kisho Kurokawa, *Rediscovering Japanese space*, 73.

Ghost in the Shell anime films are a good example of this coexisting aesthetic, as well. The characters are drawn simplistically as 2D art and the backgrounds are developed into meticulously detailed 3D art. The contrast emphasizes the ghost-like transience of human beings that furthers the narrative. What can be seen from this beauty is found in simplicity along with its relationship to details. Also, beauty can be found in the details along with its relationship with simplicity both in anime/manga and Japanese architecture.

2.4.3 Hyper-stylization in Manga

Early in the section about the cinematic quality of manga, it was mentioned how a pen stroke or symbols were used to convey an action or emotion. The practice of expressing and reading emotions instead of speaking of them was highly influenced during the Edo period. Kurokawa states, “Crowded into constant and intimate contact, people developed sensitivity to subtle shifts of feeling, to changes in expression, gestures, and attitudes. Such interpersonal ‘fine tuning’ enhanced a psychological appreciation of the introspective, emotional aspect of things. Etiquette demanded that one read the situation before acting. Words were shunned, and one attempted to reveal one’s thoughts and feelings in unspoken ways.”⁸⁹ These outward visual cues and gestures were even further development in Japanese theater, such as, Kabuki and Noh and transformed into the hyper-real. This means that the visual cues and gestures became more real than the real. This visual representation of emotion and feeling is seen in manga as symbolic facial expressions. These symbolic cues are known as hyper-stylization.

⁸⁹ Kisho Kurokawa, *Rediscovering Japanese space*, 50-51.

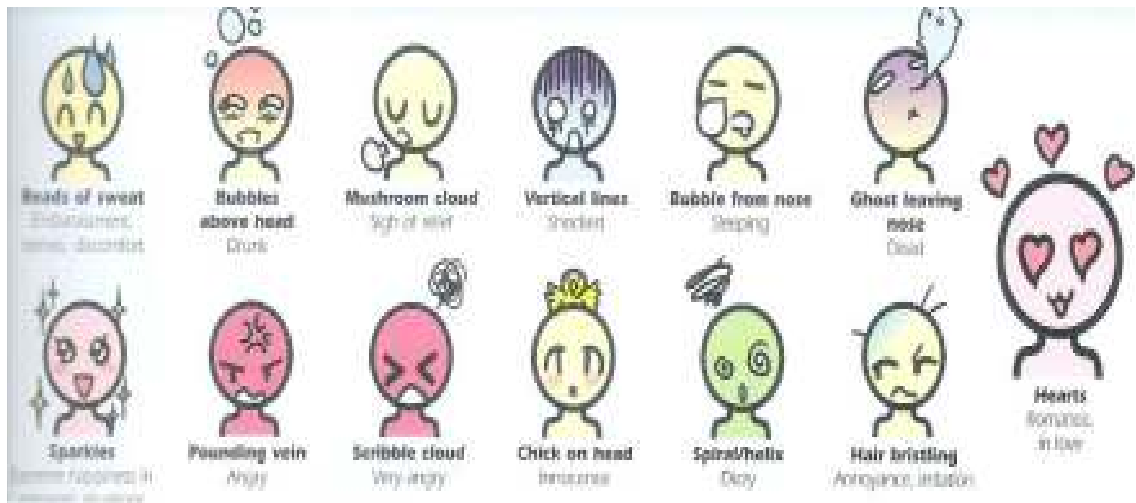


Figure 49: These are examples of hyper-stylized symbols and trademarks used in manga. The described meaning underneath is only a general word describing the emotion it portrays. The meaning of a hyper-stylized symbol or trademark can vary due to the situations and context it is being used in. They can also be grouped together to reinforce a character's emotional state.

These exaggerated examples are used more in the comedic manga. However, in the more dramatic manga, modified forms of these examples are used to enhance the visual understanding in a scene.⁹⁰ “These kinds of signals, which will often pass by in a panel or two without any explanation or comment from the author, are pervasive in manga and are intended to add detail and depth to a story that is told swiftly and without cumbersome textual description.”⁹¹ It is true that hyper-stylization is also used in Western comics, but it does not have the same variety of symbols that manga has. This is why hyper-stylization is a visual cultural text that helps make manga uniquely Japanese.

⁹⁰ Brenner, *Understanding Manga and Anime*, 52.

⁹¹ *Ibid.*, 50.



a)

b)



c)

Figure 50: (a) The shadowed eyes illustrate a form of anger due to surprise or disappointment. In this case it shows a feeling of disgust. (b) The trademark of the popping vein is used to convey anger. It allows a reader to know the characters state of mind without having to see her face. In this case the popping vein is used in place of a facial expression where in other times it is used to reinforce an emotion with a facial expression. (c) Extreme hyper-stylization of a character indicates an extreme emotion. Here the cat character, which has a more human form is transformed into a more hyper-stylized form to show how surprised he is at having his tail pulled and how much it hurts. The lighting background also reinforces this emotion.

According to Brenner, “It is important to note that anime uses many if not all of the same symbols and storytelling tropes that manga does. In anime, of course, all of these symbols are set in motion.”⁹²

The use of these hyper-stylized symbols may be better understood by exploring Japanese theatre. Kurokawa says of Edo period, “It was this densely peopled, compressed society that gave rise to the subtle, humanistic “daily life” (*sewamono*) dramas of Kabuki and the puppet theater.”⁹³ This art was the precursor to manga and cinema. The difference between these hyper-stylized symbols is that in manga they are drawn and in theatre movement represents it. One of the most interesting things about Kabuki is that it traditionally only included all male troops. It was the norm for some male actors to play female roles. “The *onnagata* actors of Kabuki---males playing females roles---were widely believed to display a more heightened femininity than real women.”⁹⁴ It was the use of signs that indicate the femininity of a woman. “The actor, in his face, does not play the woman, or copy her, but only signifies her [...] the Oriental actor seeks nothing more than to combine the signs of Woman.”⁹⁵ It is also said that the puppets of the Joruri theatre were thought to be more human than living actors,⁹⁶ whom one actually sees, that are dressed in black behind the puppet. In this same way, hyper-stylized symbols of movement become part of the visual performance as a way to read the face and the situation.

2.4.4 Wabi-Sabi

Wabi-sabi is the combination of two words, *wabi* 侘 and *sabi* 寂⁹⁷. In actuality, they are two separate words that are commonly spoken together. According to Leonard Koren,

⁹² Brenner, *Understanding Manga and Anime*, 75.

⁹³ Kisho Kurokawa, *Rediscovering Japanese space*, 50-51.

⁹⁴ Ibid. 51-52.

⁹⁵ Roland Barthes, *Empire of Signs*, translated by Richard Howard, (Farrar, Straus and Giroux, Inc., 1982), 89-91.

⁹⁶ Kisho Kurokawa, *Rediscovering Japanese space*, 51-52.

⁹⁷ *Japanese Architecture and Art Net Users System*, s.v. “sabi,” accessed April 28, 2011. <http://www.aisf.or.jp/~jaanus/>.

Wabi refers to

- a way of life, a spiritual path
- the inward, the subjective
- a philosophical construct
- spatial events

Sabi refers to

- material objects, art and literature
- the outward, the objective
- an aesthetic ideal
- temporal events

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Wabi tends to refer to items that are invisible and sabi tends to refer to items that are visible, however there is a little overlap. These words combined have a dualistic quality and creates a balance between the invisible and visible. It has become a term that now refers to an aesthetic value and sometimes just the word wabi or the word sabi are spoken interchangeably to refer to this aesthetic but most commonly they are used together.⁹⁹ It makes sense to have these two words combined because traditionally there is a duality in Japanese beliefs, traditions, and rituals. It also makes sense because the Japanese generally look beyond appearances into the invisible inward qualities. In this way there is some ambiguity and incompleteness about its definition; a type of illusiveness.¹⁰⁰ Koren states “Wabi-sabi is about the minor and the hidden, the tentative and the ephemeral: things so subtle and evanescent they are invisible to the vulgar eyes.”¹⁰¹ Wabi-sabi aesthetic is not showy or over the top in material presentation, but is in the minute or everyday details.

The wabi-sabi aesthetic can be seen in the main aspects that make manga different from Western comics. The long visual sequences of moment-to-moment and subject-to-subject panel transitioning that focuses on the inward traits or qualities of a person or idea is reflected in the value that wabi-sabi puts into the hidden details that are better understood through expression than written words. The effect of frozen time in aspect-to-aspect panel transitions is reflected in a wabi-sabi Zen maxim with its connection to the tea ceremony, “‘First [tea] meeting, last [tea] meeting,’ meaning that you must pay

⁹⁸ Leonard Koren, *Wabi-Sabi for Artists, Designers, Poets & Philosophers* (California: Stone Bridge Press, 1994), 23.

⁹⁹ Ibid., 21-22.

¹⁰⁰ Ibid., 15-18.

¹⁰¹ Koren, *Wabi-Sabi*, 50.

maximum attention to everything happening at this very moment: be here now.”¹⁰² Also the minimal and sparseness of manga can be seen as a type of incompleteness or stripping away of unneeded minute details reflects the aesthetic to “Get rid of all that is unnecessary.”¹⁰³

¹⁰² Ibid., 36.

¹⁰³ Ibid., 59.

3. Manga and Architecture

3.1 Elements of Architecture

The basic elements of Western architecture are based on the writings of Vitruvius in regards to excellence in architecture having to provide “utility, firmness, and beauty.” For a building to meet the requirements of utility, its spaces must be organized in such a way as to promote its internal functional use and that of its site. A building’s firmness is indicated by how well it stands in regards to its foundation and its proper use of building materials. This allows the building, over the passing of time to withstand various applied forces, such as, wind, rain, and any weight bearing loads. The definition of beauty to which Vitruvius refers applies to a buildings appearance. It must be pleasing to the eye, have intellectually defined “good taste” and obey the principles of proportion and symmetry. Sir Henry Wotten’s own interpretations of these three building elements are “commodity, firmness, and delight.” These three elemental principles form the ultimate test that defines whether an architectural design is considered good architecture.¹ Leland Roth states, “the Ultimate tests of architecture are these: First, does a building work by supporting and reinforcing its functional use; does it enhance its setting? Second, is it built well enough to stand up; will its materials weather well? But third and equally important, does the building appeal to the visual senses; does it provide a full measure of satisfaction and enjoyment—does it provide delight?”² In the last questions presented by Roth, we can begin to see that there is a lot more to architecture than the initial definition alludes to. Not only must a building be functional, but also its other characteristics have to support its function and setting.

Sir Henry Wotten’s exchange of delight for beauty actually is more relevant to our time. Beauty is a loaded word that has caused much debate because it relies on a person’s preference or taste. In Vitruvius’s time, proportion and symmetry was important and was used to define beauty. This is substantially different from what it is today. Most people’s thoughts on beauty no longer fits this definition even though it still plays an important part in understanding the design and meaning of architecture. Delight is a much better word because it can cover a broader range of senses. It still has some restrictions

¹ Roth, *Understanding Architecture*, 11-22.

² Roth, *Understanding Architecture*, 11.

on it to a person's preference, but it doesn't only rely on the visual sense. People may find delight in what they hear or feel, or the way they move through a space. Also, an activity supported by a space may make it a delight. Therefore, the atmosphere and setting that architecture provides can cause delight. These simple definitions of architecture form a historical basis for understanding but are not the whole of architecture. Architecture occurs within an already present landscape or cityscape and its excellence must be evaluated in terms of how it interacts with that environment.

3.1.1 Multi-Sensory World

Architecture is not just about its form, function and beauty. It is about its relationship to the cityscape or landscape. It is about its use and function. Architecture is about what occurs in that space and how people move around it, in it, and through it. It is about its meaning to the inhabitants who live there throughout history and the present. It is also how it is perceived by the individual mind and what feelings and emotions are projected back on to it. Architecture is also about what scents, noises, tastes and climatic temperatures are connected to it. Rudolf Arnheim shares this view of architecture by stating "It is an experience of the senses of sight and sound, of touch and heat and cold and muscular behavior, as well as the resultant of thoughts and strivings."³ Many people forget about the multi-sensory aspects of architecture when they are designing. Even when it is taught to architectural students, as they struggle to make deadlines, they forget about architecture's intimate connection to the diverse stimuli. Therefore, they tend to focus only on the form. What makes architecture different from other arts is its function. However, many times function is muffled by this emphasis put on the form. But architecture is about so much more.

Architecture does not exist in a static world. The things that happen in and around architecture affect its use and its perception of meaning. We constantly move around it and in it. We have the opportunity to smell the sweet aromas of flowers or savory food. We also have the opportunity to detect odors that are not so pleasant associated with an architectural site, such as, automotive exhaust, the stench of garbage, or many other

³ Rudolf Arnheim, *The Dynamics of Architectural Form* (University of California Press, 1977), 4.

noxious odors. We hear sounds from the street, possibly music playing on the radio, or we detect silence. If a building is a bakery, we associate the scent of freshly baked bread, donuts, or cookies with it. We can also associate the taste of the pastries to that building from when we stopped to buy what smelled so good. Also, if we see a picture of a place, for example the Pismo Beach Pier, we can remember the scent of the salty sea air mixed with the smell of fish. We can recall the fish and chips we ate and the seagulls we heard calling. We remember the sticky, damp, salty air on our skin and the wind tangling our hair. The mind is always making associations and memories of places and spaces whether it is a single building, a city, or a forest. It isn't just the spaces themselves but what is happening at the time. Kevin Lynch states, "We are continuously engaged in the attempt to organize our surroundings, to structure and identify them."⁴ So it is easy to see why a dominant sound or smell could impact our impression and memory of an area.



a) b)
 Figure 51: View panels from right to left (a) The *Oshinbo: Ramen & Gyoza* manga series uses motion lines, sound effects and puffs of steam to portray what a noodle shops kitchen atmosphere is like. (b) In the same series, but different episode, motion lines and sound effects contrasts the different styles of two chefs preparing food in a competition.

In architecture we must be sensitive to multi-sensory cues that lead inhabitants to places, be it in a large building like a hospital or in an even larger scale like a city, being

⁴ Kevin Lynch, *The Image of the City*, (The MIT Press, 1960), 90.

able to pinpoint the multi-sensory clues can help define those areas. Kevin Lynch pointed out that for some districts in a city, noise was sometimes an indicator to people that they were in the right place. Even the feeling of being lost was used by others to tell if they had arrived to their destination.⁵ Also “concentration of special use or activity along a street may give it prominence in the minds of the observers.”⁶



Figure 52: The *Ghost in the Shell* manga series panel sequence portrays a future market atmosphere. The artist uses the dress and appearance of the people, crowd noises, music, passing vehicle noises, and calls of market sellers to help emphasize the areas lower class character with the rundown look of the street shops.

Lynch continued to say, “Sounds and smells sometimes reinforce visual landmarks.”⁷

Increasingly, an important question for architects to ask is: How could these important olfactory and auditory cues (stimuli) be included in architectural drawings? In traditional

⁵ Ibid., 69.

⁶ Lynch, *The Image of the City*, 51.

⁷ Lynch, *The Image of the City*, 83.

architecture, there is a disconnect between the architecture's multi-sensory qualities and its traditional architectural drawings. Manga, on the other hand, has the visual language to express these multi-sensory qualities that play an important part in architecture and brings architectural designs to life. Through Manga, the viewer or reader can experience noise, scents, and emotional states.



b) a)
 Figure 53: View panels from right to left. *Oshinbo: Ramen & Goyza* manga series pages (a) and (b) use sound effects in this sequence to indicate to the reader that there is music being played somewhere near by. The campers follow the sounds, which leads them to a town's performance hall.

If architects can tap into these associations and memories with a manga-formatted presentation, they can help create an emotional response or buy in from the client. Also those associations and memories that are not easily accessed or were forgotten can be renewed in the same way manga can recreate experiences. Architects can also show the potential of an architectural design to capture a targeted atmosphere or a new experience that no one has thought about before. In an unknown like this, it is important to show the invisible qualities of sound, smell, and taste to give a sense of how the space may feel like.

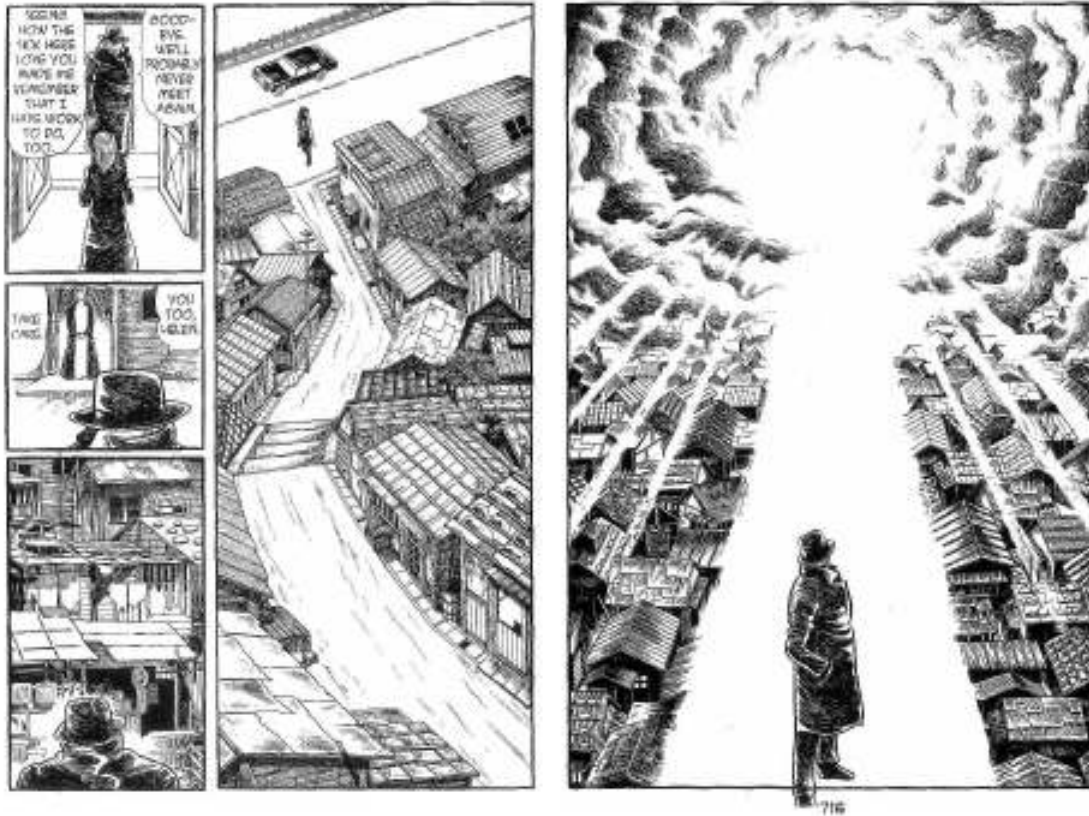
3.1.2 Space-Time

In order to experience a multi-sensory world, time is an important factor in architecture. Francis Ching explains that experiencing architecture is done through “movement in space-time.” “Sensory perception and recognition of physical elements”⁸ are naturally included in the space-time experience. According to Ching, our perceptions of a space changes as we move around and through urban or architectural space. Our “approach and departure,” “entry and egress,” the “functioning of and activities within spaces”, and the “movement through the order of spaces”⁹ are all included, by Ching, as being a part of experiencing architecture through time and space. Our memory of spaces is also determined by the sequences in time as we go through or by them. Walking down a street one-way usually does not look the same if it were walked down from the opposite direction. Also the speed that a person goes through or by spaces affects the perception of them. Even the “qualities of light, color, texture, view, and sound”¹⁰ are included in this category. As was talked about earlier, in the manga section, our senses have a connection with time. For example, sound can’t exist without time, it takes time to breathe in and smell something, light quality changes throughout the day and we can see motion, which is also imbedded in time.

⁸ Francis D.K. Ching, *Architecture: Form, Space, and Order*, 2nd ed. (John Wiley & Sons, Inc., 1996), x-xi.

⁹ *Ibid.*, xi.

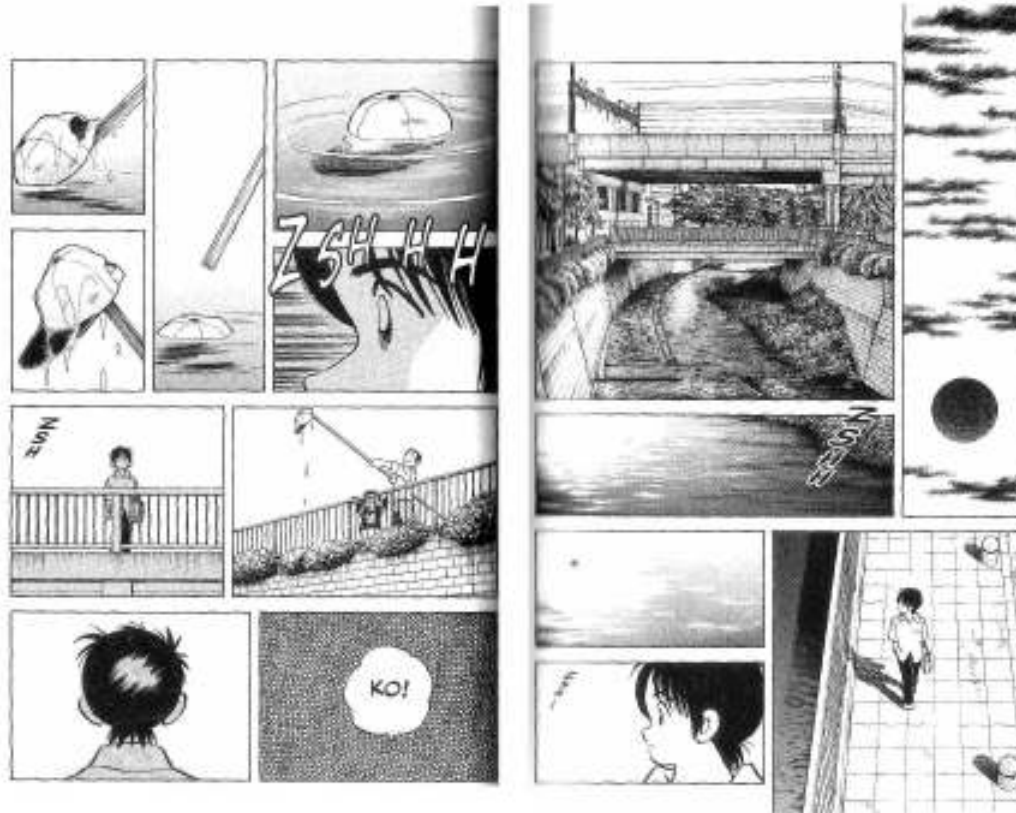
¹⁰ *Ibid.*



a)

b)

Figure 54: View panels from left to right. From this sequence, it is seen that Dr. Osanai emotional state is up lifted and is indicated by the way the light is shining from the direction of the church. It is a symbol of his enlightened state.

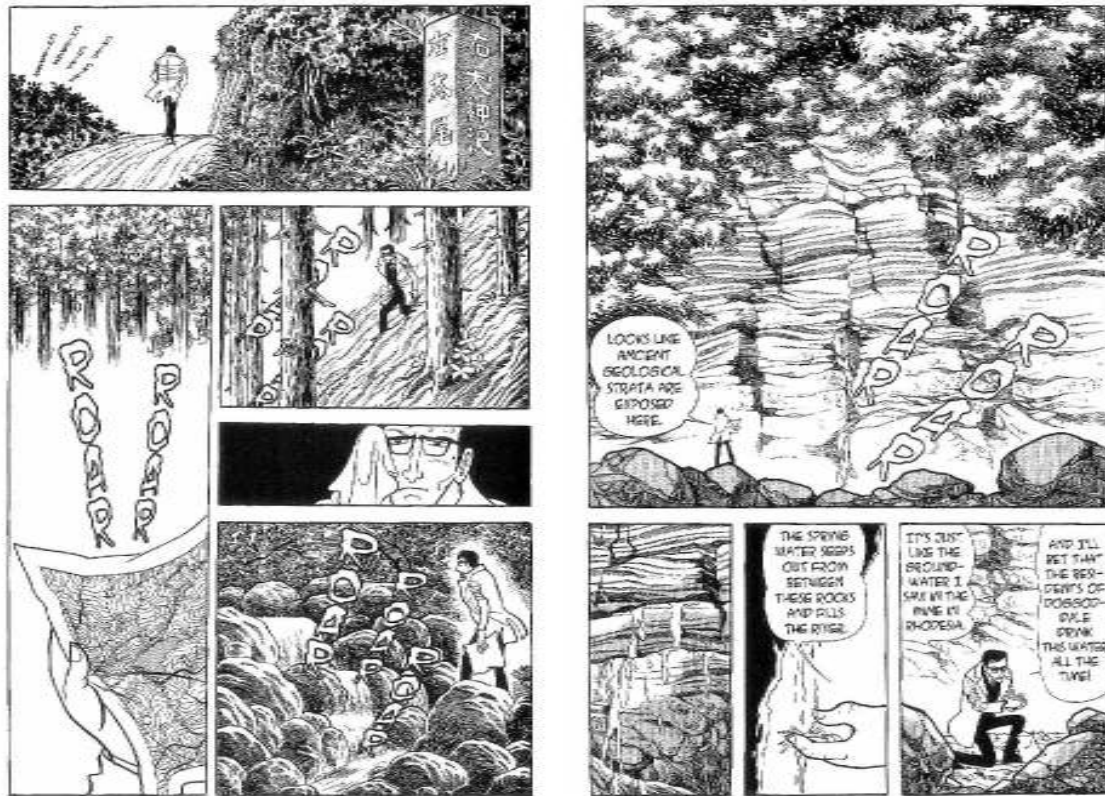


b) a)
 Figure 55: View panels from right to left. Ko is remembering a time when his favorite hat fell into the canal near his home. This demonstrates the connection between memory of experiences and the built environment.

This movement in space-time is a significant similarity shared by manga and architecture. As was mentioned in the comic and manga section, time in comics must be perceived spatially. Film is another medium that Juhani Pallasmaa claims to be the closest art form to represent architecture and says, “Architecture exists, like cinema, in the dimension of time and movement.”¹¹ Manga is similar to film in its presentation of time and movement, however these two elements, in manga, are based on space. So manga more closely represents architecture than film in the experience of movement in space over time, because film cannot exist in this space-time experience since it occupies

¹¹ Juhani Pallasmaa, *The Architecture of Image: Existential Space in Cinema*, 2nd ed. (Rakennustieto Publishing Helsinki, 2007), 13-17.

the same space; the screen it is projected onto.¹² It can then be said that architecture exists, like manga, in the dimension of space-time and movement.



a) b)
 Figure 56: View panels from left to right. The *Ode to Kirihito* pages (a) and (b) shows Dr. Urabe navigating the landscape while hearing the sound of rushing water. His map and the sound lead him to where he wants to go. Dr. Urabe’s cartoon style character also contrasts with the natural and realistically drawn landscape creating the “masking” effect.

Every component in manga has some kind of relationship with space-time due to the nature of comics where time is expressed spatially. However, since the experience of architecture is achieved through movement in space over time, motion, as a component of time in manga, has the key relationship to architectural space-time. This in turn, makes panel transitions extremely important to space-time because of the motion that happens in-between panels. It then leads to saying that aspect-to-aspect and moment-to-moment panel transitions are the most important, out of all the transitions, to architectural space-

¹² McCloud, *Understanding Comics*, 7.

time due to the way they manipulate time. And it finally singles out, aspect-to-aspect panel transitions as having the chief relationship with space-time in architecture, because of its focus on establishing the mood and atmosphere of space-time experience.

3.1.3 Experiential and Lived Space

It is not just enough to experience the physical materials of architecture. Experiencing architecture is actually the integration of both the physical and mental world. This concept is embodied by the term lived space by Pallasmaa. “Lived space is always the combination of external space and inner mental space, actuality and mental projection. In experiencing lived space, memory and dream, fear and desire, value and meaning, fuse with the actual perception.”¹³ This statement opens another dimension to experiencing the built environment; that of a unique individual perspective.

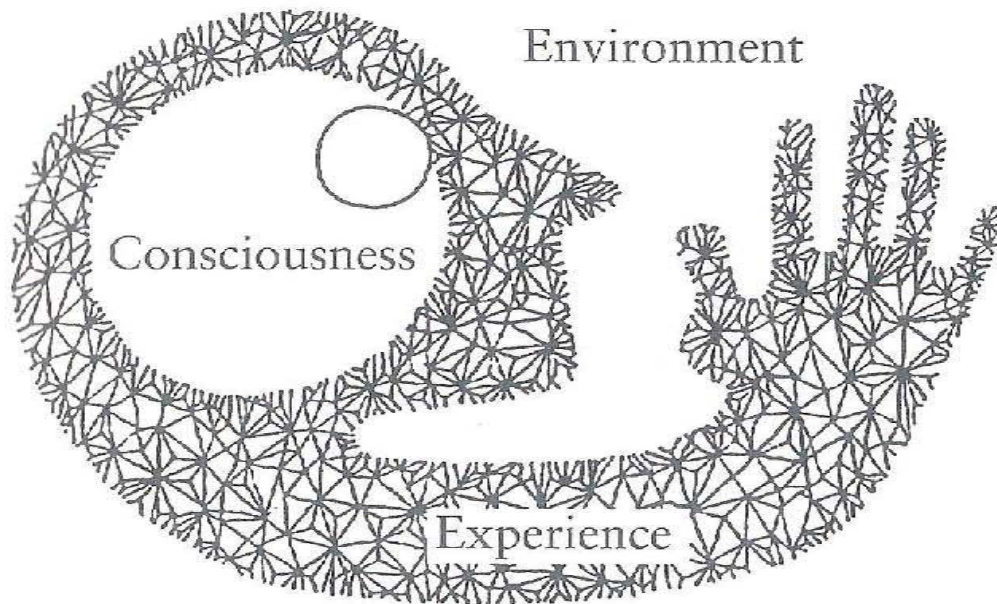


Figure 57: This is a drawing by William Kirby Lockard that graphically shows the connection between the environment, Consciousness and Experience that effects our perception of space.

Not everyone experiences architecture the same way because of each persons differing mental states, the time of day and the historical occurrences that also affect their

¹³ Pallasmaa, *The Architecture of Image*, 18.

experience. For example, when we catch sight of a courthouse, we could be impressed by its architecture if it is built in the bulky monumental style. It looks strong and powerful, and we feel confident. On the other hand, this same courthouse could look menacing and cause someone to feel anxiety who is being accused of a crime. During the day, a park may look very cheerful and inviting, but at night it could look abandoned and lonely. The challenge is: how can architects convey these experiential aspects of the architectural space in their drawings or presentations? Manga can do this through its aspect of narrative.

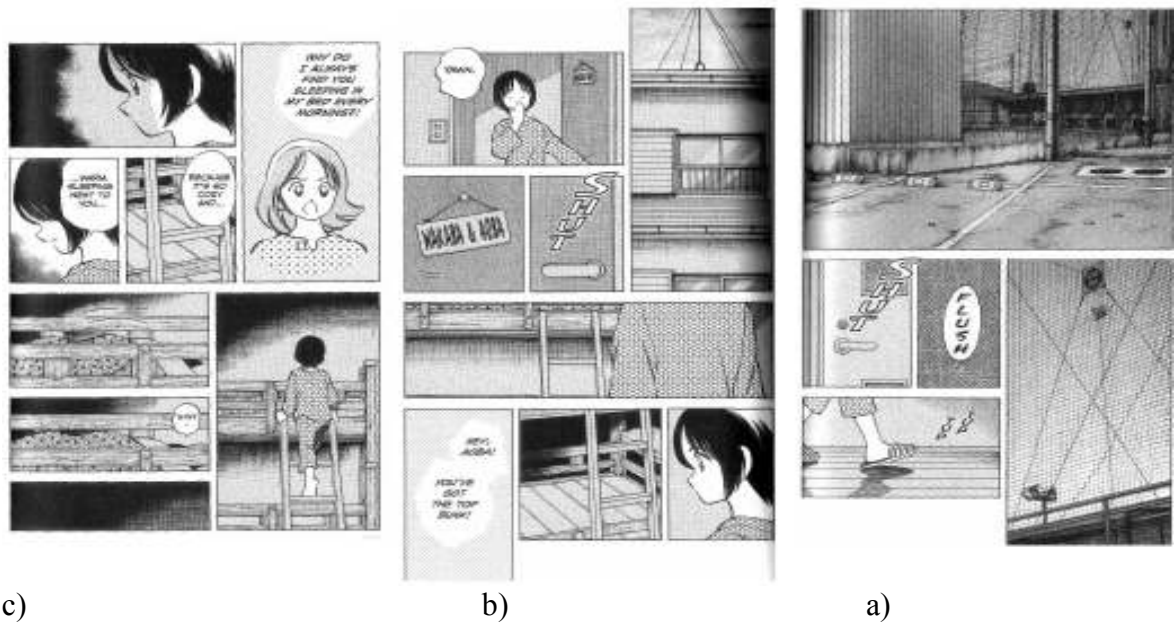


Figure 58: View panels from right to left. (a), (b), and (c) shows a scene where the dark room and bunk beds bring up a memory of her dead sister, Wakaba. This demonstrates the connection between memory, emotion, and space.

Narrative in architecture has gotten a lot of attention lately because more and more architectural professionals and professors are beginning to understand its essential link to experiencing space. Sophia Psarra writes, “Narrative is often seen as a form of representation bound with sequence, space and time. But it is also regarded ‘as structure, a particular way of combining parts to make a whole’ or as narration, as the process or ‘the activity of selecting, arranging and rendering story material in order to achieve

specific time-bound effects on a perceiver.”¹⁴ Psarra continues to say that there are two types of narratives in architecture, one that involves the “conceptual structure,” and one that involves “perceptual experience.”¹⁵ Psarra claims that these two narratives are both vital to architectural design and should both be considered when looking at architecture in its design and representation.¹⁶ The narrative in manga can facilitate in capturing both of these narrative types. This is due to its narrative being both represented in the picture, icon, and word: one that can show and one that can tell. The unique blend of the two mediums gives manga narrative its strength to represent both the invisible qualities of concept and visible properties of sequence and arrangement. This mix then creates an immersion experience that stimulates the imagination and multi-senses of the reader.

3.2 Architectural Representation Methods

Many of the methods that are used to represent architecture fail to establish a connection to lived space. Conventional architectural drawings are based, for the most part, on static drawings that show what the exterior and interior elevations look like. People and landscaping are inserted into the drawings to give it scale and show some relationship with the context outside of a building’s scope. Sometimes human activities are drawn in spaces to show function and provide some atmosphere. This part is successful because there is some element of time suggested due to viewers being familiar with how the activities play out over time. However, they are lacking in that there is no narrative or anything that speaks of experience or emotion.

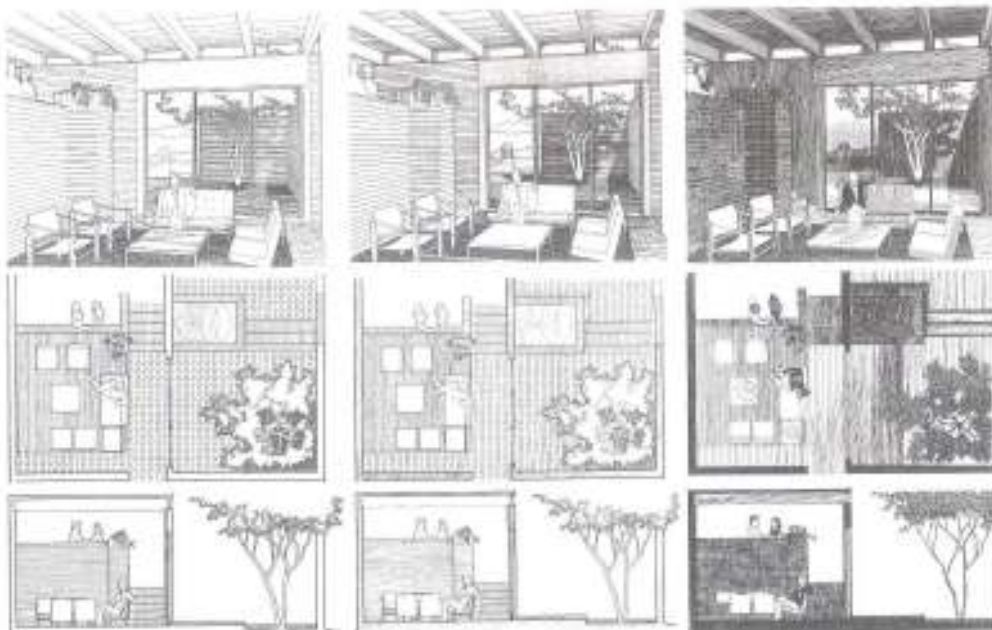
¹⁴ Sophia Psarra, *Architecture and Narrative: The formation of space and cultural meaning*, (New York: Routledge, 2009), 2.

¹⁵ Ibid.

¹⁶ Ibid.



a)



b)

Figure 59: Conventional architectural hand drawings in a client presentation format drawn by William Kirby Lockard. The people are reduced to cartoon like figures, which draws the client's attention to the architecture. There are no sound effects or other indicator of what the area sounds and smells like, although there are drawings of its surrounding forest context that indicates the area is quiet compared to the noise of a city. It still leaves the question of what nature noises are heard in this area that would give more information about its particular location.

Traditionally, when architects wanted to talk about experience in architecture they would write about it. In Steen Rasmussen's book, *Experiencing Architecture*, Rasmussen writes, "Architecture is not produced simply by adding plans and sections to elevations. It is something else and something more. It is impossible to explain precisely what it is-- its limits are by no means well-defined."¹⁷ Rasmussen then goes on to explain, with words, the experience of architecture, because conventional drawings couldn't do this. Rasmussen had to go beyond the traditional drawings to explore a different realm. He did this by using words to make visible what is invisible about the architectural experience. It is important to note that Rasmussen also used a few pictures to illustrate his points. Most conventional methods of writing about architecture used a low fraction of images compared to the percentage of text used. Francis D. K. Ching's books are an exception to this generalization. Most conventional methods separate the picture and the word. They don't recognize the great potential in their combination. Recently, however, professors and students of architecture are realizing the need to deliver an architectural presentation in a form that shows its lived experience.

At the University of Hawaii School of Architecture a student group presented their project in a sequence of time. They did this by introducing a narrative about two characters that were moving from place to place along a transit rail for a night out on the town. The atmosphere of each hotspot visited was depicted in a one shot picture. This presentation was successful compared to the traditional way of showing architectural drawings, but still there was something missing. Each picture of the hotspots looked like it was frozen in time without the benefits of aspect-to-aspect panel transitioning method. A viewer could see life in the drawings but couldn't see it played out. Visual cues that indicate motion and sound effects from manga could have helped significantly, even without adding more sequential drawings.¹⁸

¹⁷ Steen Eiler Rasmussen, *Experiencing Architecture* (Cambridge: The Massachusetts Institute of Technology Press, 1964), 9.

¹⁸ Claire Rohlinger, Christine Sanpei, Kanoa Chung, Krystle Y. Imai, and Derek Tsutomi, "Redesign Life Here", Design Project Published in Janine Clifford and Patrick Onishi. *Exploring Hawaii's Transit Oriented Future*. Caroline Hoshi, Yu-Fung Benny Hui, Meng-Ling Erick Kuo, Christopher K. Parker, and Claire Rohlinger, eds. (University of Hawaii at Manoa, 2008), 51-57.



Figure 60: Sequenced one shots from a student group project. The people are photographs of people that are faded in order not to draw all the attention from the architecture. This has less of a “masking” effect because of the real rendering style of the people. There are also no sound effects to further develop the atmosphere. There aren’t any word balloons to serve as a guide to the narrative.

There were too many colors that made it hard to differentiate the building façade from the foreground or background. The characters were also hard to detect because they had the same realistic rendering and coloring as the rest of the drawings. The people were faded, in order, to bring more emphasis to the built forms, but they still detracted from the architectural design. Also due to the realistic rendering of the people, the viewer could not experience an emotional connection or a way to mentally step into that world and feel the energy that the scenes had the potential to express. More emphasis on the buildings and environment could have been maintained by using the manga “masking” effect, which at the same time would allow the viewer to identify with a character. The people would then fade under the realism of the architectural facades. Using some aspect-to-aspect transitions would also strengthen a sense of place while highlighting the main features of the design in each area. Even though the color catches a client’s eye, black and white, if done right, could have helped with the printing expense (important to students and professionals) and freed up more time to add more drawings to their sequence and allowed it to pop in that way. A few colored drawings could then give the client an idea of what colors would be used in the area. This project presentation could also have benefited from more balance of word and picture. It could be that this presentation was organized to be verbally communicated. Having a few narrative words here and there would have helped if the clients were to look back through the drawings. This is also where a booklet would be handy. The client is given more control over a

booklet. They can take their time flipping through pages and it is easy to go back to certain spots to review information, ask questions, and make notes. This student project is an excellent example that shows the innovative ways for architecture to move in the future, that capture the lived aspect of a building or architectural space. In addition, by adding the manga elements mentioned above, would add movement and get the viewer involved in the experience.

Many new technologies and innovations have helped to close this gap between conventional drawings and the experience of lived space. First, introduced were the 3d computer programs that allow architectural designs to be animated. By using animation, time through sequence could be represented for architectural studies and presentation. With this technology architects are able to create impressive design fly-bys and fly-throughs to help clients visualize the space. Next, virtual reality was introduced and is still being developed. Virtual reality (VR) is “the use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment. VR applications immerse the user in a computer-generated environment that simulates reality through the use of interactive devices.”¹⁹ The devices can be as simple as using a computer mouse or as high-tech as stepping into a cave like structure that monitors movements and brainwaves. This environment can be experienced in real time and the navigator has more control over how they experience the space. Both 3D architectural animation programs and virtual reality immersions produce amazing results and come closer to representing lived space; however, they are still missing a key ingredient, narrative. Narrative is the only element that expresses a mental space that effects the perception and meaning of the lived space. It is also what creates the emotional connection of a viewer’s experience with architectural space.

Writing and film in the architectural realm are the only media that utilize narrative. It is obvious that writing cannot visually represent architectural lived space, because words allow the reader to visualize space in their mind. It is not what they are physically seeing. However, if pictures or images are not included, it is hard for a reader to clearly understand architectural spatial arrangements. So it can clearly be seen the

¹⁹ *Encyclopædia Britannica Online*. s.v. Virtual Reality. Encyclopædia Britannica Inc., 2012. Accessed April 26, 2012. <<http://www.britannica.com/EBchecked/topic/630181/virtual-reality>>.

advantage manga has over the written word because of its combination of picture and word.

At first glance, it is easy to tell that the media of manga and film are similar due to their element of time. If they are looked at more closely, film actually works the same way comics do in using closure to create the illusion of motion and time. The difference is that in film closure between frames happens so fast that it becomes automatic and the viewer doesn't even notice that it is happening.²⁰ One great difference between the depiction of time in film and manga is that time in manga is spatially perceived. This allows manga to have a visible past and a visible future. As the viewer reads panel to panel, the current panel and specific area in the panel is the present. The panels the viewer has already read becomes the past and the ones they have yet to read are in the future. However, because they are on the same page they are still visible to the viewer.

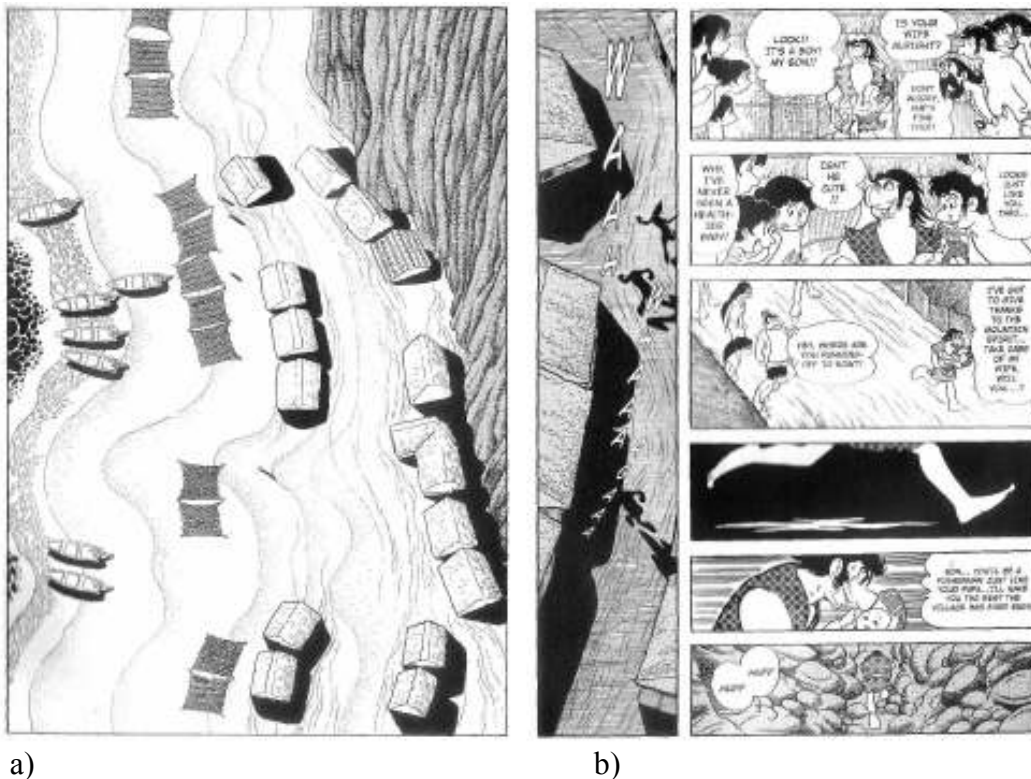


Figure 61: View panels from left to right. This is the beginning scene to Osamu Tezuka's *Phoenix Karma*. The layout and spatial arrangement of the houses in a fishing village along the seashore and cliff face are shown before introducing the wails of a baby being born and then movement of the villagers between the houses.

²⁰ McCloud, *Understanding Comics*, 65.

This actually allows a person to easily look back or forward within the comic. They could also choose to read the panels out of sequence. It wouldn't make any logical sense, however, unlike in film, the viewer is given the choice.²¹ In a panel on page 125 of the sample manga, I intentionally wrote the word balloons in such a way that a person could read them in any sequence. I noticed with this page that my eyes wanted to travel from the bottom up instead of the top down which is how most comics are read. I decided it would be good to make the word sequence not dependent on each other so then the reader would be free to read it however they wanted to. Film wouldn't have been able to give the artist or the reader the freedom to do this. These two differences between manga and film engage the viewer more and give them more power. This is important in the use of manga in architectural presentations because the client is given more control over the presentation material and they are more engaged. When the client is given more control, they do not feel manipulated into accepting a particular architectural rendering. They can feel that they are given the space to make their own decision. There are other elements of manga that make it a viable approach for showing architecture.

3.3 How is manga a viable approach when looking at architecture?

Manga has the ability to address many elements at the same time: show the invisible, mimic architectural space-time, and use narrative to immerse the reader into the represented architectural world. None of the five mediums of conventional drawing, conventional writing, animated fly-bys and fly-throughs, virtual reality, and film can address all these elements. This makes manga the most complete and viable tool for expressing lived space in an architectural space.

Manga can breathe more life and clarity into architectural drawings through its unique combination of picture and word. In this way, the invisible can be visually seen through the drawings instead of only through abstract words. This allows the space-time experience of architecture to be physically seen through images. Many conventional architectural texts and presentations, like Rasmussen's book, rely heavily on words with

²¹ McCloud, *Understanding Comics*, 104-105.

few pictures because they don't know any other way of explaining architecture. On the other hand, manga relies heavily on images and fewer words to further the narrative.

Film and animation, considered by some to more closely represent an architectural experience of space, contain a narrative like manga. However, manga can mimic this cinematography while using its spatial arrangements to further engage the audience. Manga is also easier and cheaper to produce. There isn't as much work, people, time, expensive equipment, or complicated computer programs needed to produce a manga.

The simplified iconic images in manga carry more information and meaning than realistic drawings or photographs. Also its use of sparse details and black and white coloring allows the viewer's focus to be drawn to key features of the architectural spatial qualities within the sample manga. The sound effects and silent visual cues give a person the sense of what the area or space feels, sounds, and even smells like.

Another benefit, to manga is the viewer has more control over the reading speed of the sequence and they can pause whenever they want to. They also have the option to flip back to a specific page to ask questions, make comparisons, or just examine it again. Notes can easily be written on the pages and referenced later. They can also take the manga home with them and look over it again later.

3.4 Current uses of manga in the Architectural profession

3.4.1 Computer Aided Methods

There aren't very many examples of manga use in the architectural field. There maybe more out there, but I have only come across two examples. The first example is a research project titled "Drawing Architecture using Manga Techniques", written by Yingge Qu and Marc Aurel Schnabel in affiliation with The Chinese University of Hong Kong. Yingge Qu is a research fellow with a PhD in Computer Science and Engineering²² and Aurel Schnabel is an Architect and Associate Professor in Digital Architecture, and is leading research and education in the field of Digital Media in

²² Yingge Qu, The Chinese University of Hong Kong Department of Computer Science & Engineering staff information page, accessed December 1, 2011, <http://appsrv.cse.cuhk.edu.hk/~ygqu/>.

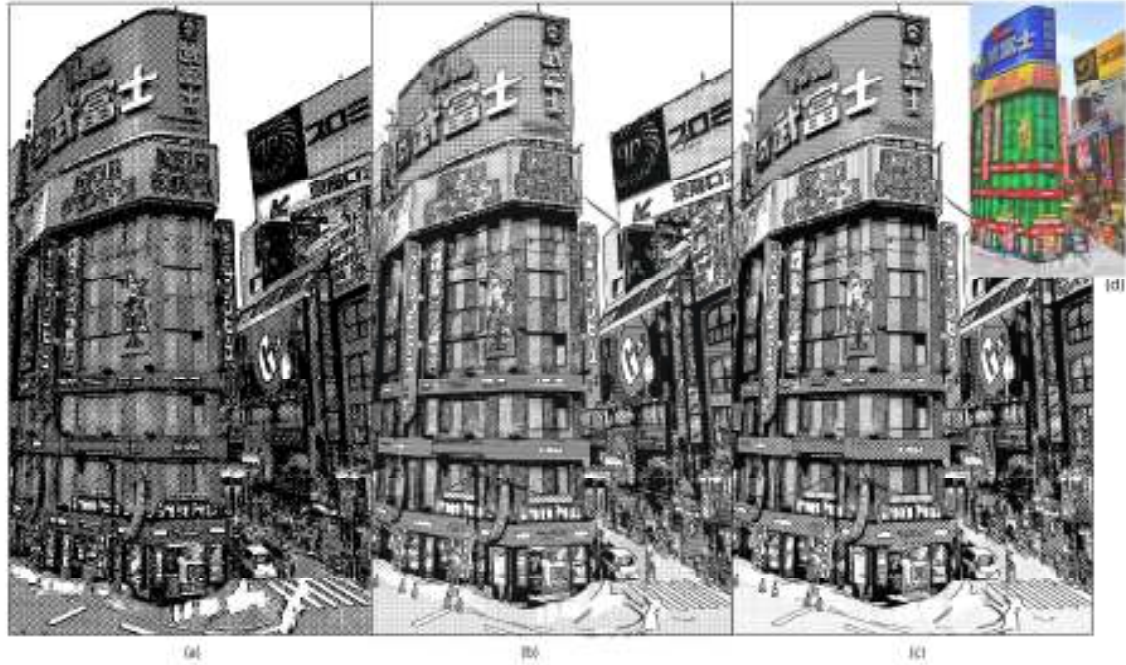
Architectural Design.²³ Before Qu's collaboration with Schnabel, Qu worked with a team at The Chinese University of Hong Kong on a project that preserved the richness of manga screen toning when using a computer method to convert photographs into manga background. Qu and Schnabel then got together to apply this method to architectural presentation. They first used a manga computer program to extract the structural lines that made up the form of the building in a photograph and eliminated unwanted lines that were only details.²⁴ This distention between the lines in manga is important because of its focus on simplification of the form, only showing what is essential. The details of realism are strategically removed until only the necessary lines remain. This break down of line importance creates an object that would be far less complex for a person to draw. The next step involves color to pattern mapping. In this method, the computer digitally mimics how manga artists lay their screen tones on a page. The type of screen a manga artist decides to use denotes tone, texture, material property, or even chromaticity of surfaces. Also the process of laying the screen tone out and transferring it onto a manga drawing is very labor intensive.

²³ Marc Aurel Schnabel, The Chinese University of Hong Kong School of Architecture staff information page, accessed December 1, 2011. http://www.arch.cuhk.edu.hk/people/staff_marc.htm.

²⁴ Yingge Qu and M.A. Schnabel, "Drawing Architecture using Manga Techniques," The Chinese University of Hong Kong, accessed October 10, 2011, <http://www.arch.cuhk.edu.hk/server1/staff1/marcaurel/publications/manga.pdf>.



Figure 62: A manga artist hand placing and cutting manga screen tones. This method of applying screen tones can be time consuming depending on how many screen tones need to be placed. Professional manga artists usually have assistants that help ink and place screen tones.



a)

b)

c)

d)

Figure 63: “Generating manga background from a real photograph. Commercial software (a) adopts the halftone technique and presents a uniform screening result. (b)&(c) are [Qu and Schnabel’s results with two different parameters. They differentiate the chromaticity in the original color photograph (d) using the variety screens, while preserving the tone. Both (b) &(c) exhibit 5 types of screens.”²⁵

They called their computer method of screen toning a type of richness-preserving manga screening. Half toning and color2gray are other computer methods currently being used, but they only address tones in an existing photograph and is not adequate to express

²⁵ Yingge Qu, Wai-Man Pang, Tien-Tsin Wong, and Pheng-Ann Heng, “Richness-Preserving Manga Screening,” The Chinese University of Hong Kong, accessed November 4, 2011, <http://www.cse.cuhk.edu.hk/~ttwong/papers/screen/screen.html>, 1.

texture or material properties, such as color.²⁶ This step is extremely important if the manga technique is to be used in architectural presentations. It shows how architectural information, such as color, material, and texture can be preserved. It also shows a more simplified, less time consuming way of converting an architectural project into a manga style drawing. However, there still needs to be an artist's eye involved with the final produce to make the converted information more pleasing to the eye. As can be seen with the above figure, there are still a lot of distracting details that can be eliminated.

3.4.2 Architectural Use of the Western Comic Format

The other example found was a comic book format used by the Bjarke Ingels Group, BIG, for a book titled *YES IS MORE* that showcased their projects. Although their work is a good attempt to make the presentation interactive, I was a little disappointed when I flipped through the pages because the format wasn't used in a way to help me understand the firm's work. It was lacking in clarity and visual interest in its material textures. Even Mark Lamster, in an article for Architect the AIA Magazine, wrote, "As a vehicle for delivering Ingels's can-do dynamism, it works. But as a tool for studying architecture in a concrete way, it's not always an ideal format. The pictures tend to be too small to fit within the comic frames, and many are low quality [...] the layouts are busy,

²⁶ Qu, Pang, Wong, and Heng, "Richness-Preserving Manga Screening," 1-2.

with dialogue boxes and arrows and other graphic distractions.”²⁷



Figure 64: Western Comic Book Formatting From BIG Architects’ *Yes Is More*. Photographs and realistic computer renderings used instead of hand drawings create less visual clarity. Word balloons are crowded with lots of information that weakens easy readability.

BIG was innovative in using a comic book style to illustrate their book. However it could have worked better if they would have incorporated the manga style or a more simplified style of comic using less words. One of the main reasons, this book may have failed to hit the mark is because they used the comic style only as a cosmetic application. They did not incorporate the essential aspects of comics as a way for the viewer to understand the subject (their company). Another major reason is because they modeled the book after the western style comic and not manga. A manga page layout is less distracting and isn’t filled up as much with dialogue boxes. Manga is also black and white allowing it to cost

²⁷ Mark Lamster, “Up, UP, and Away,” *Architect: The Magazine of the American Institute of Architects*, July 2011, 77.

less for printing and therefore more pages with quality drawings can be printed for less. So, there can be more pages dedicated to conveying a project's visual story.

I agree that the comic book format BIG used for their book reflects the firm's energetic and progressive thinking; and it excites me to see this format being tested in the architectural arena. If BIG wanted me to make a comic that clearly would express and showcase their individual projects, I would use the manga format to turn it into a series with each project as a separate installment. Aspect-to-aspect panel transitioning would capture the essence of the projects design. In addition, I would focus on the more cinematic technique of moment-to-moment panel transitions to create an experiential environment that would help clients and other viewers see how space is used and develop an emotional response to it. In the next section, I will discuss the sample manga and my experiences in Japan that prompted my manga panel drawings.

4. Sample Manga: The Japanese City

4.1 Ikebukuro District as Topic for Sample Manga

It was my experience in Japan that prompted Ikebukuro as the topic for the sample manga. This proved to be both a tool of expression and analysis for this paper. Navigating the Japanese city streets is so unlike anywhere else because they move up as well as across. In other words, the action in the street is vertical unlike in most cities even New York City where the action and movement is horizontal. In these types of cities retail stores usually never goes past the second floor. In Japan there are hundreds of addresses in one building and no way to access the directory of each building from the sidewalk or pedestrian areas. The dilemma is this: how does one locate a restaurant studio or apartment? They must look up. Read the Japanese signs from top to bottom. The problem is when a foreigner attempts to navigate the Japanese world of the city, they are confused. As a foreigner in Ikebukuro, I was bewildered by the city's reliance on vertical space. Since I was unfamiliar with reading vertically, it was uncomfortable interpreting reality from top to bottom. It is usually done from left to right as in reading. What also causes confusion for foreigners is the apparent lack of hierarchy and continuity of the Japanese streetscape. It is difficult for a person, unfamiliar with the seemingly numerous

and disjointed details that is carried from building to building, to categorize the vast amount of visual information. This along with the unfamiliar language, city sounds, and added vertical sign information causes a type of sensory overload. In this same way it was shocking to me trying to navigate and sketch Ikebukuro, as a result that is the subject of my manga sample.

The amoeba like growth of Tokyo and the Japanese cultural emphasis on attention to detail are two reasons why Tokyo appears to be chaotic to so many foreigners. First of all, the earliest recordings of Japanese history show a weak central government. It wasn't until 1600 when Tokugawa Bakufu unified Japan that a strong central government was established. Before then there was only independent states that were in constant war with each other.²⁸ There were no laws or building codes that controlled the development of villages and how buildings were built. Even when there was a strong central government people still enjoyed relative freedom for build things according to their needs.²⁹ Even with adoption of contemporary city planning, Tokyo “grows and flourishes in fits and starts without any kind of long-term urban planning.”³⁰ Yoshinobu Ashihara calls Tokyo an “‘amoebic city’ with its amorphous sprawl and the constant change it undergoes.”³¹ Tokyo also been referred to as a city made up of villages due to its exponential growth that swallowed up small enclaves that were just barely able to hang onto their separate identities.³² High land prices and the Japanese notion of impermanence also add to Tokyo's continual change.³³ Today, it is also plagued by high building turnover. So as a result of this somewhat uncontrolled growth and regeneration, “resulting in a townscape that is like a set of badly aligned teeth”³⁴ this also causes the streets not to make sense to foreigners. Odd combinations of buildings are seen side by side and the streets themselves do not follow any type of grid pattern.

²⁸ Jayson Chun, “Lecture 08: Tokugawa Japan,” HIST 241 Civilizations of Asia, University of Hawaii West Oahu, Fall 2010, online lecture.

²⁹ R. Y. Kowk, “Architectural Traditions: Japan,” Asan 636: Asian Urban Forms, University of Hawaii, February 14, 2012, Saunders Hall 119.

³⁰ Yoshinobu Ashihara, *Hidden Order Tokyo Through the Twentieth Century*, translated by Lynne E. Riggs (Kodansha International Ltd., 1989), 58.

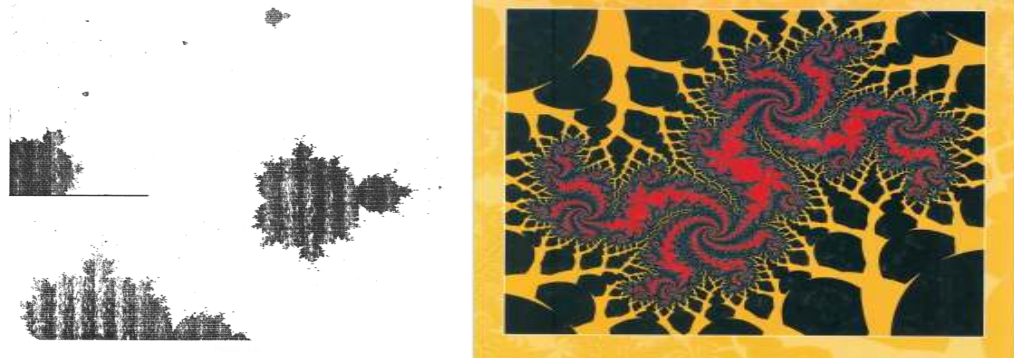
³¹ Ibid.

³² Barthes, *Empire of Signs*, 42.

³³ Yoshinobu Ashihara, *The Hidden Order*, 59.

³⁴ Ibid., 62.

For a culture that has given great emphasis to detail, its cities are not meant to be looked at from far away. “In architecture intended to be viewed from afar, emphasis is placed on grasping the whole exterior, while that intended to be seen at close quarters gives more attention to the detail and the texture of each part.”³⁵ Just like Mandelbrot’s notion of order in the chaos of nature, Tokyo works the same. From the different details that accompany each building to the details of daily life, each is a part of the city that organically thrives.



a) b)
Figure 65: Illustrations showing Mandelbrot’s parts (a) that makes up the whole (b).

Tokyo is constantly changing to respond to its ever evolving content and function. Tokyo appears to be chaotic because we are not looking close enough at its “sub-whole.” Each building in Tokyo is in itself is a whole, but at the same time it plays a part in another whole. There is so much diversity in the Japanese city that no one needs to go far to get the things they need. Each building is apart of a neighborhood. Each neighborhood is apart of a nucleus, which includes a Family Mart, restaurants, dry cleaners, etc. Tokyo may be sprawled out but is still a composition that is sustained by many working parts. In this same way, the order is only perceived by looking closer at the part; the “sub-whole”; the details.³⁶

Ikebukuro, considered to be the commercial and entertainment center of the Toshima ward, reflects the same confusion and chaos of Tokyo. It is where the Toshima ward offices and other big company headquarters, such as, Bic Camera and Tokyo Hands

³⁵ Yoshinobu Ashihara, *Hidden Order* 90.

³⁶ *Ibid.*, 94-95.

are located.³⁷ Before Toshima ward was included with the 23 special wards of Tokyo, its area was made up of several villages and agriculture lands. Tokyo integrated this area into its wards when Tokyo expanded in the 1930s. Toshima ward is now known to be one of the eight central wards of the Tokyo Metropolitan area that surrounds the Imperial Palace.³⁸ Ikebukuro Station is considered the center of Ikebukuro and cuts Ikebukuro in half, dividing its West and East side. Ikebukuro Station is reported as having the busiest metro station and the second busiest train station in Tokyo. It serves around 2.7 million people every day. One of the main reasons for the station being so busy is it serves large suburban areas northwest of Tokyo. The private Seibu and Tobu lines serve these areas and terminate at Ikebukuro Station where travelers must transfer to other rail or metro lines, in order, to get to other places in Tokyo. JR Yamanote line is one of the busiest lines, which serve all the stations of central Tokyo. Once Ikebukuro was added to its stops, Ikebukuro then was considered one of the multiple centers of Tokyo.³⁹



a) Sunshine 60 Storey Street with Sunshine City high-rise in the background. It is the tallest building. The Toyota Amlux building is the blue building peeking out at the end of the street. (b) An alley of restaurants before reaching Sunshine 60 Storey Street. (c) Building facades a lot like Akihabara outside of Ikebukuro Station.

³⁷Mike Mchedlishvili, "Ikebukuro," Traveler's Information Portal, updated 2004-2012, accessed February 4, 2012, <http://gazta.info/stories/japan/26126/3.html>.

³⁸ Toshiba Official Website, updated 15 January 2009, Toshiba Official Website, updated January 15, 2009, accessed March 5, 2012 <http://www15.j-server.com/LUCTOSHIMA/ns/tl.cgi/http%3a/www.city.toshima.lg.jp/kusei/profile/000782.html?SLANG=ja&TLANG=en&XMODE=0&XPARAM=q,&XCHARSET=UTF-8&XPORG=,> 05 March 2012.

³⁹ Tokyo-Tokyo.com, "Ikebukuro," Rossetti International, 2006, accessed February 20, 2012. <http://Tokyo-Tokyo.com/Ikebukuro>.



Figure 67: Map of Tokyo's 23 wards. Ikebukuro is located in the Toshima ward in the Northwestern area of Tokyo, colored in green, and right below Itabashi and Kita wards.

Like many daily Japanese travelers, I traveled from the outer suburban area on the Seibu line, and transitioned at Ikebukuro Station to the JR Yamanote line. This proved also to be a transition that a Japanese friend of mine, Nanako, also a graduate from the University of Hawaii School of Architecture, had in common. She was a very good guide to the area and it was great to have someone to talk too and help me to be less overwhelmed by the Japanese city. The district of Ikebukuro was totally unknown to me before it became a meeting place for us. Ikebukuro isn't a well-known foreign tourist destination but its popularity is starting to rise in the amount of travelers that visit this district.

A popular pedestrian street in Ikebukuro called Sunshine 60 Storey Street is lined

with a number of different kinds of shops, restaurants, and the Sunshine City high-rise which houses an aquarium, a small amusement park, and more shops. As people stroll through this area during the day and at night, buildings with facades like Akihabara, Shibuya, and Shinjuku are noticed. There are anime arcades, maid cafes, and manga cafes, which reflects a similar atmosphere of Akihabara but with a younger and more female crowd. The shopping is for a more youthful crowd and prices are pretty reasonable for the most part, except for a few large department stores with expensive merchandise. Ikebukuro seems like a place that has something for everyone. From a cinema to bookstores, anime arcades to shopping for fashion, a food amusement park to take a boyfriend/girlfriend to, and upcoming bands playing in Ikebukuro West Gate Park. It seemed to have a little of everything. So it can be concluded that Ikebukuro strove to be the place where anyone can do anything.

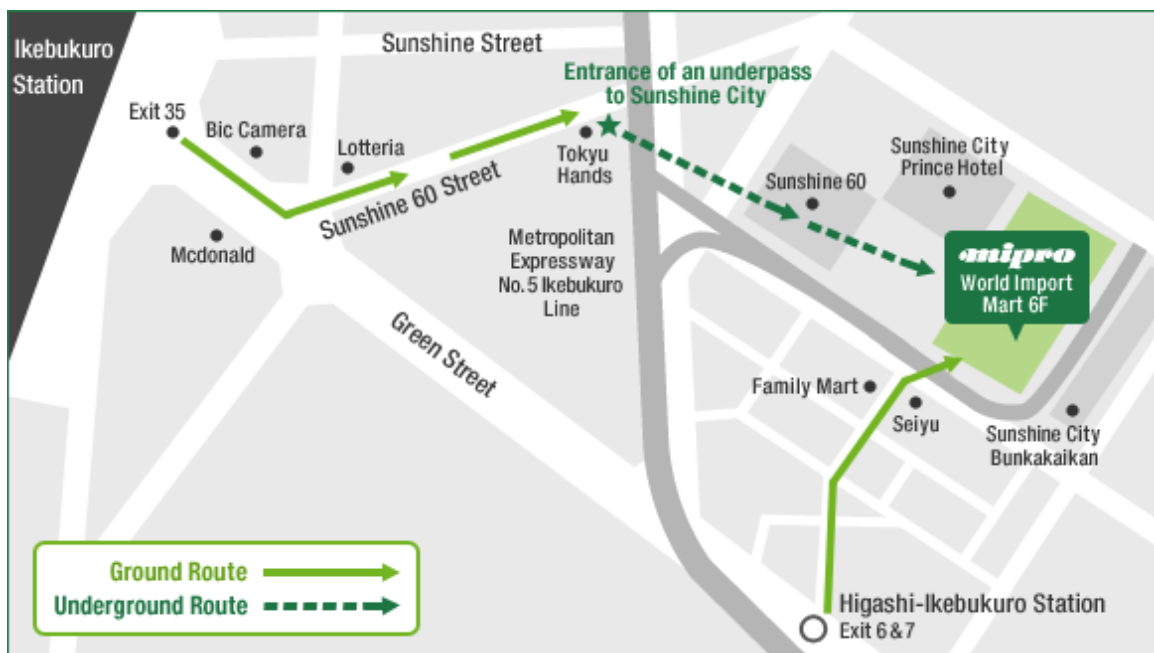


Figure 68: This is a map of Sunshine 60 Storey Street. This street helps bring a connection between Ikebukuro Station and Sunshine City Complex (includes Sunshine 60 Building, Sunshine Prince Hotel, Sunshine City Lyceum) that are Ikebukuro district landmarks.

An anime called *Durarara!!*, set in Ikebukuro, can help give more insight about the area. One of the main characters is a boy who moved to Ikebukuro because he wanted

something interesting to happen in his life. He met a lot of interesting characters; a headless horseman which turns out to be a headless woman who rides a motorcycle, a extra strong man who dresses like a bartender, a black Russian who works for a sushi restaurant, and a group of young adults who are Otaku and uses manga as a way to torture gang members. This is only a short list of the interesting characters introduced in the series. The anime portrayed Ikebukuro as a place that was a rougher area because of the gangs that were there but also set it as a place occupied by interesting people. Professor Marja Sarvimaeki, who lived there when she was in Japan, even used the word “interesting” when describing what Ikebukuro was like. Then it hit me that if Ikebukuro is a place where anyone could do anything then it has to be a place bound to have something interesting happen.

Ikebukuro has been described in newspaper articles as being an “oft-overlooked, slightly gritty cousin of Shinjuku, Ginza, Shibuya, Roppongi, and Akihabara.”⁴⁰ And even though Ikebukuro is seen as a rival to Shinjuku in its liveliness and entertainment, Shinjuku is seen as “ultra-urban” while Ikebukuro is seen as having a more neighborhood feel.⁴¹ Both of these descriptions capture Ikebukuro. It has many urban attractions mixed in with the private neighborhood feel. This gives it a bit of a mysterious feeling. Its slightly gritty appearance also gives it a sense of forbidden excitement. It arouses the feeling of walking on the wrong side of town late at night. Of course, not frightening enough to make you scared for your life and its roughness is in contrast to the other social centers of Tokyo not American cities.

Ikebukuro West Gate Park is even “immortalized in popular fiction as the hangout of young working class heroes, molls, and punks.”⁴² The urban mystery novel series that started it all was called *Ikebukuro West Gate Park*, which was turned into a TV and manga comic series. Its plot included rival gangs that claimed this area as their turf.⁴³ Ikebukuro’s present state in criminal activity is far from its depicted state in this work of

⁴⁰ CNN GO, “Rediscovering Ikebukuro, Tokyo’s forgotten district.” Turner Broadcasting system, Inc., January 24, 2011. Accessed February 14, 2012. <http://www.cnn.go.com/tokyo/shop/rediscovering-ikebukuro-034570>.

⁴¹ Japan Visitor, “Tokyo Guide: Ikebukuro,” Japan Tourist Info., 2000, accessed on February 5, 2012, <http://www.japanvisitor.com/index.php?cID=430&pID=1792>.

⁴² Ibid.

⁴³ Ibid.

fiction. Even though Ikebukuro is in the top four places for purse snatching and break-ins, the numbers for reported crimes in Tokyo are so low that there is only a slightly greater chance for someone to be hit by lightning than to be a victim of one of these crimes.⁴⁴ Ikebukuro's gritty nature is only being played up because it is a characteristic that gives it an identity. It is similar to the atmosphere of Shinsekai in Osaka. Osaka is a rougher, working class city in Japan reflecting its start up roots as a merchant town. Shinsekai is an older, rougher section of Osaka, and this feature played up to attract tourists to this area. It almost has the feeling of a theme park highlighting its older less cleanly characteristics.

Besides the play on Ikebukuro's rougher side, it is also seen as having a "bohemian village heritage".⁴⁵ In the Showa era it was "nicknamed 'Ikebukuro Montpamasse' after the hub of intellectual and artistic life in Paris in the early 20th century".⁴⁶ In the mid 1940s Ikebukuro's oldest cinema, Cinema Rosa, was seen "a pioneer in screening foreign films, independent productions and anime feature films".⁴⁷ There are also two performing arts centers. Ikebukuro Performing Arts Theatre was established here in 1951 and Tokyo Metropolitan Art Space was built in 1990 where dramas and musicals are now staged.⁴⁸ What also adds to Ikebukuro's "bohemian" image is its high number of immigrants. It is reported as having the highest number of "Chinese immigrants since 1986"⁴⁹ One of the reasons for its higher immigrant population is due to its higher population of university students. Rikkyo University is a well known and "major private co-educational university"⁵⁰ that is located on Ikebukuro's Westside. Due to this fact many students live in Ikebukuro.

What adds to Ikebukuro village and gritty atmosphere is its history. The villages that made up Toshima ward were mainly agricultural lands. This land type was changed gradually overtime. The area of Ikebukuro still had this agricultural feel to it when

⁴⁴ Annamarie Sasagawa, "Tokyo's Crime Hotspots", *Tokyo Weekender*, March 2, 2012, accessed April 14, 2012. <http://www.tokyoweekender.com/2012/03/tokyos-crime-hotspots/#>.

⁴⁵ CNN GO, "Rediscovering Ikebukuro."

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Tokyo-Tokyo.com, "Ikebukuro."

Roland Barthes wrote about it in his 1970 book, *Empire of Signs*. Showing that this area held close to its roots, Barthes wrote, “And on the other side of the imperial ring [...] is still another populous neighborhood: Ikebukuro, workers and farmers, harsh and friendly as a big mongrel dog.”⁵¹ When he wrote these words, he was talking about how each ward and district of Tokyo had produced its own distinct races and bodies, which he had to newly get familiar with as he visited each one. He continued, “Thus each name echoes, evoking the idea of village, furnished with population as individual as that of a tribe, whose immense city would be the bush.”⁵² This notion of simple villages making up Tokyo is key to how each of Tokyo’s neighborhoods and city centers have retained their unique identities and Ikebukuro is not an exception to this fact. Due to its later inclusion to the JR Yamanote line and location between the expanded suburbs and central Tokyo, Ikebukuro has retained a closer relationship to its neighborhood roots.

4.2 Contemporary Urban Design Components

Ikebukuro has become very contemporary in its design over time. The biggest start to its transformation was the building of Ikebukuro Station. When Sunshine City high-rise was built, it became a major landmark for the Ikebukuro area that can be seen from a far distance. When it opened in 1978, it was the tallest building in Tokyo and is considered Tokyo’s oldest “City within a City”. It is now the third tallest building in Tokyo, but continues to tower over any building in its area so that a pedestrian can locate it from anywhere in Ikebukuro. It holds an International Aquarium, Planetarium, Ancient Orient Museum, and Namco Nanja Town, which is a food theme park.⁵³ This high-rise does not have a direct relationship with its entrance from the Sunshine 60 Street. It is only when a pedestrian sees a big blue sign next to Tokyo hands that says Sunshine City, would they know where to go. If they were unfamiliar with Ikebukuro, they would then have to follow signs the rest of the way because the entrance isn’t right off the street.

The Toyota Amlux building is more of a secondary landmark. It is harder for visitors to notice it during the day, but at night it is very distinctive from other buildings

⁵¹ Barthes, *Empire of Signs*, 39.

⁵² Barthes, *Empire of Signs*, 42.

⁵³ Mchedlishvili, “Ikebukuro.”

because it has its blue lights on. It can then be seen peeking out above the lower neighborhood buildings. As I became more familiar with the area I began to see other smaller and more localized landmarks, such as street lamps, street signs, and western restaurant signs that I could read. These I relied on to navigate the area when I came back by myself without a friend to guide me. These landmarks were particularly important to me because I couldn't read or remember the side street names of this area. When I wanted to find the manga café, I used elements of the city that had stood out to me when I went there before with Nanako, I remembered to start at Ikebukuro Station's East exit and cross the street in the biggest crosswalk that led me to the beginning of the main avenue. I had to stay to the left of the avenue and at the next major intersection veer slightly to the left to enter a mainly pedestrian street. When I saw that the street was mainly pedestrian, saw the Sunshine 60 Street silver vertical street signs, and saw the signature street lamps, I knew I was in the right area. Then I had to pass the KFC, walked to the end of Sunshine 60 Street, turned around, and walked back to the KFC from another direction to know I was suppose to turn left there. I didn't recognize it before because when I was with Nanako we actually passed that street and came back. Finally, I had to find the dark staircase that had no sign above it to indicate where it led. I then knew that this was the staircase to walk up one floor and then take the elevator to the next floor, which opened up in the manga café. All these objects became critical landmarks for me, letting me know where I was in relationship to where I wanted to go. It was also interesting to realize I had to see the KFC at the particular direction that Nanako took me, to know I had to turn there. It was also by the recognition of these landmarks that I realized the anime, *Durarara!!*, depicted Ikebukuro.

The *Durarara!!* anime and manga that was made for a Japanese audience emphasized various elements of the Ikebukuro district. They used these intimate landmarks as a way to connect with their readers and viewers. To Japanese who are familiar with Ikebukuro, reading *Durarara!!* would be like coming home. This awareness provided me with insight into what elements were used as visual signals in the story that was based in Ikebukuro. I noticed from the anime that Ikebukuro Station, Sunshine City, Tokyu Hands, the Toyota Amlux, Sunshine 60 Storey Street, the expressway, Ikebukuro

West Park and an owl statue are major components that make up Ikebukuro. These are places or things that are held in people's memory that identify Ikebukuro as a place. Even the anime characters, though exaggerated, would be characters that a person would think belonged there. This shows that the people in Ikebukuro also help to identify the area.

In spite of the contemporary urban form of Sunshine 60 Storey Street, it still has an open market feel about it. Sales people stand outside their shops with signs and call to pedestrians. Even the shops on the 7th floor of a building have employees on the street holding tall signs so that the signs can be seen above the crowd. Their calls are mainly in Japanese peppered lightly with some English words, such as "sale" and "cheap." These calls are mixed with music that flows out of the shops. The distinctive sound from Pachinko slots also escapes into the street and mixes with the sounds and music of more technological gaming devices that attract a younger people. Standup signs from all the shops in a building clutter its front. The retail shops on the first floor move merchandise out on the sidewalks, unafraid of thieves secretly snatching items. Some restaurants do the same with their tables and chairs; but it isn't as common to do that on this promenade. Bicycles also add to this chaos as they are parked wherever there is a spot. Many people in Japan ride bicycles because there is just no space for parking cars. The bicycles seem to become part of the streetscape as they blend in with the signs and building facades. Yoshinobu Ashihara attributes this chaos to the fact that no one particularly owns the streets. This adds to the open market feel of the place.

Amongst all the noise and perceived chaos of the Ikebukuro streetscape, there is still a reflection of Zen that is tucked away. It is the Japanese restaurant that provides a safe haven of wabi-sabi. In Tokyo dining is still, for the most part, a very private experience. Besides some local street restaurants, the only restaurants opened almost entirely to the street are foreign-based restaurants, like McDonalds and KFC. There was one restaurant in a train station that had outside over flow seating, but the seating faced the wall and had dividers behind the seats so that customers were still protected from the public pathway. It looked very claustrophobic but it was private. However, the restaurants I am talking about are the one's that are hidden away. These are considered to reflect wabi-sabi because they can be described as being "small, secluded, and private

environments that enhance one's capacity for metaphysical musings [...] They are a world apart: nowhere, anywhere, everywhere."⁵⁴ Many times, due to the private or out of the way locations of the restaurants, the workers will stand out by their signs to try to attract customers to come inside to their restaurant and then show them the way. Without these hostesses leading the way, it nearly seems impossible to find the restaurant for the first time. My friend Nami took me to one of these restaurants. As she led me to this restaurant we had to traverse dark stairs and an elevator. It kind of reminded me about how the Japanese teahouse is separated from the world. The restaurant was separated from the street in this same way. We had to take a little journey to get there.

When we got to the restaurant it was very small and there weren't any windows looking out onto the street. It was completely secluded from what was happening outside. It wasn't luxurious in its decoration. It looked like a simple family operated business. This is another reflection of the material qualities of wabi-sabi that describes things as "usually small and compact, quiet and inward-oriented [...] They inspire a reduction of the psychic distance between one thing and another thing; between people and things."⁵⁵ The seclusion of this small restaurant produced an inward focus that ignored the environment of the city street that customers left behind to enter the restaurant.

What was also surprising about this restaurant was it had a grill in the middle of the table so that customers could cook their own food. Who heard of going to a restaurant to cook your own food? When a customer orders, the waitress brings the raw ingredients for the customer to mix and cook on the grill. The dishes on the menu are made up with simple and common ingredient, and are pretty easy to cook. It is a more of a common person's type of food, instead of a complicated expensive dish with exotic ingredients. A cook is also there to show customers how to cook the dishes if a dish is unfamiliar to them. The simple decoration of the restaurant, the dish ingredients, and way the food is cooked reflects wabi-sabi moral precepts to get rid of that which is unnecessary and enjoy the things that are unpretentious and simple. Also by preparing and cooking the food themselves, the customer is helped to focus their mind on the moment and what is being

⁵⁴ Koren, *Wabi-Sabi*, 67

⁵⁵ Ibid.

done instead of other worldly endeavors. This also brings more appreciation for the dish even though it is simple.⁵⁶

The Japanese tea ceremony was designed to do the same thing. First, the tearoom was modeled after “a medieval Japanese farmer’s hut” which is built out of modest and simple materials. It has a very small and intimate space and is built away from everyday life. Focus is placed on the ceremony itself and the tea utensils instead of the outside world to bring an inward focus which brings an appreciation for the “minor and the hidden.”⁵⁷ The whole purpose of tea was to help monks stay awake when they were meditating, so it makes sense that the tea ceremony was done in such a way to bring an inward meditative focus.⁵⁸

There was one other place that is similar to the above type of restaurant. It is the manga café. When I went to a manga cafe, I also had to take a journey away from the street. I wondered if I could even find it again. The manga cafes really aren’t considered a restaurant, but they function in the same way, that of rejuvenating a person from the everyday world. Manga cafes are places especially for local Japanese who need a quiet place to relax, read manga, watch anime, use the internet, or to sleep overnight if they miss the last train home. These are out of the way cafes where a person needs to know where they are located in order to find them. The lights are down low and a private cubical for one or two people can be rented by the minute or hour. They are not especially comfortable for sleeping over night but the highlight is unlimited drinks and coffee while you are there and being able to take a shower. I found it to be a great escape from the city so I could recharge to take the city on again.

These two escapes from the city can be looked at as an invisible urban form. They are not very big and there are many locations hidden away within the urban landscape of the city. They are the places that reflect wabi-sabi values and rejuvenate the Japanese spirit. They could be called the modern day urban tearoom for the common man who can’t afford the luxuries of space apart from their living quarters. This is very different from the restaurants and cafes designed in the West. Most of them are outward focus

⁵⁶ Koren, *Wabi-Sabi*, 59.

⁵⁷ *Ibid.*, 50-51.

⁵⁸ R. Y. Kowk, “Garden Landscaping: Japan,” *Asan 636: Asian Urban Forms*, University of Hawaii, April 10, 2012, Saunders Hall 119.

where customers can see outside the windows to look at the street. Japanese restaurants, especially noodle shops, even if they are directly off of the street have a short drape over the entrance and windows to provide privacy for its customers.

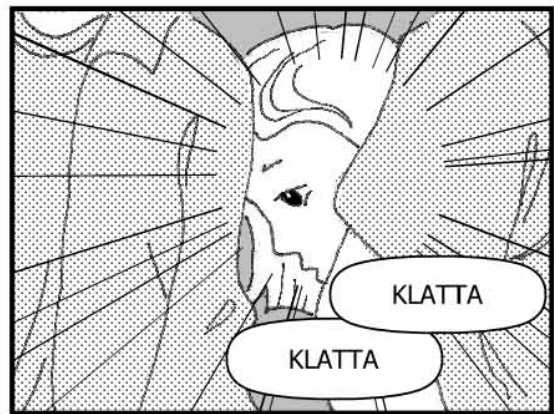
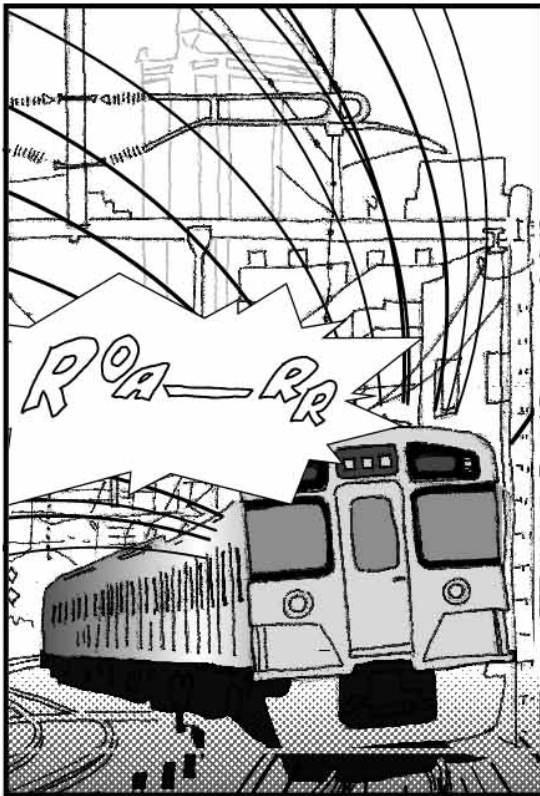
It is interesting how Tokyo has thrived as an urban center and yet Japanese values still shape its urban form no matter how contemporary or modern it has become. It is also interesting that the order of the Japanese city must be discovered by looking closely at it in the same way wabi-sabi discovers beauty in things that at first appear ugly. In the next section I will focus on the sample manga and its reflection of Ikebukuro.

4.3 The Sample Manga

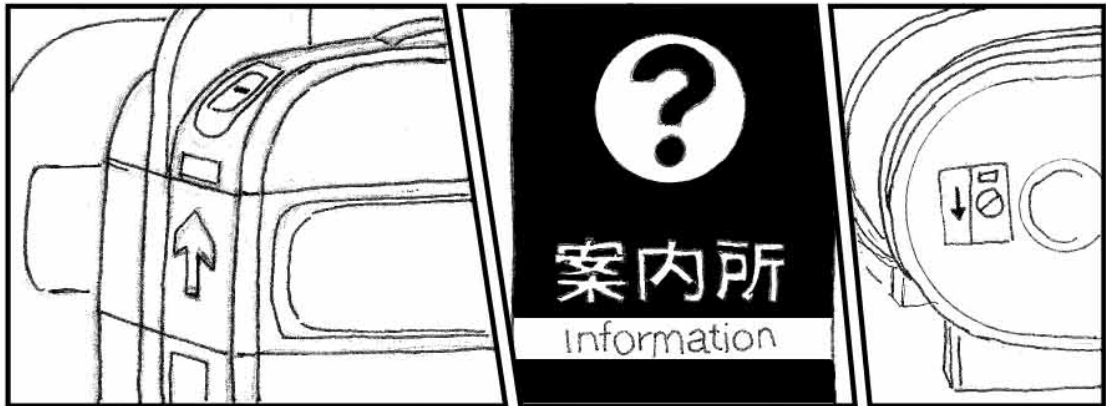
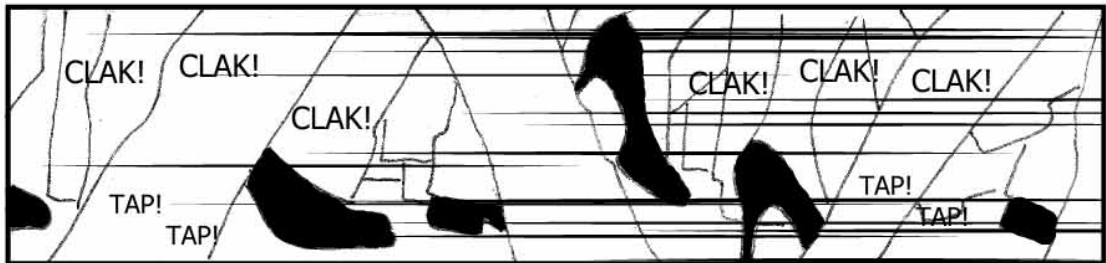
My purpose for the sample manga is to show how the manga technique of aspect-to-aspect panel transitioning can be used to isolate and identify the different elements of the Sunshine 60 Storey Street pedestrian walk. It is also the goal to show how the feel of the area is enhanced by this method. I also wanted to show how sound, smell, taste, and even the flashing of lights can be shown through the medium of manga to allow a multi-sensory experience of the area. In addition, the element of arrival and departure to Ikebukuro becomes a part of the experience. This is important because the entering and exiting of certain parts of the city becomes apart of a person's perception of the city. The main perspective being highlighted in the sample manga is that of a new visitor. It is vital to look at how a city or space is perceived from both a new visitor and a resident. Heidi is the main character who has the role of a new visitor. The sample manga is then focused on her experiences in the Ikebukuro area. Her friend Nami is a native to the Japanese city and a regular visitor to the Ikebukuro area. The sample manga uses her guidance to show Heidi and the readers how to look at the Japanese city in a more Japanese way. The manga panels have two dual purposes; the first is to aid in forwarding the narrative and the second is to serve as a lens, to bring order to the chaotic details of the streets.



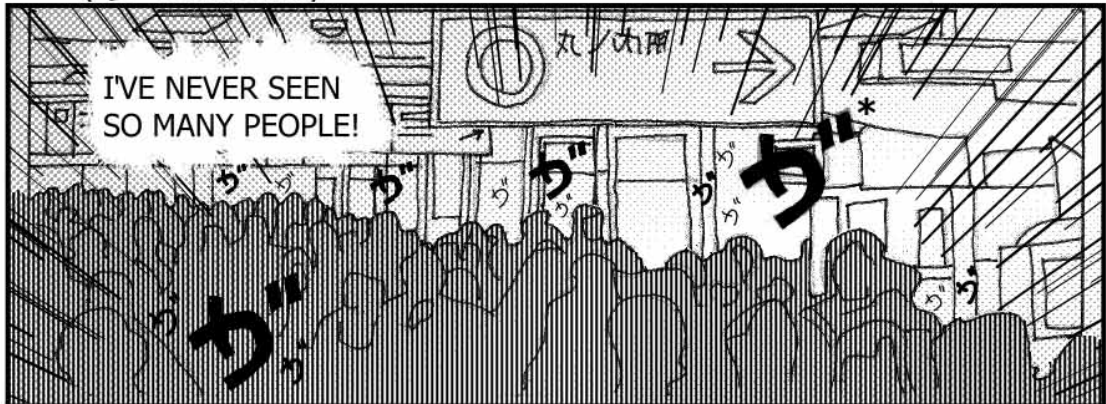
SOMEWHERE IN TOKYO ...

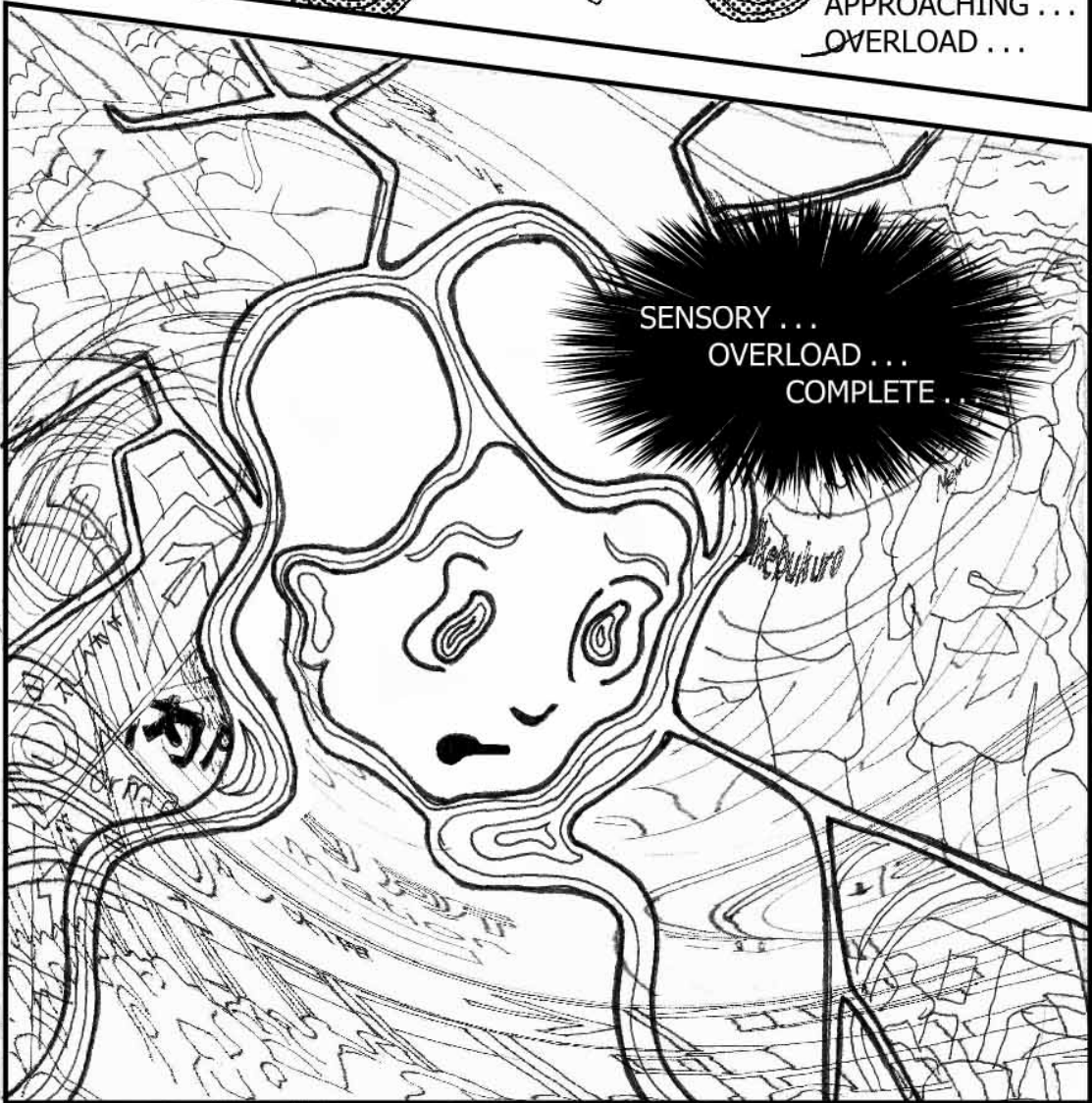
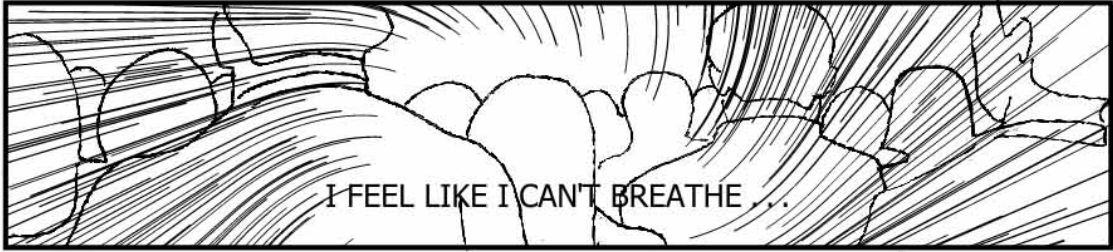






(*カ) : Crowd noise





REBOOT IN PROCESS ...

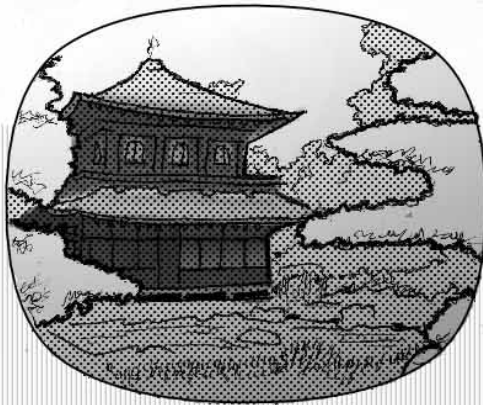


サンシャイン方面
for Sunshine

UMM ... EXCUSE ME ...
SUMI ... MASEN!

I GOT
TO GET
OUT OF
THIS
CROWD!

I'M SUCH A
KLUTZ. HOW
EMBARASSING!



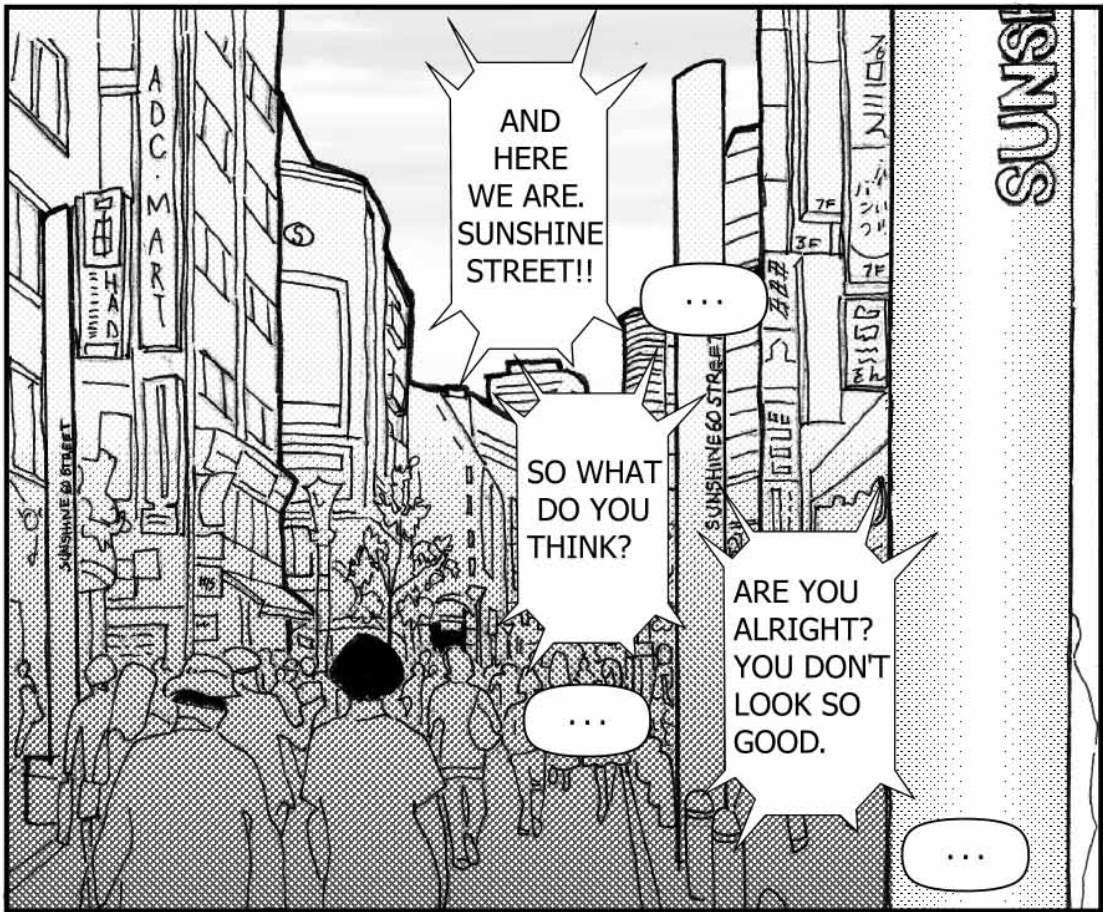
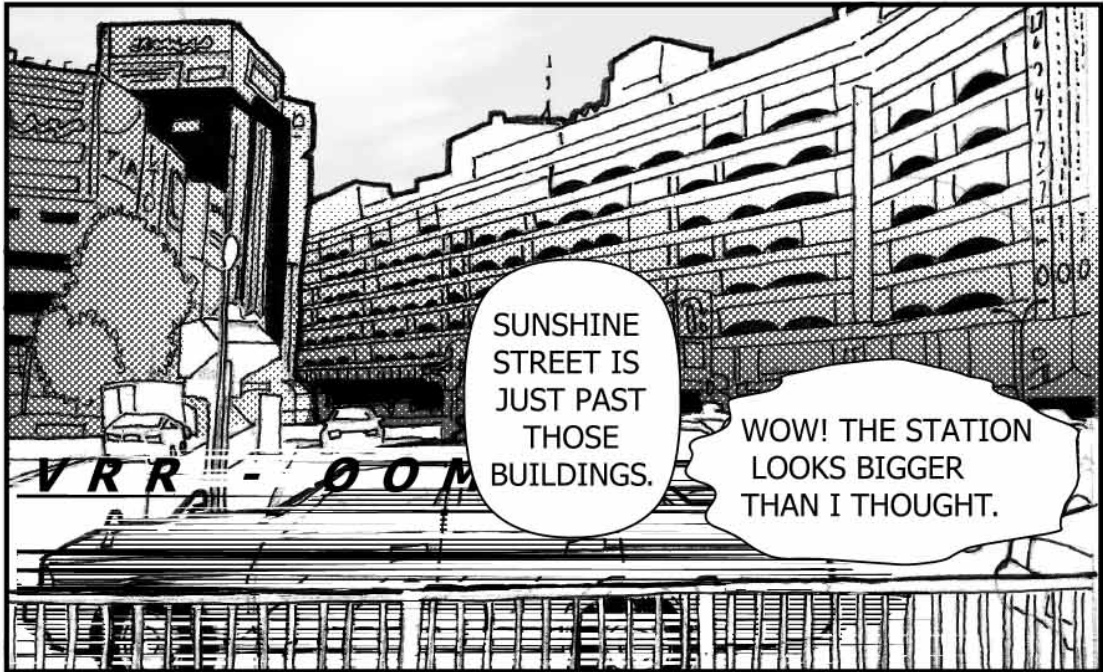
JAPAN IS NOTHING LIKE I THOUGHT
IT WOULD BE ...

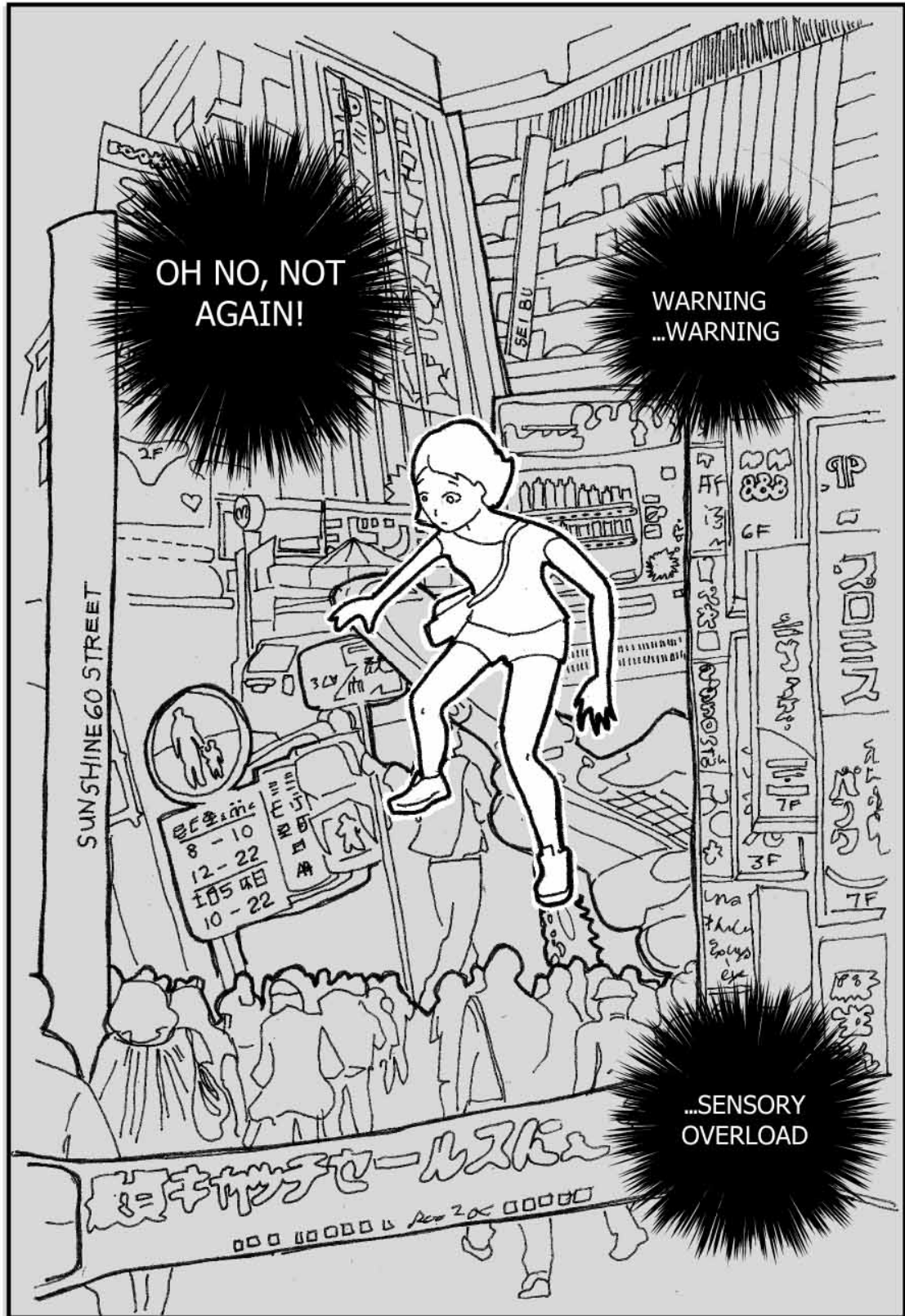
WHAT WAS I
THINKING?
WHY DID I
COME TO JAPAN ...
BY MYSELF?



(*konnichiwa: Good afternoon)







OH NO, NOT AGAIN!

WARNING
...WARNING

SUNSHINE GO STREET

8-10
12-22
10-22

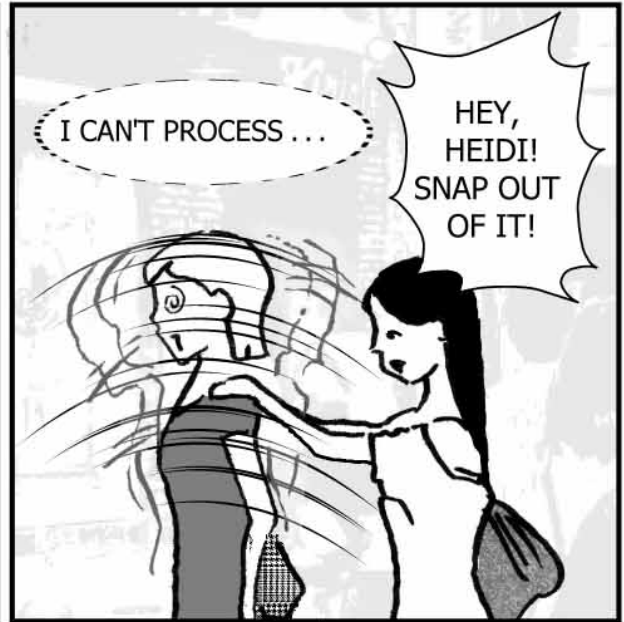
SEIBU

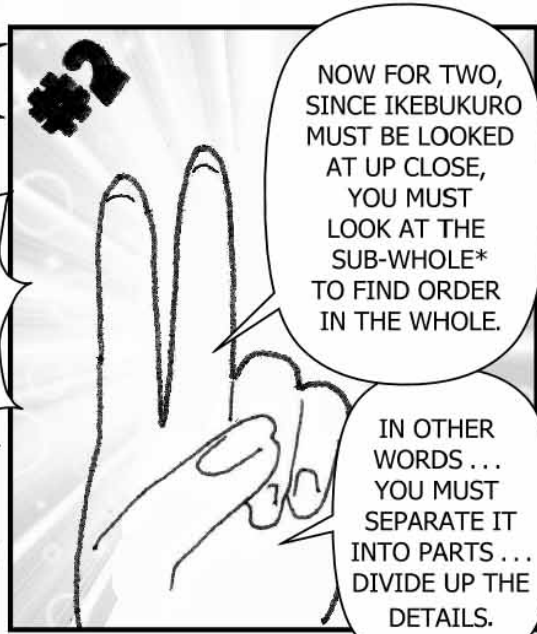
...SENSORY OVERLOAD

東京駅南口セールの会場



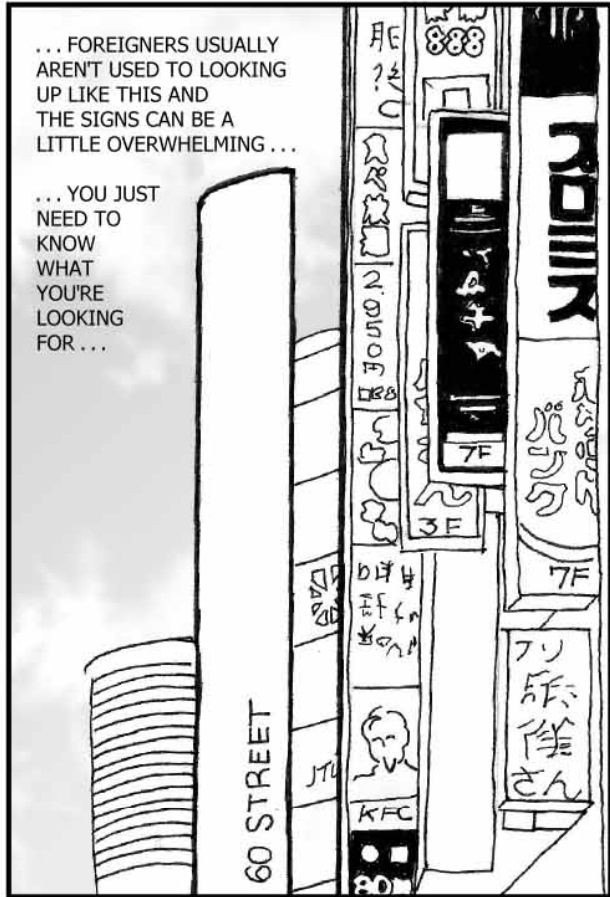
(*gaijin: foreigner)







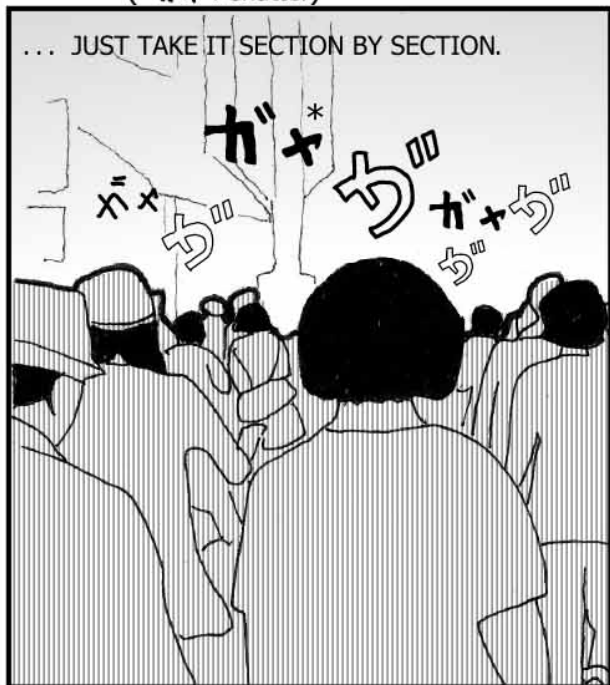
NOW... SEE HOW I'M LOOKING CLOSE, DIVIDING THE SCENE OF THE STREET WE ARE LOOKING AT, AND LOOKING UP.



... FOREIGNERS USUALLY AREN'T USED TO LOOKING UP LIKE THIS AND THE SIGNS CAN BE A LITTLE OVERWHELMING...

... YOU JUST NEED TO KNOW WHAT YOU'RE LOOKING FOR...

(*ハヤ : Chatter)



... JUST TAKE IT SECTION BY SECTION.



SO,

#1 DON'T TAKE
IKEBUKURO ALL
IN AT ONCE. LOOK
AT IT CLOSER.

#2 DIVIDE IT UP
INTO PARTS.

#3 LOOK UP.

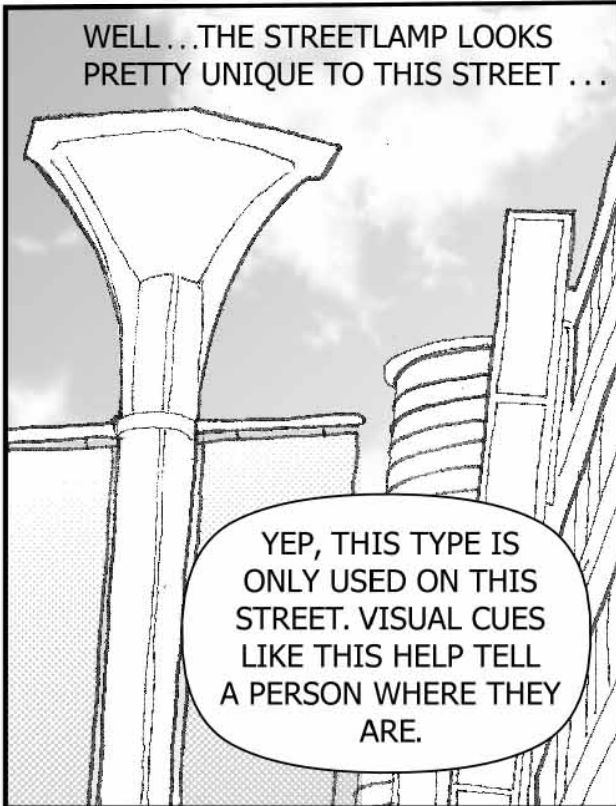
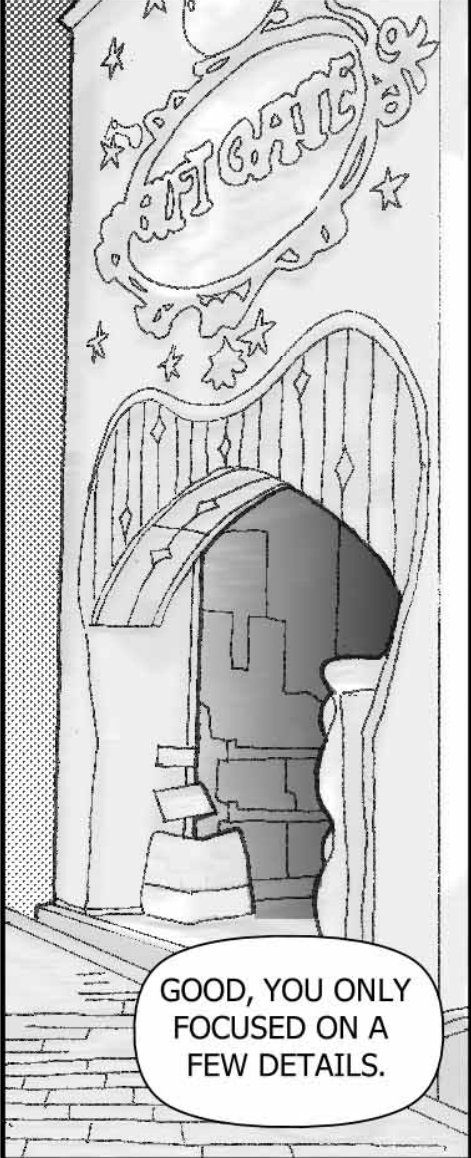
WELL, WHY
DON'T YOU
GIVE IT A TRY
OVER HERE.

OK



IT IS INTERESTING HOW THE PEOPLE INTERACT WITH THE SIGNS AND THE STREET ...

THERE IS A RESTAURANT ABOVE THE GIFT GATE SHOP, BUT I'M JUST TRYING TO FOCUS ON ONE THING.



WELL ... THE STREETLAMP LOOKS PRETTY UNIQUE TO THIS STREET ...

YEP, THIS TYPE IS ONLY USED ON THIS STREET. VISUAL CUES LIKE THIS HELP TELL A PERSON WHERE THEY ARE.

GOOD, YOU ONLY FOCUSED ON A FEW DETAILS.

I'M GLAD YOU FOCUSED ON THE SIDEWALK EARLIER. HERE IN JAPAN, ITS USED LIKE A TRANSITION SPACE THAT HAS MULTIPLE USES.

SAI...
DAI...
NO
HAN...
BAI...

SALE

HANBAI!
HANBAI!

SAIDAI NO
HANBAI!

BIGGEST
SALE!



IT FEELS LIKE A MARKET PLACE. ITS SO FULL OF LIFE ...

NO ONE OWNS IT, PER SAY, SO EVERYONE CAN USE IT.



BICYCLES BECOME APART OF THE STREETScape ...

ABC-MART

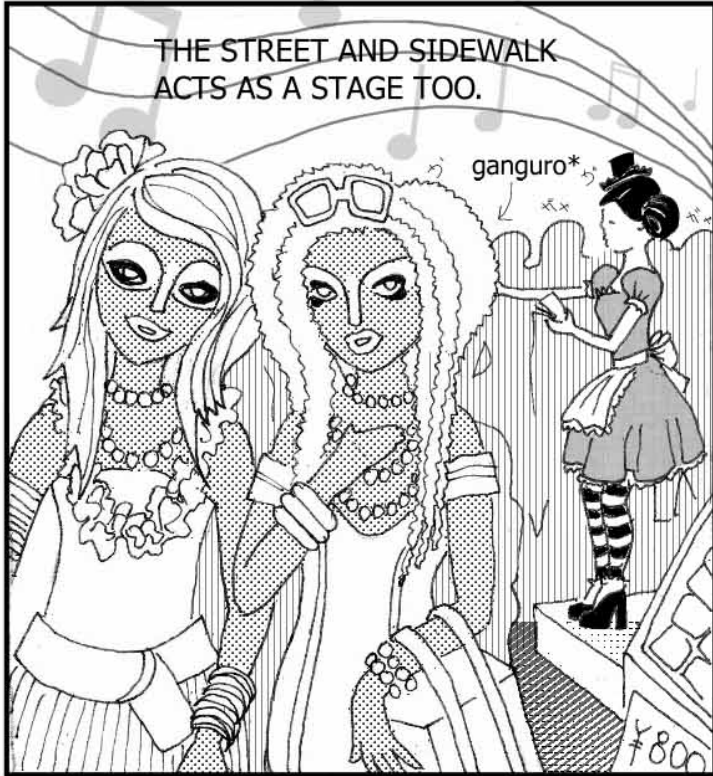
THE LINE BETWEEN THE STORE AND SIDEWALK ...

THE SIDE WALK AND STREET ...

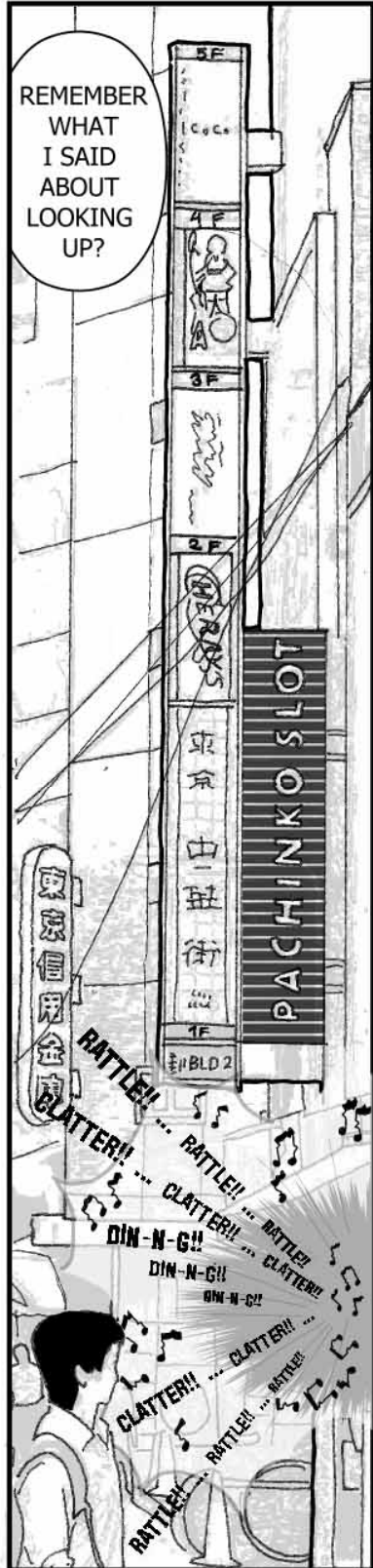
... IS VERY AMBIGUOUS.

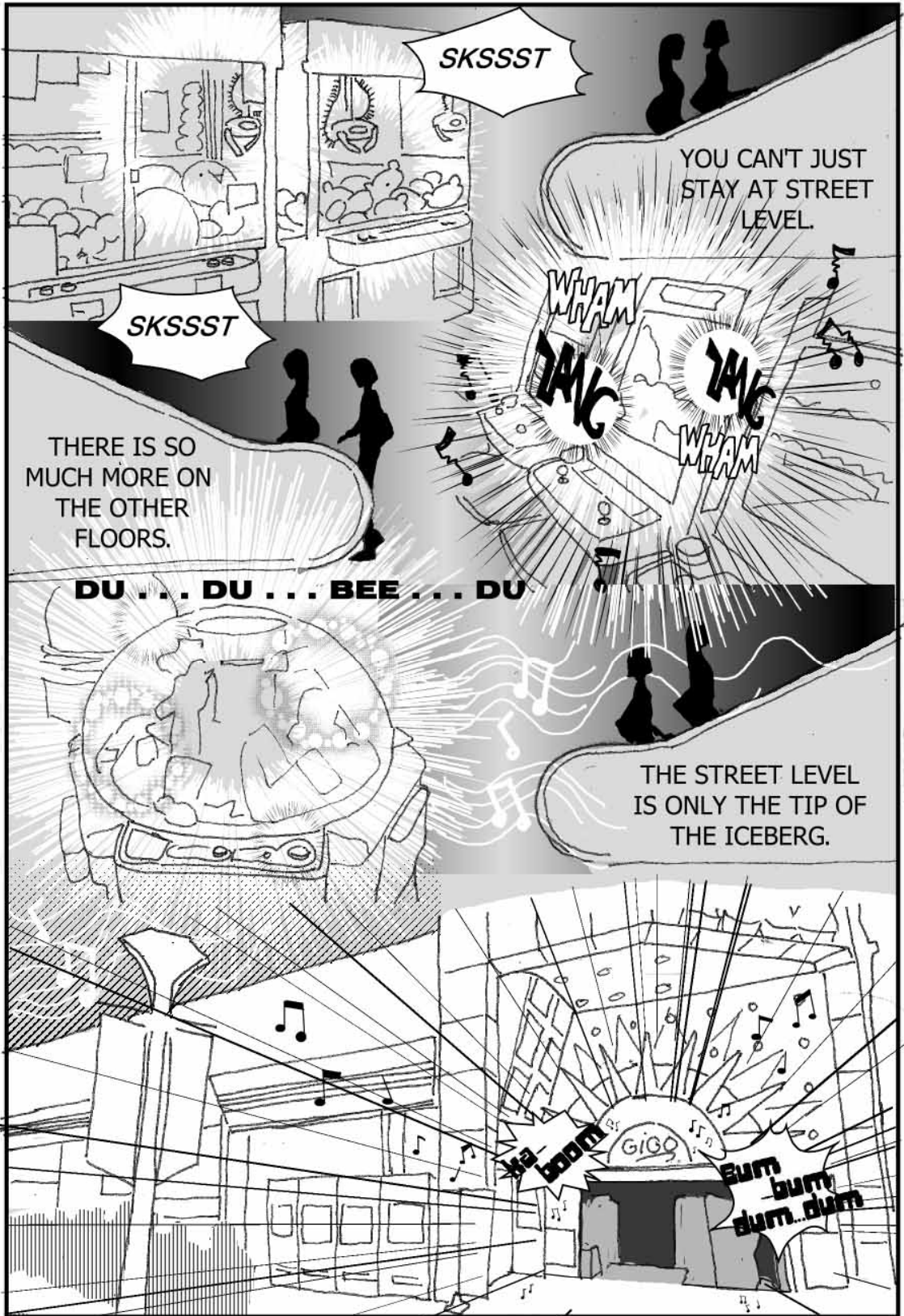


HANBAI!!
HAN...BAI!
HANBAI!!



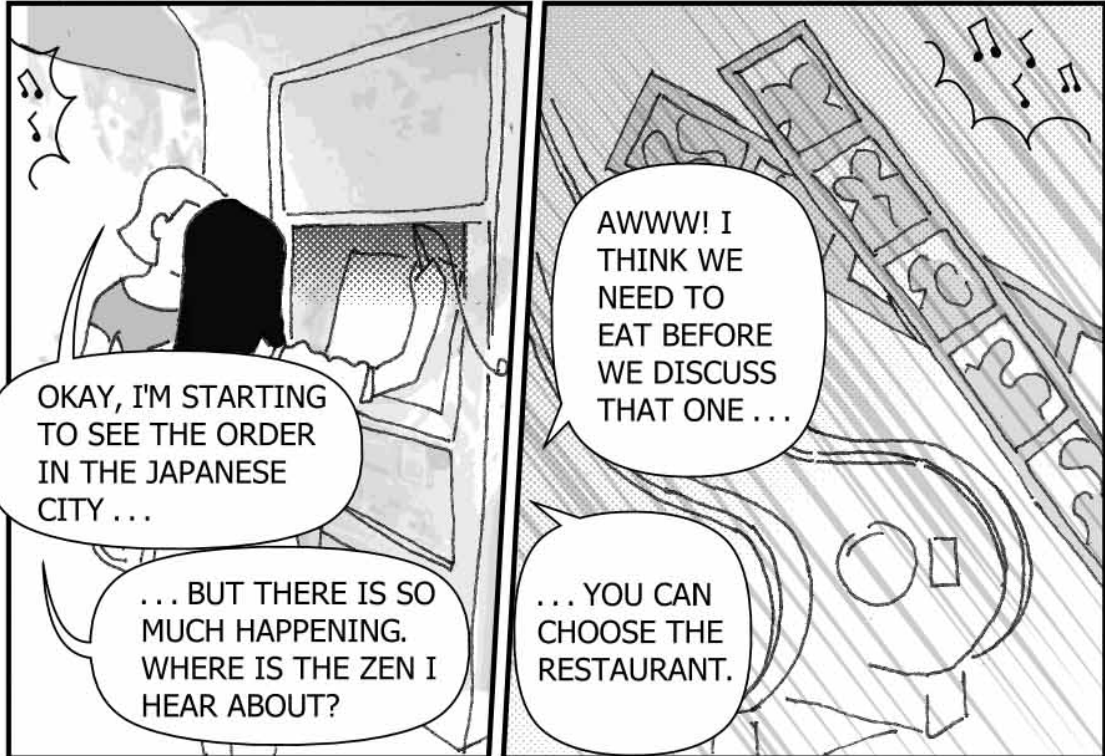
(*ganguro: a style of extreme street fashion)



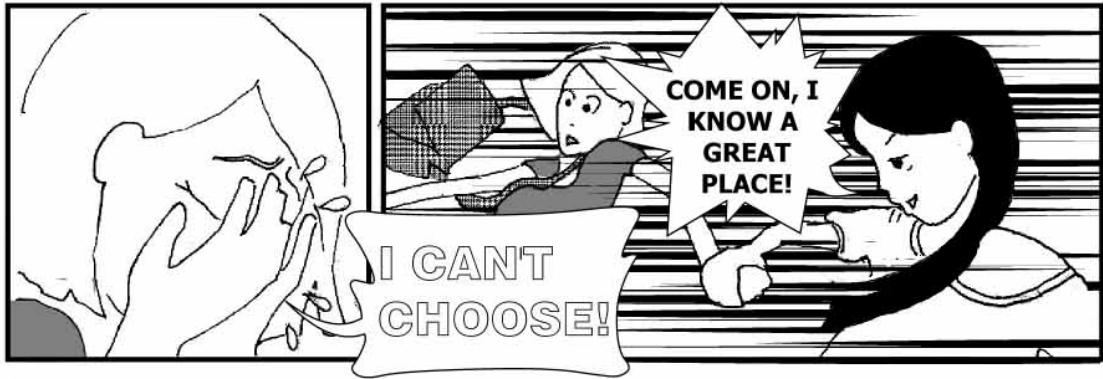


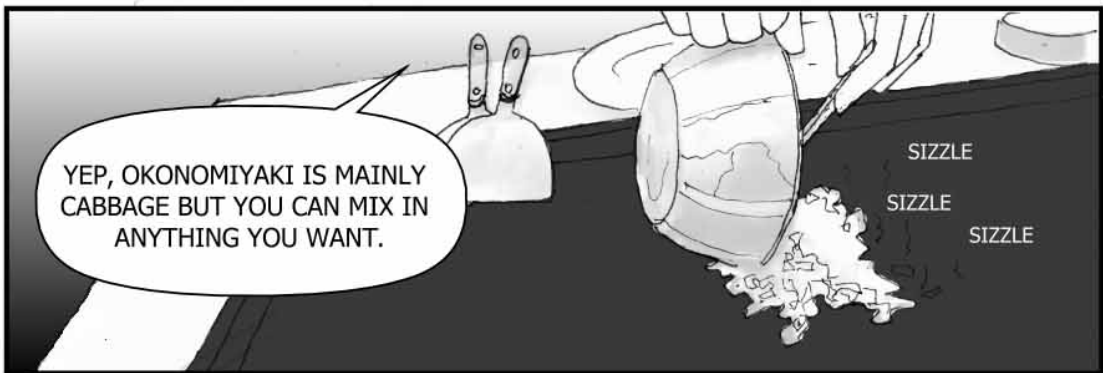
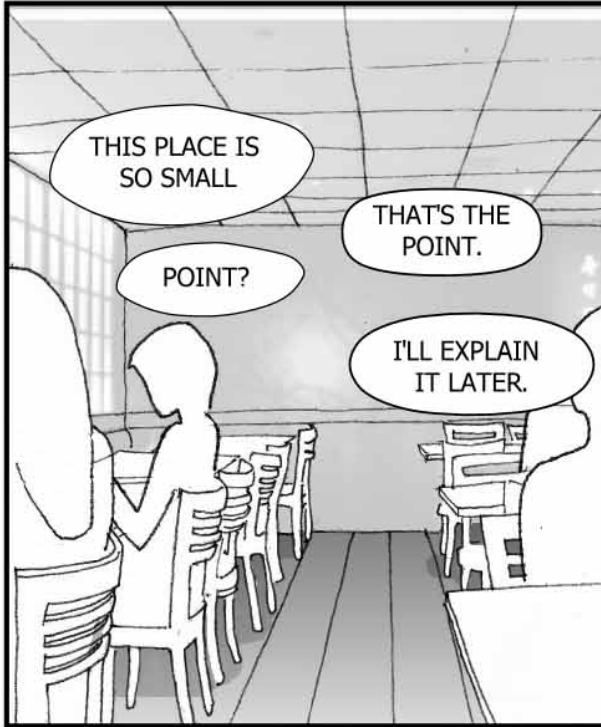


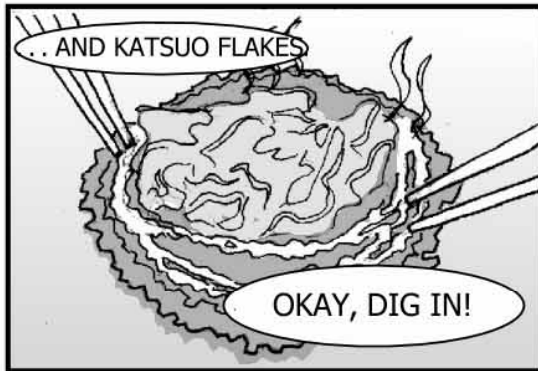
(*purikura booths: sticker photo booths)

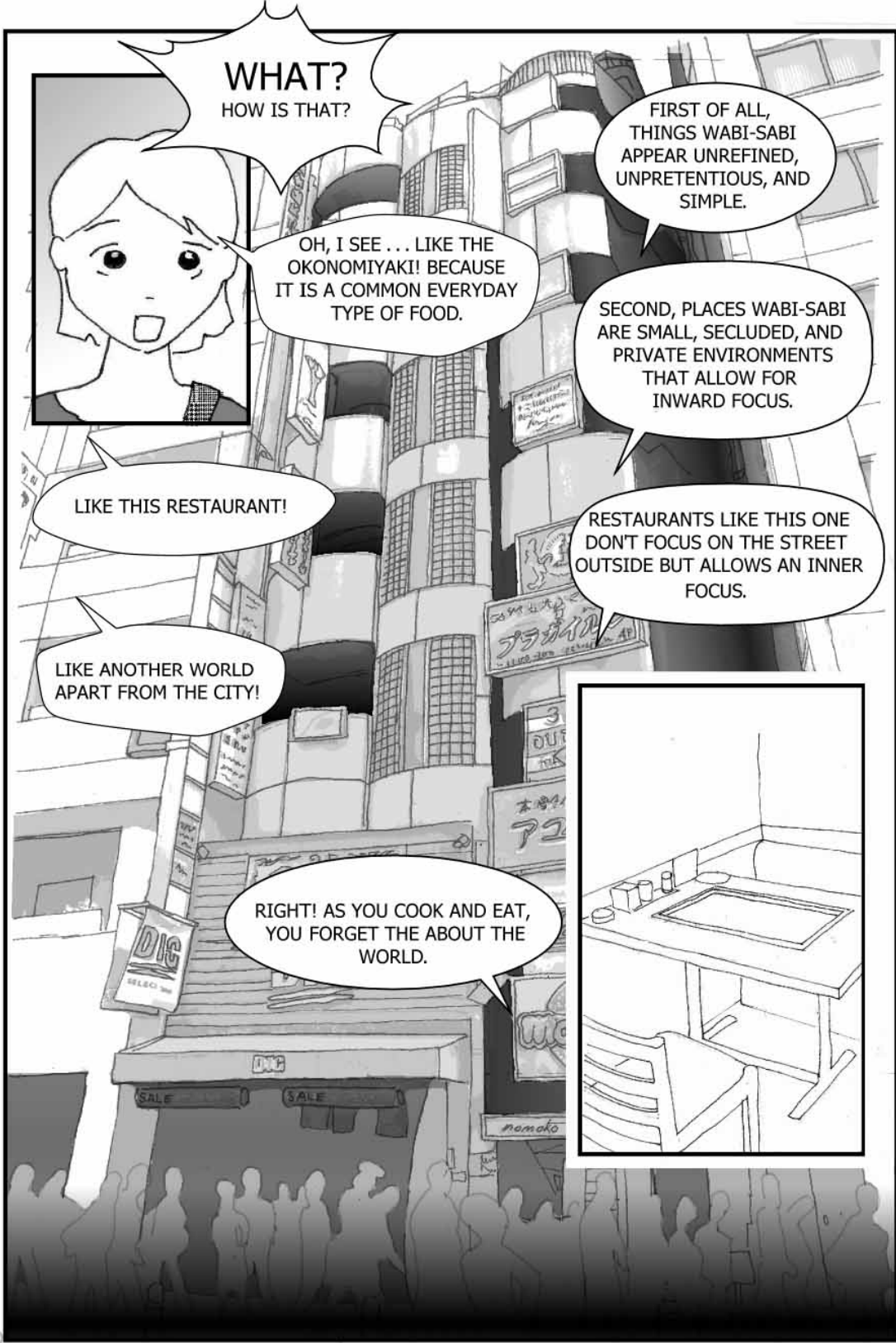












WHAT?
HOW IS THAT?

FIRST OF ALL,
THINGS WABI-SABI
APPEAR UNREFINED,
UNPRETENTIOUS, AND
SIMPLE.

OH, I SEE ... LIKE THE
OKONOMIYAKI! BECAUSE
IT IS A COMMON EVERYDAY
TYPE OF FOOD.

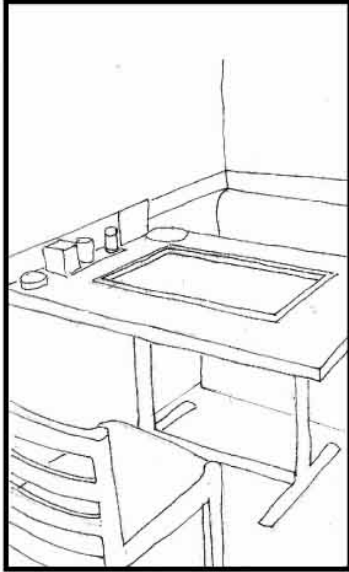
SECOND, PLACES WABI-SABI
ARE SMALL, SECLUDED, AND
PRIVATE ENVIRONMENTS
THAT ALLOW FOR
INWARD FOCUS.

LIKE THIS RESTAURANT!

RESTAURANTS LIKE THIS ONE
DON'T FOCUS ON THE STREET
OUTSIDE BUT ALLOWS AN INNER
FOCUS.

LIKE ANOTHER WORLD
APART FROM THE CITY!

RIGHT! AS YOU COOK AND EAT,
YOU FORGET THE ABOUT THE
WORLD.

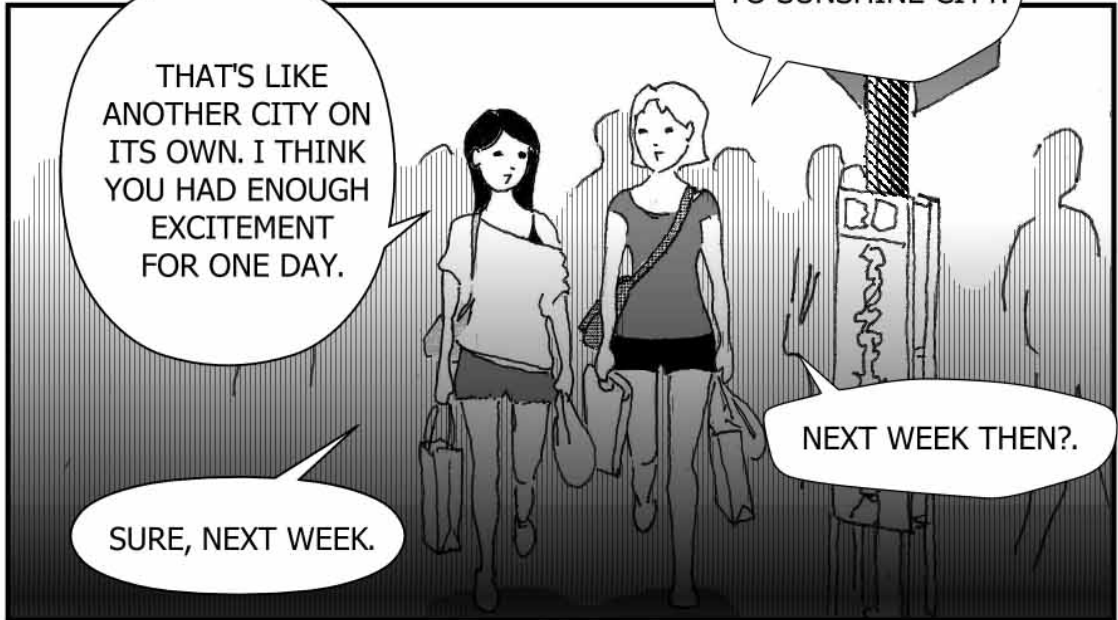




IKEBUKURO HAS MANY DIFFERENT SMALL RESTAURANTS THAT ARE HIDDEN AWAY FROM THE HUSTLE AND BUSTLE OF THE CITY.

WOW!
THERE REALLY IS ZEN IN IKEBUKURO

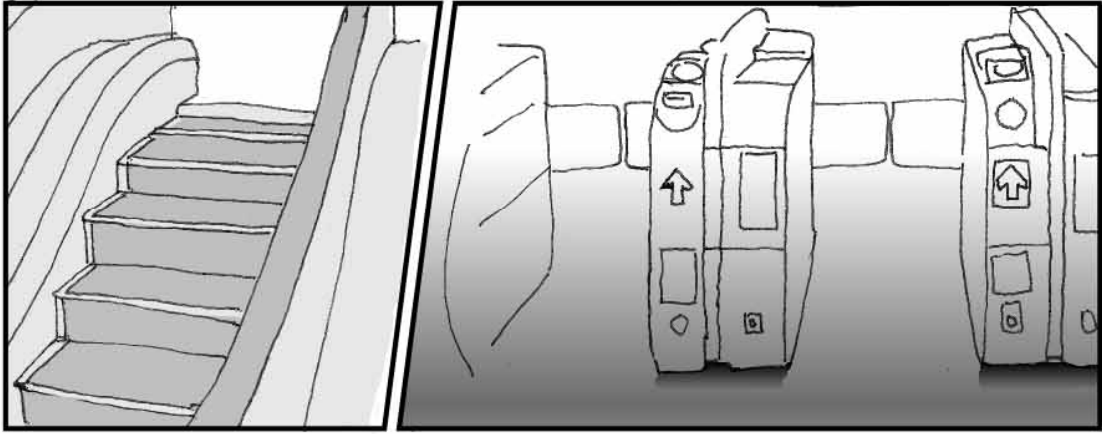
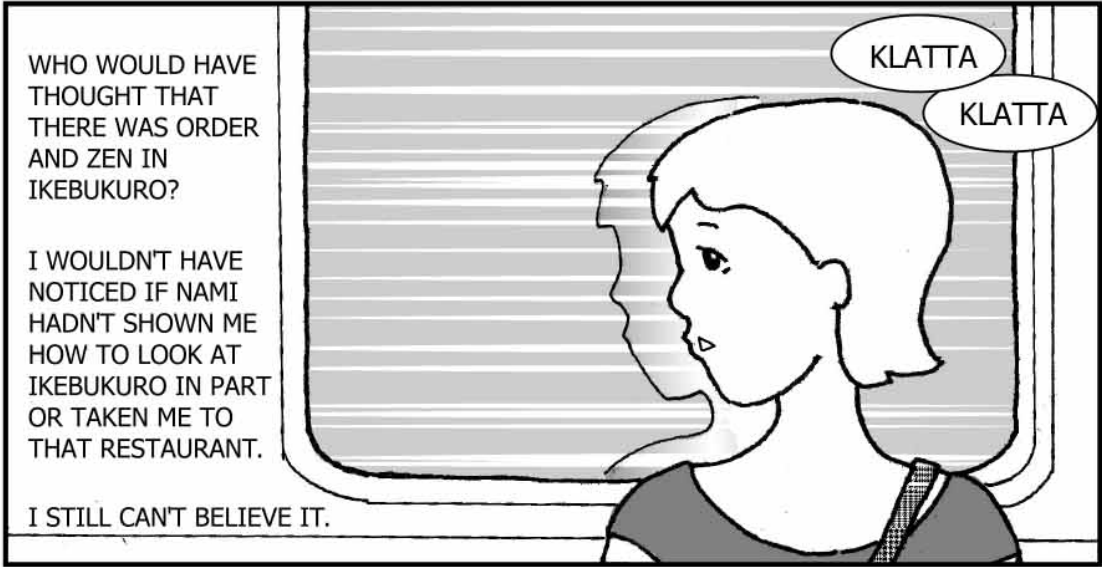
WE DIDN'T GET TO SUNSHINE CITY.



THAT'S LIKE ANOTHER CITY ON ITS OWN. I THINK YOU HAD ENOUGH EXCITEMENT FOR ONE DAY.

SURE, NEXT WEEK.

NEXT WEEK THEN?.



Sample Manga Extensive Definition Page

Page 16: **ganguro*: Is a style of extreme fashion that became popular in the 1990s to 2000s. During this time Shibuya and Ikebukuro districts were the center of ganguro fashion. This fashion has largely died out but can be seen every once in awhile.

Page 17: **purikura* booths: sticker photo booths (The booths shown here take professional quality photos that can be digitally touched up or decorated on the spot.)

4.4 Sample Manga Conclusion

As discussed in chapter 3, all the components of manga, such as, motion, narrative, sound, smell, and taste have a connection with space-time. In addition, the aspect-to-aspect panel transitions, is a technique to control motion and time between panels and is a key component with the strongest relationship to space-time in the built environment. Due to this conclusion, it was my aim to focus on this transition style while drawing the sample manga. However, in my first attempt things didn't go the way I had initially planned.

When I first attempted to draw my sample manga it looked more like a Western style comic. Sometime during the manga development and drawing process, I began focusing on ways I could finish the manga sooner because I felt things were moving too slowly. As a result, I crammed all the details and narrative into fewer pages. When I looked at the pages together, I felt something was wrong. It didn't look like manga and I couldn't figure out why. When I showed the manga to my committee, Jayson Chun pointed out that I had edited out almost all the aspect-to-aspect panel transitions. He suggested that I was trying to fit too many details into the narrative and I should narrow it down and focus on less. This way I could get rid of the scenes that weren't needed anymore which would leave more room for aspect-to-aspect panel transitions. This would also leave room to extend other scenes that needed to be drawn out over more pages. In leaving, Jayson advised me to focus on the moment of drawing and not what I needed to get done. This was hard to do at first because I really needed to get it done, but it helped me fully understand the difference between manga and Western comics.

The artwork in Western comics, as was pointed out in chapter two, is more detailed with more realistically drawn characters and color. Because of all the work put into the pages there has to be fewer pages. Then because there are fewer pages, they can't waste space on panel transitions like aspect-to-aspect and moment-to-moment, which take up space without significantly moving the narrative forward. To manga artists, furthering the narrative isn't their main focus. Being in the moment and capturing that atmosphere is just as important. In my haste to get my drawings done and further the

narrative in fewer pages, I had eliminated all the elements that made manga different from Western comics. Because I was lacking these things I was unable to create the immersion experience that would bring Ikebukuro to life on the pages. The street and buildings seemed so static and the detail filled panels appeared to be as chaotic as I had felt myself when I was in Ikebukuro for the first time.

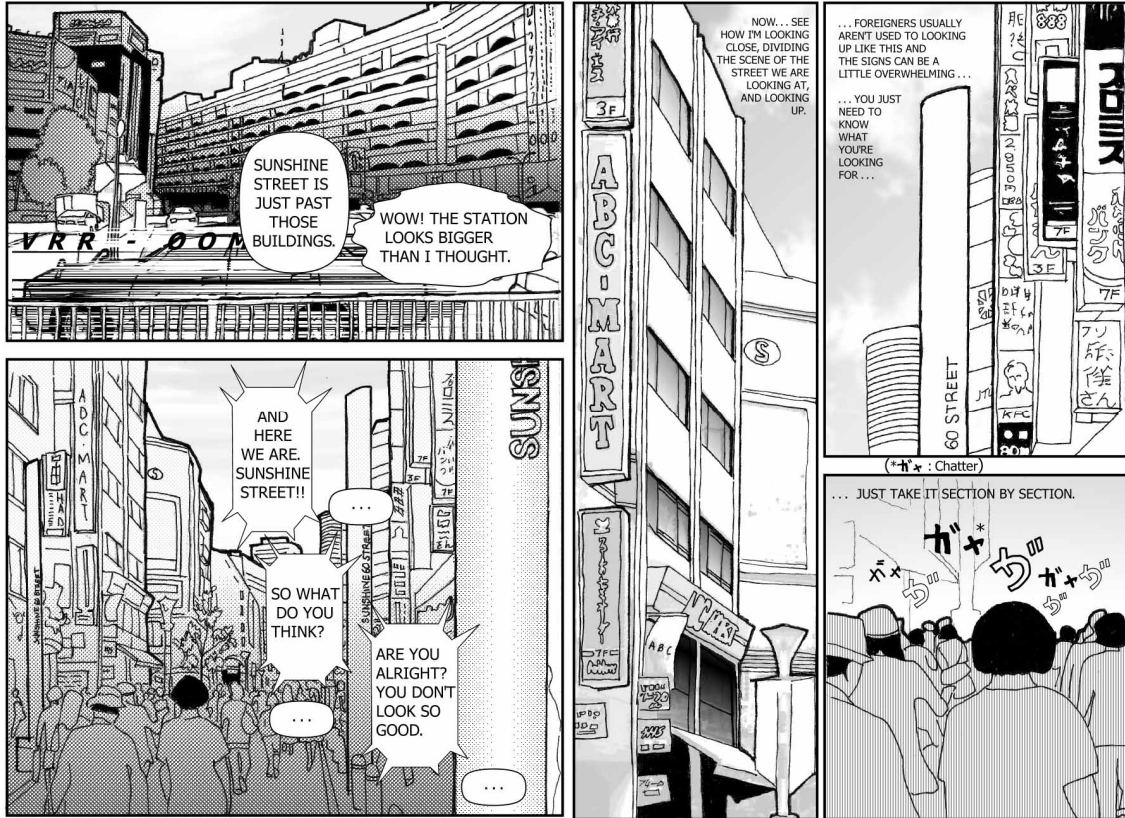


Figure 69: My first attempt at drawing the market scenes. There was too much information piled into one page. The street was being shown almost all at the same time causing lots of small details to be drawn.



a) b)
 Figure 70: In my second attempt at drawing the market scene, I focused in on certain details instead of trying to show the street all at once. The sequence ended up spanning over two pages (a) and (b) instead of one.

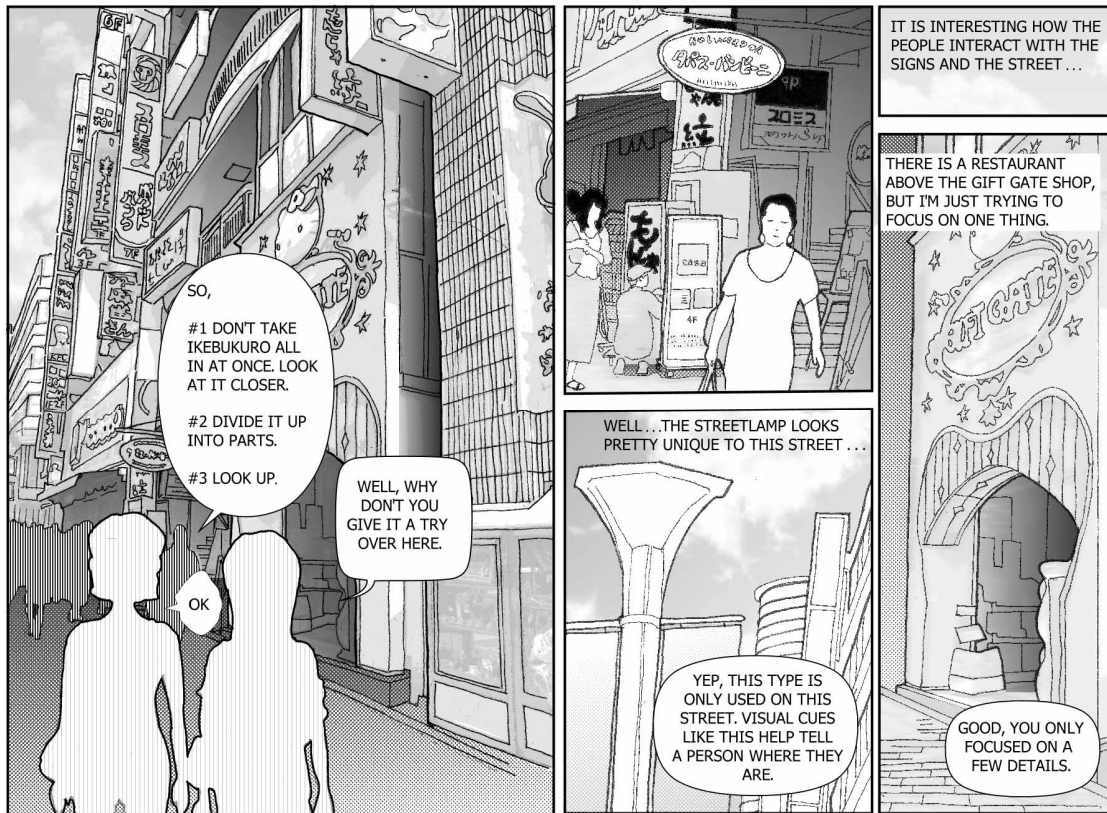
In my second attempt at drawing the sample manga, I was more successful with implementing the aspect-to-aspect panel transitions. The use of these transitions allowed me to focus in on certain components of a scene without having to fit the whole scene with all its details onto one page. I found that this method worked better to communicate the character of the street because I was guiding the eyes of the reader to key components and features. This, in turn, helped me organize these components and features to create a readable order for Sunshine 60 Storey Street. Seeing this transformation in my drawings, gave me the idea of keeping a couple of my more Western style comic pages to create a contrast with the new aspect-to-aspect panel transitions. This also served as a learning tool within the narrative for the readers.



a)

b)

Figure 71: (a) is a page kept from my first attempt of drawing manga. (b) Is an aspect-to-aspect panel transition page fragmenting the scene in the bottom panel of (a). Only certain details are picked out to be shown and there is much more clarity than (a). It was the goal to highlight this difference.



a)

b)

Figure 72:(a) is another page kept from my first attempt of drawing manga. (b) Is an aspect-to-aspect panel transition page fragmenting the scene of (a). Again, only certain details are picked out to be shown and there is much more clarity than in (a).

Not only did the aspect-to-aspect panel transitions help to catch the spirit and atmosphere of Sunshine 60 Storey Street, it was used to express how Heidi perceived the space when she first encountered Ikebukuro Station (see pages 112-113). These panels are placed in a horizontal layout to emphasize the horizontal movement of the crowd. Motion lines on the second panel on page 112 also reinforce this movement. The use of motion lines in the last panel on the page 112 and the first panel on page 113 show the tunneling and spinning of Heidi's vision before her eyes are focused on in the next panel. In the following and last panel, her mental state is expressed as a warped and cracked image of herself with a spinning background.

Creating mood and atmosphere isn't the only important job of aspect-to-aspect panel transitions; they also became a very effective way of inviting the reader into the

sample manga narrative. A reader must be drawn into the narrative before it can fully be experienced. This drawing in is very important to the architectural narrative as well as the manga narrative. It permits the reader to be immersed in the multi-sensory world of manga and therefore the built environment. This immersion allows the experience laid out in the manga to become the reader's own experience. Bringing the reader in and bringing them out of the narrative is like entering and exiting a built environment. I used the first page and last page of the narrative to bring attention to this often overlooked aspect that is a part of experiencing the space.

To draw the reader into the sample manga narrative, aspect-to-aspect panel transitions are used on its first page (see page 110). Fragments of a journey into Ikebukuro are linked together starting with the bigger context of the Ikebukuro skyline in Tokyo (Fig. 73a). Next, a train is shown, then the inside of the train, and lastly, a girl becomes the focus. The reader is not told directly that the girl is on a train headed to a place in Tokyo. However, the reader makes this association through combining the fragments of the scene and a few words. This aspect-to-aspect fragmenting of a scene allows the reader to focus on the city of Tokyo as the narrative's setting. Also the image dominated picture and word combination is used to promote this focus on the setting in the narrative, but not to necessarily progress the narrative. It also stimulates curiosity in the reader of where this girl is going and continues to draw the reader into the story. In turn, this draws the reader into the city and therefore the urban and architectural environment.

This same method is used to close the narrative. However, the silent aspect-to-aspect panels on this page, instead of drawing the reader into the story allow reflection on the urban and architectural experience (Fig. 73b). This ends the narrative more smoothly and allows the reader to ponder the Ikebukuro experience. An abrupt ending would have left the reader surprised and looking for more when their attention should be on what they have read. The immersion and contemplation help reinforce the points being made that there are order and Zen among the noise and confusion of Ikebukuro.

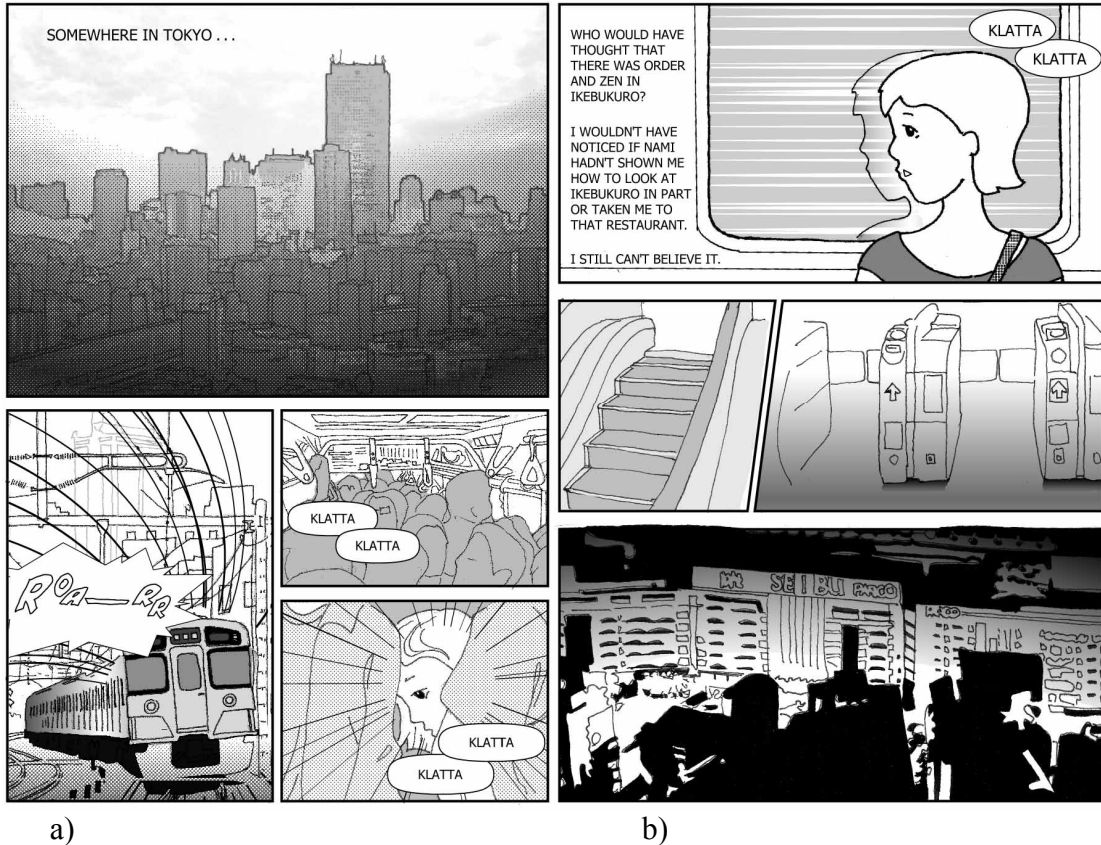


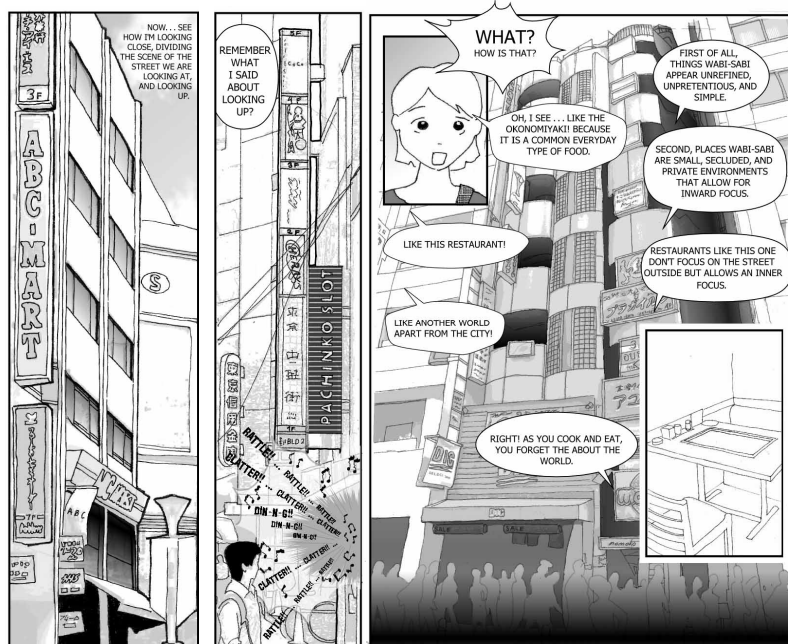
Figure 73: (a) is the first aspect-to-aspect panel transition page that invites the audience into the narrative. (b) Is the last aspect-to-aspect panel transition page that invites contemplation on the narrative.

As stated above, narrative is important to both architecture and manga. It helps guide the sequencing of space and create a continuity of experience. It is like the glue that holds all the elements together. I had to be very careful about what kind of narrative to develop for the sample manga. I didn't want one that completely ignored the topic of architectural experience and I didn't want a narrative that would be so academic that it would be boring. I decided to model it after the way *Oishinbo*, a manga series about food, used narratives that would be about situations or competitions that involved food. I decided to base the narrative on my own experience in Japan because it was a situation that naturally centered on the built environment and wouldn't sound forced.

Along with my first attempt of drawing the sample manga, my narrative was a little flat and sounded forced even though these were the things I was trying to avoid. On top of that, the narrative wasn't too clear and was filled with too many things happening.

After Jayson’s suggestions about focusing on less, I eliminated half of the narrative. I focused more on Heidi’s mental state and how the unfamiliar built environment of the Japanese city affected it. Nami then became a knowledgeable friend who, in order to help Heidi, explained how to take in the Japanese streetscape and find Zen rejuvenation within Ikebukuro. Even though the narrative still needs some work, it has been improved and is successful at bring continuity to the representation of the experience in Ikebukuro.

One of the important points made in the sample manga is about the vertical organization of Sunshine 60 Storey Street’s retail. To emphasize the vertical, I used the whole height of the page, but only used a narrow portion of the page’s width (Fig. 74). This only allows for one building or only a portion of a building to be the focus. However, the portion of a building better translates the areas vertical element. If I tried to show more than one building, the vertical element wouldn’t be as strongly enhanced. To continue a connection with this vertical aspect, I repeated this type of panel throughout the manga. Additionally, the vertical signs associated with the retail on each floor were turned into focal points in some of the other panels.



a) b) c)
 Figure 74: Panels (a), (b), and (c) all utilize the full length of page but focus only on one building façade to reinforce the vertical aspect of Ikebukuro.

I also made it a point to show the vertical journey of the characters to show pedestrian movement in this direction besides horizontal movement.

Sounds are extremely important to show in the manga because they are the essential part of the urban and architectural environment and they affect the perception of Ikebukuro's surroundings. They also serve as indicators of what type of activities are happening in a space. The light chirping of birds, soft mellow music, or the lack of audible noise can reinforce the serene nature of an area. The uncontrolled noise of a crowd and other conflicting noises can add to the feeling of anxiety if someone is lost or they feel overwhelmed by a space. Without these sounds the environment and atmosphere does not seem the same. On page 110, of the sample manga, I deal with the noise of a train; what can be heard outside and inside (Fig. 75b). The urban experience of the train would be totally different without the dominant "roar" of a train when it passes or the "klatta klatta" rhythmic noise heard by passengers (Fig. 75a).

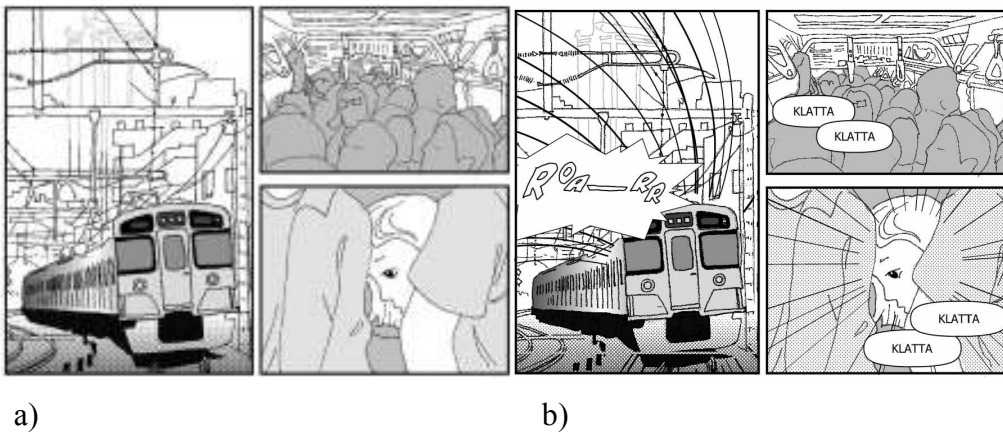


Figure 75: (a) The train sequence without sound effects and movement lines. (b) The train sequence with sound effects and movement lines.

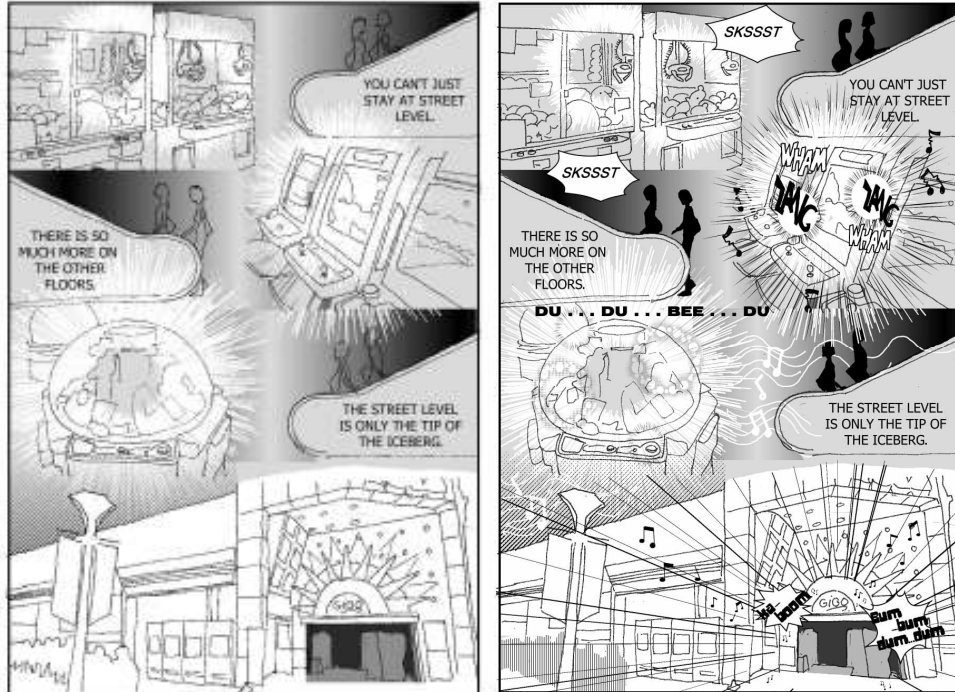
The same would go for the sounds on the street (Fig. 76) and the gaming building (Fig. 77).



a)

b)

Figure 76: (a) is the street scene without sound effects or announcement balloon. (b) is the street scene with sound effects and announcement balloon.



a)

b)

Figure 77: (a) is the gaming building scene without sound effects. (b) is the gaming building scene with sound effects.

Without sound, the urban and architectural environments aren't the same.

Like sound, smell is also an indicator of what types of activities occur in an area or what kind of restaurant may be nearby. Smells also stay in the memory of an experience, whether it is a pleasant or distasteful experience. When the restaurant store fronts were being shown in the sample manga, I displayed the possible food dishes they would serve to stimulate the audience's sense of smell. Since smell and taste are closely related when it comes to showing food, taste is also a sense that is stimulated here (see page 127). In the restaurant scenes, the drawings center on the food as the experience's focal point (see page 129-130) and taste is more directly addressed.

Through the process of creating the sample manga, I discovered there is a lot of planning and decision making up front. There is also more refining and redoing sketches over and over again. Simplification is a lot harder than it appears to be. Many people think that drawing simple lines instead of a realistic drawing is easier and less skill. I actually have found that to be the opposite. It was harder making the judgment calls and strategically deciding which lines to omit and which ones to keep. I found myself taking up too much time drawing unnecessary details. Then I would have to take up more time going back and deciding on which details to keep and which ones to ignore. Sometimes I would end up eliminating the drawing completely. If I had taken the time earlier to think about the simplification instead of rushing into a drawing, I wouldn't have wasted so much time drawing unwanted details. On the other hand, I was able to learn from drawing all the details and subtracting the unnecessary ones. It takes great skill, experience, and time to learn how to draw simplified cartoon drawings that hold the right meaning or expression, in order to, communicate what is in an artist's head. This drawing experience helped bring me to the realization of how complex it is to see the invisible to begin with, and then interpret it, in such a way, that someone else can see it in an architectural design. It has really made the aesthetic of wabi-sabi real to me.

My advice to those wanting to draw a manga focused on architecture is to generously use aspect-to-aspect panel transitions. If the production of the manga is taking too long, instead of eliminating pages, look to see where time can be saved, such as, simplifying the drawings or shortening the narrative. These last two components are not

as important when compared to the need of capturing a mood or atmosphere, in order to; enhance a reader's architectural experience. Second, limit the details to the architectural aspects that are the focus in the manga. One technique would be to simplify the cartooning of the characters to contrast with detailed architectural backgrounds creating the "masking" effect. This will actually save drawing time and bring clarity to what should be noticed, while stimulating the reader's multi-senses. Third, don't be afraid to cut out drawings that aren't working, even if a long time was spent on them. I had to cut many drawings out of my first attempt; however I was able to integrate or rework pieces of those drawings into my final manga. So, don't throw anything away because it might be useful later. Fourth, try to stay in the moment and enjoy the drawing process. It's amazing how a drawing can reflect the state of mind the artist is in while they are drawing. Fifth, don't be afraid to get feedback especially when it is from someone who has knowledge about manga or architecture. Lastly, don't give up. If it doesn't work the first time, try again; a person will only get better and faster.

5. Conclusion

Manga and anime have been and still are gaining popularity in the global arena. This fact points to a Japanese cartoon and comic audience which is also growing and who are familiar with its visual characteristics. In turn, this leads to the probability of having more clients and employees, within the architecture community, who are familiar with manga and anime. This will help clear the negative stereotype that cartoons are just for kids and the use of manga techniques and methodology in architectural practices will become more accepted. Manga would then have the opportunity to bridge the gap between clients' understanding and the representation of the built environment. It will also allow clients to more honestly see the environments, atmospheres, and meanings that architectural structures and spaces shape. Along with clients, architects will have a new method of looking at and seeing the built environment.

The methodology of manga is unique in its ability to enhance architectural representations in terms of the multi-sensory and space-time perception of architecture through characteristics of manga, such as narrative, portrayal of the invisible realm and

expression of spatial time in its panel arrangements. We have found this to be true by deconstructing manga to its fundamentals and looking at it in regards to other art forms and methods used to represent architecture.

Manga, like other comics, has a vocabulary and grammar made up of the balance between sequential word and picture. This helps clarify understanding in its narrative about the concepts being presented. The iconic images, in manga, also hold more meaning than photographs or realistic drawings, which allows the vocabulary of manga to be more visual with fewer words.

What makes manga different from Western comics is its more frequent use of the “masking” effect, aspect-to-aspect panel transitions, and moment-to-moment panel transitions. Manga are therefore longer in length to support the amount of pages needed for these features. In order to accommodate this length, manga makes use of minimalist drawing, black and white instead of color, and hyper-stylized symbols. All these features are what makes Manga unique to Western comic and are imbedded in the cultural notion of Zen or wabi-sabi.

All comics include a narrative and spatially produced time, which is important when representing architectures lived space and space-time. However, it is the “masking” effect, aspect-to-aspect panel transitions and moment-to-moment panel transitions that creates more potential to engage the viewer and invite them into the narrative. These components are also able to more easily immerse the viewer into a multi-sensory built environment. The “masking” effect is important to architecture because it allows the reader to connect with a more cartoony character, which is more concept. They can then step into a more realistically drawn environment that triggers the senses of sight, hearing, smell, taste, and touch. The aspect-to-aspect panel transition method is what holds the most power of creating a certain mood or atmosphere. This transition arranges fragments of a scene which makes a viewer work harder to use closure to bring continuity to the page. This in turn allows the viewer to contemplate on the scene, setting, and narrative and creates mood and atmosphere. Also it creates more viewer engagement and immersion into the built environment.

The current architectural representation methods of conventional drawing and writing, 3D architectural computer animation, virtual reality and film do not address all aspects of architecture, such as its multi-sensory characteristics, space-time, and need of narrative for lived space. Manga provides an all-encompassing medium that can effectively address each of these aspects

Looking back on what has led me to this investigation and conclusion, I can see what things were instrumental in leading me to this place. Steve Jobs once said in a commencement address to Stanford University graduates, “you can’t connect the dots looking forward; you can only connect them looking backwards. So you have to trust that the dots will somehow connect in your future. You have to trust in something—your gut, destiny, life, karma, whatever. This approach has never let me down, and it has made all the difference in my life.”⁵⁹ I too followed a gut feeling and ended up with so much more than I imagined. If I hadn’t taken that anime and manga class at the same time as my research methods class, I may have never made a connection between anime and architecture. If I hadn’t been overwhelmed by the Japanese city, I wouldn’t have understood the full potential of aspect-to-aspect panel transitions. It proved a way for me to organize and catalogue the chaos with which I was overwhelmed. If I hadn’t had my Practicum at Group 70 International, I wouldn’t have had Francis Oda encourage me to investigate how manga can be used in presentation to engage the client in dialogue with the architect. I also wouldn’t have tried to draw a mini manga for my final presentation for the firm. Therefore, I wouldn’t have changed my focus on anime to manga or tried to draw a sample manga. In turn, I wouldn’t understand the fundamentals of manga that have such a powerful connection to representing and observing the built environment.

Now looking to the future, I want to continue my investigation of anime and manga in its relationship to architecture. Since I understand the fundamentals of manga, I can more confidently look at anime and how it portrays the Japanese concept of space and cultural values. First, I plan to work on a manga that focuses on moment-to-moment panel transitions. I want to investigate what potential that particular transition has in representing the sequencing of architectural space. I am also planning to work on a

⁵⁹ Reyna L. DePonte, e-mail message forwarded to author of Steve Jobs Stanford commencement speech, October 25, 2011 3:50 PM.

manga that looks at the experience of one architectural building, since I have already focused on a larger urban context of Ikebukuro. I am also looking forward to trying this manga method out on a non-Japanese city or building. I believe this whole dissertation experience, including my trip to Japan and my Practicum experience, has started me on a journey to discover my potential in the architectural profession and has given me a unique perspective and specialty. This journey has also opened up my imagination to what the architectural profession can be and it is very exciting.

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Bibliography

- Arnheim, Rudolf. *The Dynamics of Architectural Form*. University of California Press, 1977.
- Barthes, Roland. *Empire of Signs*. Translated by Richard Howard. Farrar, Straus and Giroux, Inc., 1982.
- Bjarke Ingels Group. *Yes is More: An Archicomic on Architectural Evolution*. Taschen, 2010.
- Brenner, Robin E. *Understanding Manga and Anime*. Libraries Unlimited, 2007. ebook.
- Brown, Steven, ed. *Cinema Anime*. New York: Palgrave Macmillan, 2006. Ebrary Reader ebook.
- Burch, Noel. *To The Distant Observer: Form and meaning in the Japanese cinema*. Berkeley: University of California Press, 1979.
- CNN GO. "Rediscovering Ikebukuro, Tokyo's forgotten district." Turner Broadcasting system, Inc., January 24, 2011. Accessed February 14, 2012. <http://www.cnn.go.com/tokyo/shop/rediscovering-ikebukuro-034570>.
- Cavallaro, Dani. *Anime Intersections: Tradition and Innovation in Theme and Technique*. North Carolina: McFarland & Company, Inc., 2007.
- _____. *Anime and Memory: Aesthetic, Cultural and Thematic Perspectives*. North Carolina: McFarland & Company, Inc., 2009.
- _____. *Critical and Cultural Theory: Theme Variations*. The Athone Press, 2001. Ebrary Reader ebook.
- Chelsea, David. *Perspective For Comic Book Artists*. New York: Watson- Guptill Publications, 1997.
- Ching, Francis D.K. *Architecture: Form, Space, and Order*. 2nd Edition. John Wiley & Sons, Inc., 1996.
- Deleuze, Gilles. *Cinema 1: The Movement of Image*. University of Minnesota Press, 1986. Ebrary Reader ebook.
- _____. *Cinema 2: The Time-Image*. University of Minnesota Press, 1989. Ebrary Reader ebook.

- Galbraith, Patrick. *The Otaku Encyclopedia: An Insider's Guide to the subculture of Cool Japan*. Kodansha America LLC., 2009.
- Gravett, Paul. *Manga: 60 Years of Japanese Comics*. Collins Design, 2004.
- Hall, Edward. *The Hidden Dimension*. New York: Anchor Books, 1990.
- Hendry, Joy. *Wrapping Culture: Politeness, Presentation and Power in Japan and other Societies*. Oxford: Clarendon Press, 1993.
- Hiroki Azuma. *Otaku: Japan's Database Animals*. Translated by Jonathan Abel and Shion Kono. University of Minnesota Press, 2009. Ebrary Reader ebook.
- Hu, Tze-yue G. *Frames of Anime: Culture and Image-Building*. Hong Kong University Press, 2010.
- Ingulsrud, John E., and Kate Allen. *Reading Japan Cool: Patterns of Manga Literacy and Discourse*. Rowman & Littlefield Publishers Inc., 2009. Kindle edition.
- Japanese Architecture and Art Net Users System*. Accessed April 28, 2011.
<http://www.aisf.or.jp/~jaanus/>.
- Japan Visitor. "Tokyo Guide: Ikebukuro." Japan Tourist Info. 2000. Accessed on February 5, 2012, <http://www.japanvisitor.com/index.php?cID=430&pID=1792>.
- Junichiro Tanizaki. *In Praise of Shadows*. Translated by Thomas J. Harper Edward G. Seidensticker. Tuttle Publishing, 1977.
- Kisho Kurokawa. *Rediscovering Japanese Space*. New York and Tokyo: John Weatherhill, Inc., 1988.
- Koren, Leonard. *Wabi-Sabi for Artists, Designers, Poets & Philosophers*. California: Stone Bridge Press, 1994.
- Krause, Linda and Patrice Petro, eds. *Global Cities: Cinema, Architecture, and Urbanism in a Digital Age*. Rutgers University Press, 2003. Ebrary Reader ebook.
- Lamster, Mark. "Up, UP, and Away." *Architect: The Magazine of the American Institute of Architects*. July 2011.
- Lockard, William Kirby. *Design Drawing*. 2000 Edition. New York: W. W. Norton & Company, 2001.
- Lower, Lucy. EALL 325B/ASAN 325B: *Japanese Film: Art and History Beginnings to 1960*. class lecture. University of Hawaii at Manoa. Fall 2009.

- Lu, Alvin, ed. *The Art of Miyazaki's Spirited Away*. Viz Media, LLC., 2001.
- Lynch, Kevin. *The Image of the City*. The MIT Press, 1960.
- MacWilliams, Mark W. ed. *Japanese Visual Culture: Explorations in the World of Manga and Anime*. New York: M. E. Sharpe Armonk, 2008. Ebrary Reader ebook.
- McCarthy, Helen. *Hayao Miyazaki: Master of Japanese Animation*. Berkeley, CA: Stone Bridge Press, 1999.
- McCloud, Scott. *Understanding Comics: The Invisible Art*. Kitchen Sink Press Inc., 1993.
- McDonald, Keiko I. *Reading a Japanese Film: Cinema in Context*. University of Hawaii Press, 2006.
- _____. *Cinema East: A Critical Study of Major Japanese Films*. Fairleigh Dickinson University Press, 1983.
- McGinn, Colin. *Power of Movies: How screen and Mind Interact*. Knopf Publishing Group, 2005. Ebrary Reader ebook.
- McGray, Douglas. "Japan's Gross National Cool". *Foreign Policy*. Issue: May/June, 2002.
- Moeran, Eyal Ben-Air Brian and James Valentine. eds. *Unwrapping Japan Society and Culture in Anthropological Perspective*. Manchester University Press, 1990.
- Morton, William Scott. *Japan: it's history and culture*. McGraw - Hill, Inc., 2005.
- Napier, Susan J. *Anime: from Akira to Howl's Moving Castle*. Palgrave Macmillan, 2001. Ebrary Reader ebook.
- Nolletti, Jr. Arthur and David Desser. eds. *Reframing Japanese Cinema*. Indiana University Press, 1992.
- Nygren, Scott. *Time frames: Japanese Cinema and the Unfolding of History*. University of Minnesota Press, 2007. Ebrary Reader ebook.
- Pallasmaa, Juhani. *The Architecture of Image: Existential Space in Cinema*. 2nd Edition. Rakennustieto Publishing Helsinki, 2007.

- Polledri, Paolo, ed. *Shin Takamatsu*. Rizzoli, New York: San Francisco Museum of Modern Art, 1993.
- Power, Natsu Onoda. *God of Comics: Osamu Tezuka and The Creation of Post-World War II Manga*. Edited by Thomas Inge. University Press of Mississippi, 2009. Kindle Edition.
- Psarra, Sophia. *Architecture and Narrative: The formation of space and cultural meaning*. New York: Routledge, 2009.
- Rasmussen, Steen Eiler. *Experiencing Architecture*. Cambridge: The Massachusetts Institute of Technology Press, 1964.
- Reid, T. R. *Confucius Lives Next Door*. New York: Vintage Books, 2000.
- Richie, Donald. *A Hundred years of Japanese Film*. 1st Edition. New York: Kodansha America, 2001.
- _____. *Tokyo: a view of the city*. London: Reaktion Books, 1999.
- Rohlinger, Claire, Christine Sanpei, Kanoa Chung, Krystle Y. Imai, and Derek Tsutomi. "Redesign Life Here." Design Project Published in Janine Clifford and Patrick Onishi. *Exploring Hawaii's Transit Oriented Future*. Caroline Hoshi, Yu-Fung Benny Hui, Meng-Ling Erick Kuo, Christopher K. Parker, and Claire Rohlinger, eds. University of Hawaii at Manoa, 2008.
- Roth, Leland M. *Understanding Architecture: Its Elements, History, and Meaning*, 2nd Edition. Westview Press, 2007.
- Ruh, Brian. *Stray Dog of Anime: The Films of Mamoru Oshii*. New York: Palgrave Macmillan, 2004. Ebrary Reader ebook.
- Sarvimaki, Marja. ARCH 271: *World Architecture and Urbanism A*. lecture notes. University of Hawaii at Manoa School of Architecture. October 5, 2010.
- _____. "Layouts and Layers: Spatial Arrangements in Japan and Korea", *Sungkyun Journal of East Asian Studies*, Vol. 3, No. 2. Sungkyunkwan University, 2003.
- Sasagawa, Annamarie. "Tokyo's Crime Hotspots." *Tokyo Weekender*. March 2, 2012. Accessed April 14, 2012. <http://www.tokyoweekender.com/2012/03/tokyos-crime-hotspots/#>.
- Scott-Baron, Hayden. *Digital Manga Techniques*. Baron's Educational Series, inc., 2005.

Steele, James. "Minimalism." *Architecture Today*. (London, 2001): Accessed May 5, 2011. <http://www.zoulias.com/articles/article005.html>

Studio Ghibli. *The Art of Miyazaki's Spirited Away*. 2008.

Tadao Sato. *Currents in Japanese Cinema*. Translated by Gregory Barrett. New York : Kodansha International/USA, 1982.

Thomas, Maureen, and Francois Penz, eds. *Architectures of Illusion: From Motion Pictures to Navigable Interaction*. Intellect Books, 2003. Ebrary Reader ebook.

Tomoko Otake. "Blurring the Boundaries". *The Japanese Times Online*. May 11, 2009. <http://search.japantimes.co.jp/cgi-bin/fl20090510x1.html>.

Toshiba Official Website. Updated January 15, 2009. Accessed March 5, 2012 <http://www15.j-server.com/LUCTOSHIMA/ns/tl.cgi/http%3a/www.city.toshima.lg.jp/kusei/profile/000782.html?SLANG=ja&TLANG=en&XMODE=0&XPARAM=q,&XCHARSET=UTF-8&XPORG=,>

Vitta, Maurizio, ed. *Shin Takamatsu: Architecture and nothingness*. Italy: l'Arca Edizioni, 1996.

Yoshinobu Ashihara. *Hidden Order Tokyo Through the Twentieth Century*. Translated by Lynne E. Riggs. Kodansha International Ltd., 1989.

Yukio Futagawa, ed. "Shin Takamatsu". *GA Architect*, no.9. Tokyo: A.D.A Edita, 1990.

Manga

Mitsuru Adachi. *Cross Game*. Vol. 1. Shonen Sunday Edition. Translated by Ralph Yamada and Lilian Olsen. San Francisco, California: Viz Media, LLC., 2005.

Nihei Tsutomu. *Blame!*. Translated by Stephen Paul. Los Angeles, CA: Tokyopop, Inc, 2005.

Osamu Tezuka. *Ode to Kirihito*. Translated by Camillia Nieh Manga. New York: Vertical, 2006.

_____. *Buddha Kapilavastu*. Vol. 1. New York: Vertical Inc., 2006.

_____. *Phoenix Karma*. Translated by Jared Cook, Shinji Sakamoto, and Frederik L. Schodt. New York: Vertical Inc., 2006.

- Qu, Yingge and M.A. Schnabel. "Drawing Architecture using Manga Techniques." The Chinese University of Hong Kong. Accessed October 10, 2011. <http://www.arch.cuhk.edu.hk/server1/staff1/marcaurel/publications/manga.pdf>.
- Qu, Yingge, Wai-Man Pang, Tien-Tsin Wong, Pheng-Ann Heng. "Richness-Preserving Manga Screening." The Chinese University of Hong Kong. Accessed November 4, 2011. <http://www.cse.cuhk.edu.hk/~ttwong/papers/screen/screen.html>.
- QuinRose X Soumei Hoshino. *Alice in the Country of Hearts*. Vol. 2. Translated by Beni Axia Conrad. Los Angeles: TOKYOPOP Inc., 2009.
- Shirow Masamune. *The Ghost in the Shell*. Vol. 1. Translated by Frederik L. Schodt and Toren Smith. New York: Kodansha Comics, 2009.
- Tentsu Kariya and Akira Hanasaki. *Oishinbo A la Carte: Japanese Cuisine*. Translated by Tetsuichio Miyaki. San Francisco, California: Viz Media, LLC., 2006.
- _____. *Oishinbo A la Carte: Ramen & Gyoza*. Translated by Tetsuichio Miyaki. San Francisco, California: Viz Media, LLC., 2005.
- Tite Kubo. *Bleach*. Vol. 17. Tokyo: SHUEISHA Inc., 2001.
- Yukito Kishiro. *Battle Angel Alita: Last Order*. Vol. 1. Tokyo: SHUEISHA Inc., 2000.
- _____. *Battle Angel Alita: Last Order*. Vol. 1. Translated by Lillian Olsan. San Francisco: Viz Media, 2007.
- Film**
- Akira*. DVD. Directed by Katsuhiro Otomo. Akira Committee/Kodansha, 2002.
- Appleseed*. DVD. Directed by Shinji Aramaki. United States: Geneon, 2005.
- Appleseed 2: Ex Machina*. DVD. Directed by Shinji Aramaki. United States: Warner Home Video/Madman Entertainment, 2008.
- Barefoot Gen*. DVD. Directed by Mamoru Shinzaki. Geneon Entertainment, 2006.
- Cowboy Bebop*. DVD. Directed by Shinichiro Watanabe and Yoshiyuki Takei. Design Columbia Tri-Star Home Entertainment, and Destination Films, 2001.
- Durarara!!*. online streaming. Directed by Takahiro Omori. Aniplex, 2010. <http://www.hulu.com/durarara>.

Ghost in the Shell. DVD. Directed by Mamoru Oshii. Manga Video, 2005.

Ghost In the Shell 2: Innocence. DVD. Directed by Mamoru Oshii. United States: Go Fish Pictures/Bandai Entertainment, 2004.

Grave of the Fireflies. 1988. DVD. Directed by Isao Takahata. Toho, 2002.

Howl's Moving Castle. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 2004.

Ikiru. DVD. Directed by Akira Kurosawa. Toho Co. 1952.

Kiki's Delivery Service. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 1989.

My Neighbor Totoro. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 1988.

Nausicaa of the Valley of the Winds. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 1984.

Oshima Nagisa. 1994-1995. *Nagisa Oshima's 100 years of Japanese Cinema*. VHS.

Princess Mononoke. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 1997.

Rashomon. DVD. Directed by Akira Kurosawa. Daiei Co., 1950.

Revolutionary Girl Utena: The Movie. DVD. Directed by Kunihiro Ikuhara. Central Park Media, 1999.

Spirited Away. DVD. Directed by Hayao Miyazaki. Studio Ghibli, 2001.

The Japanese Version. VHS. Directed by Andrew Kolker and Louis Alvarez. Center for New American Media, 1991.

Tokyo: the neon city. DVD. Directed by Fred J. Gattys and Wilson R. Tuiz. Films Media Group, 2005.

Whisper of the Heart. DVD. Directed by Yoshifumi Kondō. Studio Ghibli, 1995.