Refracted Visions: Transmedia Storytelling in Japanese Games

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Introduction: Approaches to transmedia storytelling

We tell ourselves stories to define identity, keep a legacy, comfort the troubled, solve problems or teach lessons. Today, I want to talk about storytelling in Japanese videogames. I'm going to throw out a few different ways of viewing "transmedia" storytelling, what that means to me and how it may or may not relate to the "media mix." I'll give some examples of grand transmedia stories in modern Japan and rethink some ways in which platform, art and genre have been used to create stories that reflect, and reflect on, contemporary concerns of Japanese society.

Modern Japanese transmedia storytelling is often described as a media mix, a conglomeration of manga, anime, film, literature, poetry, pop music, light novels, videogames and other narrative forms, as well as the echoes of narrative and characterization found in the endless layers of merchandising—figurines, plush toys, lunch boxes, backpacks, clothing, whatever you can possibly purchase with an image or logo on it (Steinberg 2012; Picard and Pelletier-Gagnon 2015). In short, modern Japan's stories are told across many different kinds of art-based and consumer-based media. We can view this as a multilayered yet unified narrative that achieves greater depth and complexity with every additional item. We can also consider it a splintered, refracted vision of modern Japan.

I think both ways of viewing Japanese media make sense, as these media show the complex and disjointed nature of stories told about Japan in the twentieth century. When you look at the massive rifts in Japanese society and historical understanding—from the annexation of the colonies to the 1923 Great Kanto Earthquake, the Asia-Pacific War, the Occupation, rebuilding and the bubble economy through to the "lost decade" of the 1990s—the stories told about Japanese history, society and culture demand a refracted, multifaceted view. This is where the title of my talk comes from—the refracted visions of modern Japan that we find in its different artistic media, including videogames and the game texts themselves.

Of course, when most scholars think of "transmedia," Henry Jenkins' definition comes to mind, with transmedia storytelling listed in the glossary to Convergence Culture as: "Stories that unfold across multiple media platforms, with each medium making distinctive contributions to our understanding of the world, a more integrated approach to franchise development than models based on urtexts and ancillary products" (2006: 293). This is a useful, stable definition that helps us think through the connections between a text and its many iterations in different forms. This model takes the text and works outwards, seeing how many different media and consumer objects are linked together by a common set of characters, world-building and story.

I am interested in seeing what happens when we turn inwards on a title, looking further into how different media are used within the same text. Can a single text be considered "transmedia"? When we are talking about videogames, I believe that this is the case. In this essay, I want to explore

ways we can use the term "transmedia" profitably in better understanding games themselves, as well as how a set of games could function as a common unit addressing a unified idea. This means an expansion of the term "transmedia" to mean some new things that are different from the singular Henry Jenkins model. What has been the norm for a "transmedia" reading of texts has certainly been useful and allowed us better understandings of how media artifacts work together. But I would like to propose some other useful ways of viewing media that help us better understand videogames—as singular texts, in relation to each other, and in relation to society.

Starting at the absolute beginning, some possible interpretation of "trans" includes the idea of "across, connecting, or through." The term "trans" also connotes fluidity; it points to what is being carried across or through and asks how something connects across different mediums. In her readings of "trans-national" East Asian literature, Karen Thornber (2009) describes a "literary contact space" where writers from Japan, Korea, China and other Asian locales connect through shared ideas and ideologies, appropriating and borrowing each other's rhetoric, symbols and cultural assumptions. Angela Yiu (2016) similarly points to trans-national literatures occurring when non-native speakers of a language create artistic works through the medium of another language, with the resulting "cross-border" or "post-national" literature transcending national boundaries. So, "trans" for me implies the possibility of new creation via boundary crossing and connectivity.

Next, examining "media" closely, it indicates art forms, genres and categories, as well as our need to classify everything into different kinds of media. When considering videogames, platforms become important, and the hardware and software that are used to create the art form. James Newman (2017) highlights the importance of considering different versions of games, as different ports and platforms in different regions in the world can affect the gameplay experience or how players encounter the game. Considering the "medium" for videogames, it can function as the vessel for a story and the mode of storytelling, asking these questions: what exactly is the medium, and by what means (how) is the story told?

Looking at this as a whole, we can view "transmedia" as meaning "across and through different mediums and art forms."

Transmedia storytelling in Japanese videogames

When we consider storytelling in Japanese games, we think of big, hundred-hour, long narrative games like Final Fantasy, Metal Gear Solid, Legend of Zelda—scripted adventures with strategy and deep characterization, psychological development and learning on the part of both character and player. These are hallmarks of the JRPG, found in games like Kingdom Hearts, Dragon Quest and the Tales series. It also applies to more action-oriented role-play like Dark Souls and Castlevania. Some game series, including the Final Fantasy stories, comprise discrete individual episodes with connecting elements. Some action-adventure narratives, including Legend of Zelda or Metal Gear Solid, maintain the same main character for each game and often feature overarching enemies and allies that reappear in different forms.

One of the most important things about these narratives is that they have developed along with the hardware capabilities. For example, when Final Fantasy shifted from the SNES to the PlayStation console in 1997, we saw a much larger game structure, with Final Fantasy VII using the memory of CD-ROM technology rather than cartridges. The narrative itself is extremely long, using full-motion video and 3D computer graphics for the first time in the series. When Metal Gear shifted from 2D on the MSX console to 3D on the PlayStation in 1998, Kojima Hideo used the PlayStation memory storage in a completely different way to create a character with psychic powers. The villain, Psycho Mantis, seemingly reads players' minds and comments on the games they have played recently, reading their actions from recent saves and loads in the console memory. Moving between platforms can give new ways of telling a story even in the same series. But what else could be "transmedia" about this?

We can also think of "transmedia" as meaning "across art forms." Advances in console technology also made media experimentation possible in terms of the different kinds of art forms that could be used in one game text. If we look closer at the two examples I just mentioned, FFVII innovatively used different kinds of artwork in the same frame or scene, most notably using pre-rendered backgrounds with 3D character models. For example, the scene where Cloud Strife follows Aeris into the Ancient Forest has a beautiful 2D watercolor painting in the background—this reminds me of Miyazaki Hayao's lush natural backgrounds in Nausicaä of the Valley of the Wind or

Princess Mononoke. The 3D character figure with polygon features was superimposed on top of that.

Another good example with an urban environment is seen in the opening sequences in Midgar's train station. The innovative mix of 2D with 3D art design is also evident when the character is moving around on the World Map, although hills also appear to have contours in this environment. On the other hand, the characters are much more detailed in the battle scenes, appearing taller and with a more realistic human look. An extra level of detail again is provided in full-motion video (FMV) sequences. Here we have a still from a climactic scene in the narrative, where you can see the face much more clearly. It should be remembered that this was all very new in 1997—20 years ago! My main idea behind giving this example is to convey that the story of Final Fantasy VII is told "across different art forms."

Similarly, Metal Gear Solid, released one year later in 1998, also used 2D backgrounds with 3D polygon character figures. Kojima was able to achieve a much more realistic look with Snake than Square did with Cloud Strife. Like FFVII, Metal Gear Solid had FMV cut-scenes, but Kojima did something new and unexpected by introducing documentary footage of nuclear missiles and waste facilities. The footage was inter-cut in and between narrative video scenes, so this sequence appears in the middle of Snake's conversation with Kenneth Baker, head of ArmsTech. During this video sequence, Baker's voice continues the conversation, so you can hear him talking while the film is playing. Then it cuts back to the in-game scenario to show Snake's reaction. Another good example is the scene where Snake meets the scientist Hal Emmerich. The scene was intercut with flashbacks of the Hiroshima atomic bombing based on Hal's memory, depicting the stories he had heard from his father and grandfather. Again, the video plays with Hal's voice-over.

These two games showed a high degree of experimentation in their media forms, which, I think, contributed to the impact of the storytelling in both. I also think it's significant that both Cloud and Snake have fractured identities—their psychological development includes self-awakening and discovery that they have been subjects of scientific experimentation. The fractured and multi-faceted art media of the games, in other words, add a layer of meaning to the fractured identity of the main character.

"Transmedia" can also mean movement and fluidity between and across space. By this, I'm thinking of games like Paper Mario, which play with spatiality and dimension, switching fluidly between 2D and 3D space. I'm also thinking of games that depict real-world spaces in extremely realistic terms, like Tokyo in Persona 5. Many blogs and Twitter streams online have considered the equivalence of environmental depictions in the game-world and real-world scenes (for example, a real-world Shibuya bar depicted with extreme fidelity and realism in the game space) (Ashcraft 2017). It has become a trend to take screenshots of the in-game scenes and juxtapose them closely with real-world scenes, with fans and game critics using this juxtaposition to highlight just how "real" the game space looks and feels.

This kind of reality appeared much earlier in the Yokohama that appears in Shenmue. If you follow bloggers like Robert Lewis (2014), you can actually go on "pilgrimages" to important sites from the Shenmue narrative, comparing locations from the game to their real life counterparts.

There are also augmented reality games, which play with connections between "real-world" and "game-world" spaces, with the events and development of the story happening somewhere in between. Here, of course, I am thinking of Pokémon GO, which was very popular at Replaying Japan in Leipzig. I think such games have great potential to make us think and rethink our relationship with both real-world space and game space and where exactly the player is situated with respect to these. In all these games, the player encounters a transmedia experience, where the "medium" is space itself.

Transmedia in videogame terms could also mean movement across the creative role of "author" in the game. Some games have a different balance or ratio of developer and player. The developer makes the scaffolding and tools, and the player makes their own course of action. The most obvious example of this would be Super Mario Maker, where the player makes their own obstacle course with often-disastrous results, turning the Mario character into a figure of superhuman persistence, impossible self-destruction and limitless renewal (Newman 2016). We also have games with character customization, notably the MMORPG genre, where the choice of character can affect the kind of story you experience.

Of course, games in the simulation genre allow the

player a great deal of customization and decision-making. Simulation games like Harvest Moon (1996) allow you to choose your own actions, like planting a garden and taking the harvest to market. Animal Crossing (2001) was highly customizable in terms of the character's name, gender, hairstyle, clothing, house design and so on.

While Japanese role-playing games have been criticized for strict limitations on character customization or dialogue choices, I think this is a narrow view. Certainly, some games are so linear that playing the game is more like turning pages than acting as an independent agent. This brings to mind the "visual novel," although, in Japan, "visual novels" are divided into NVL (indicating a more linear "novel") and AVG or ADV (indicating "adventure"), which incorporate more puzzles and player problem-solving. Player choice is very important in many of these games. The genius of Phoenix Wright: Ace Attorney was the importance of the player's actions, not only, for instance, in selecting the dialogue options that would allow a courtroom interrogation to go well but also in pointing out the contradictions between testimony and evidence. Designer Takumi Shu said it was important for the player to feel agency in the game since the story was linear (Castle 2014). Dating games like Tokimeki Memorial and other kinds of role-playing games, on the other hand, allow the player to replay the game to experience different story endings. In games like Catherine, replaying different choices in the dialogue trees allows the player to access different endings and different understandings of the game world.

Linearity and storytelling in Japanese games

So far, I have mentioned games that have a fairly accessible story. Some are incredibly difficult and some need to be replayed for the full picture, but in general, the story develops from beginning to end, with one or many different outcomes. All games require a certain level of skill to get through the story, with what Espen Aarseth (1997) calls "non-trivial effort" on the part of the player. A certain level of game literacy is needed even for the simplest games. The fact that Mario can only progress by moving to the right of the first screen, for example, must be learned and is not entirely intuitive. But, in the games I have mentioned above, the story develops in a progression forwards until you reach the end(s), and it is game over.

But, another genre of games exists, where the story is hidden, inaccessible, and not linear in any way. For this reason, people don't usually think of these games as having a story, and scholars such as Janet Murray (1997: 51) and Barry Atkins (2003: 23) have criticized them for their lack of narrative. I'm talking about fighting games. So where is the story, and how do you get it?

In classic arcade fighting games, you get a character select screen with up to 30 different characters to choose from, although early games had about ten characters. Battles increased in difficulty, and often, you had to win ten battles in a row to get rewards. Usually, the reward was seeing the "ending" for that particular character. For example, Siegfried's ending from Soul Edge includes a picture of him holding a glowing sword with accompanying text: "Alas, no more battles need be waged. Soul Edge now lay in front of him. This warrior, this armor, this sword, may finally rest. But at such a cost…." In the character ending, the player also finds out some of the characters' backstory and reasons for fighting. Until you win with a particular character, you often have no idea about their motivation, their psychology, or origins. The revelation of the story in these games depends almost completely on player skill.

As I mentioned above, this applies to all games, as you can't progress if you can't get past obstacles in your path, but fighting games demand a very high level of skill to acquire even a small part of the overall narrative. You get the story piece by piece—some for this character, some for that character. The fun of the game is putting the puzzle pieces together to find out the overarching narrative of this particular world. In a long-running series like Soul Calibur, there are also 17 years of narrative development from Soul Edge (in 1995) to SoulCalibur V (released in 2012). So you have to figure out not only what is happening in the relationships between characters in a single game but also what has happened to those relationships in the intervening years between games, as well as each character's development over time. In terms of narrative tension, this strategy is highly successful, but it can be months or years before a player gets the full picture of what is really happening in the game's story.

Some advantages of this diffuse narrative mode include the fact that the player can not only see cut-scenes depicting a battle from two completely different perspectives but also actually play and experience both sides of that battle. The player also gets a feel for how the broader story of a whole civilization plays out in the smaller stories of individuals, experiencing the narrative on both micro- and macro-levels.

The player sees how representatives of different nationalities are depicted as fighting for different values and objectives, which betrays the prejudices and assumptions of the game developers. A very rich picture and gameplay experience can thus emerge.

Compared to a genre like the JRPG, both story and character function very differently in fighting games. Player choice starts with selecting character and mode of play, before any fighting or narrative development takes place (further discussion in Hutchinson 2007 and 2015). I've noticed that in the Game Studies scholarship, fighting games are often excluded from discussion, as if they don't exist. But, in a medium where visual representation is valued over psychological character development, and the mode or medium of storytelling is fractured and non-linear, this can tell us a lot about how media can be employed to tell engaging and complex stories in unexpected ways.

Considering all of this, there are many ways to view a single game text as a "transmedia" cultural artifact. The "transmedia" aspect of game texts characterizes not only series and franchises that have continued for years but also singular videogame texts that use space, art and narrative structures in interesting and innovative storytelling. But, what are the stories about? When we talk about "transmedia storytelling," it is necessary not only to look at how the stories are told but also what they are telling. Then we can ask, "What is it about this particular story that demands or leads to a 'transmedia' approach in telling it?"

Putting all of these games, genres and stories together, we see a wide range of artists and writers working in and across different genres and categories of games to reflect, and reflect on, Japanese contemporary society and its concerns. Taking a cultural reading across genres, we can see various concerns and anxieties leap out as consistent topics of Japanese videogame stories (what we could call videogame discourse): war and war memory, colonialism and the colonial legacy of the Japanese Empire, nuclear power (used for energy and weapons), bioethics and bioengineering, social breakdown and the mission to define the Japanese "Self" (reifying Japanese identity, culture and history). We can pick any one of these concerns and track them across different mediums, platforms and genres in the Japanese videogame industry. This interpretation of "transmedia storytelling" points to a nation's understanding of itself, told in various kinds of stories across various kinds of games.

For example, last year at Replaying Japan, I talked about Japanese war games across various platforms and genres—shooter arcade games like 1942, PC strategy games like Nobunaga's Ambition, online card games like Kantai Collection, console games like the tactical espionage of Metal Gear Solid and real-time strategy in Kessen (Hutchinson 2016). Putting them together reveals a serious reflection on Japan's role in the war and how Japanese people imagine and position themselves with respect to the war. Another example I would like to consider here is the issue of bioethics in modern Japan. We can look at the following games as a set: Final Fantasy VI and VII, Metal Gear Solid, Tekken and Resident Evil. All of these games and franchises represent very different genres and different kinds of gameplay. But, they all share a fear of technology and intense anxiety over genetic manipulation. I'd like to overview each one briefly to show what they are about and what kind of bioethics are involved.

Transmedia reflections: Bioethics in Japanese videogames

Final Fantasy VI is full of genetic experiments, which are integral to the main plot. The villain, Kefka, spends most of his time hunting magical creatures called Espers, using them to extract power. Here we see four Espers trapped in big glass jars inside Kefka's Magitek research facility. Kefka extracts Magic from these living beings, and turns it into weapons through the invention of Magitek Armour, a wearable suit that emits a powerful blast of light-energy from the chest. In this way, the ruler Emperor Gestahl is able to create an "invincible army" of Magitek soldiers.

At the center of all this is the character Terra, who is half human and half Esper. Kidnapped as a child, Terra is raised as an elite Magitek soldier. Kefka forces her to wear a slave crown to subdue her thought process and sends her into battle in Magitek Armour. The centrality of Terra's experience to the narrative is apparent in the fact that the logo for FFVI depicts Terra riding on a Magitek conveyance. Here, the Magitek Armour looks more alive than mechanical, highlighting the biological nature of the weapon created by sacrificing all those Espers in the glass jars.

A recurring character in the Final Fantasy series is Cid, usually an engineer or a scientist of some kind. In this game, he appears as the evil scientist Cid Del Norte Marquez. He controls the power of Magic and bestows it on village children as an experiment on what Magic can do. It's

revealed during the game that the villain Kefka himself was a failed Magitek experiment. The effort of trying to meld Kefka's personality with the Magitek Armour snapped his mind. In these ways, the game can be seen as exploring the awful results of using living beings as soldiers and biological weapons.

Final Fantasy VII deals with similar bioengineering themes. We see the main character Cloud Strife on the floor with his friend Zack, who is helping him up after they have escaped from glowing glass tanks in the basement of the Shinra mansion. Like Kefka's Magitek factory, the Shinra mansion is a laboratory for growing super-soldiers, infusing them with Mako, which acts very much like nuclear material. This process gives SOLDIERS a bright blue glow to the eyes. Cloud does not complete the process but exhibits the same blue eyes and goes through the whole game confused about whether or not he is a member of the elite fighting squad. This also confuses the player and leads to high narrative tension and deep immersion in the game-world. Furthermore, the evil scientist Professor Hojo has also experimented on other people, such as Vincent Valentine, an optional character who the player can find in the Shinra mansion basement by following a hidden note.

While the question of bioengineering is not as central in Final Fantasy VII as in Final Fantasy VI, it is significant that the game only has one main playable character. FFVI has up to 14 playable characters, so you do not have to play as Terra or even have her in your party. In contrast, in FFVII you have to play as Cloud and suffer his identity crisis with him. At one point, Cloud suffers Mako poisoning, which puts him in a coma, so it is necessary to play as other characters. This increases the player's concern for Cloud, heightening the narrative tension. In this way, the question of bioengineering is closely entwined with character formation and player-character identification—important aspects of the gameplay experience.

The Metal Gear Solid series is probably the most obvious narrative about bioethics in the history of videogames. The story of Metal Gear Solid has several unimaginable plot twists and turns, even if you have played the game; it's hard to keep track of who is a clone of whom, and how many different kinds of experiments have been run on how many people. The Metal Gear series has cloned super-soldiers, human weapons, people with mechanical exoskeletons, people whose blood has been replaced with liquid plastic, nano-viruses, and people being

kept in suspended animation so their cells can be harvested and copied—a human surrogate mother to a clone army. All of this is paid for by the military-industrial complex. One of the main genetic experiments of the series is the program known as "Les Enfants Terribles," where children are grown from cells taken from the world's most powerful soldier, Big Boss. Many books could be written about bioethics in Metal Gear Solid, so I will stop here. But, this game, more than any other, explores the various aspects of bioengineering and the military from every possible angle.

Unlike the other games I'm analyzing here, Tekken is a fighting game with a diffuse narrative structure. One of the characters who becomes more important after Tekken 4 is Jin Kazama. He carries the "devil gene," inherited from his grandmother Kazumi via his father Kazuya. In Japanese, it's called Devil's Blood (デビルの血), Devil Factor (デビルの因子 inshi) or Devil's Power (デビルの力). It's never clearly explained exactly what this "Devil Gene" is or where it originally came from. But, one thing is for sure—the Mishima Zaibatsu and G-Corporation both want its power. The G-Corporation manipulates the devil gene in cellular experiments aimed at creating stronger human hybrids. Part of this mission is known as the "GENOCELL program." G-corporation has bioengineering facilities in Nepal and Nebraska, where various characters are taken through the game to serve as subjects for genetic experimentation.

The effect of the "Devil Gene" is clearly seen in depictions of Jin Kazama. Normally, he looks like the typical fighter found in games of this genre, with a fierce aspect to his face and hyper-muscular body. When the devil gene switches on, Jin's face remains the same (if more fierce), but his head sprouts horns, large black wings appear on his back, and the irises of his eyes turn yellow. The change is directly reflected in gameplay dynamics, since Jin has different attacks in battle when the devil gene is activated. For the player, playing as Jin means memorizing not one but two sets of character moves. The extra challenge is rewarded by Jin's enhanced battle statistics. In this way, the bioengineering project directly affects Jin's abilities and, therefore, the player's own abilities and skills. This is one of the most direct ways in which a fighting game can translate game thematic into game mechanics.

Likewise, it should be noted that Metal Gear Solid players benefit greatly from Snake's enhanced biological features, as increased stealth and fighting abilities allow

smooth progress through the game-world. Similarly, Terra in Final Fantasy VI is able to destroy enemies easily when battle scenes are activated, gaining higher HP (hit points or health points) than the rest of her party. Cloud alone is physically damaged by his experience in the Mako tanks. While all these characters bear mental scars from their physical enhancement and scientific experimentation on their bodies, they are able to perform at higher levels than other characters in the game-world. Cloud spends much of his time as quite weak, physically and mentally, in contrast to his clone enemy Sephiroth. Cloud is only able to accept and understand his past at the end of the game—after player progression in the game has gained him a high HP and powerful abilities. In this example, player skill, narrative progression and character abilities develop in sync, creating a strong impact when Cloud is finally able to overcome his fears, take charge of the party and defeat his enemy.

Lastly, I would like to consider Resident Evil. This game series is a different genre, one of the earliest survival horror games from Japan. The original title "BIO HAZARD" indicates the biological concerns of the game narrative. In this game, the Umbrella Corporation is a pharmaceutical company, but it is also a secret genetic engineering enterprise. We have more corporate bioengineering to create the ultimate bio-weapon, which, in this game, is called Tyrant. Of course, there is a huge disaster resulting in the release of biological mutagens known as the T-virus. When mutated cells arise in a living organism, this is called an "infection"—the biohazard of the title. This game is interesting because it looks at both humans and animal infections and how pathogens pass between species. In the end, the only solution is atomic destruction, and Raccoon City is obliterated.

Taking these games as a set, we see many commonalities between them. All include corporate bioengineering with government collusion. All games feature the creation of a super-soldier and/or bio-weapons. The dead are used for their cells and genetic material (Big Boss in Metal Gear Solid; Kazuya in Tekken), and scientific experiments are run on live subjects (Cloud and Terra) against their will. The games also feature mad scientists; William Birkin, the scientist from Resident Evil 2, is horrifically mutated by his own genetic experiments (which is probably a fitting end). Other villains and scientists in these games are revealed to be horrifically mutated beings; Kefka and Hojo mutate into several different forms in their final battles. This game dynamic was a feature of Final Fantasy and other games like

Dragon Quest from the very early days of the series, but here the game dynamic serves a clear narrative purpose. In these examples, we see a judgment and bias against the scientist, and the narratives, set against the background of military bioengineering, are generally negative.

Of all the scientists in these games, Hal Emmerich from Metal Gear Solid is the only one portrayed in a sympathetic light, but he is not involved in genetics. He feels extreme guilt and remorse about creating Metal Gear and helps to destroy the weapon he inadvertently created. On the other hand, the geneticist Dr. Naomi Hunter is seen negatively. Specializing in gene-based therapy, she is the one who invented the FOXDIE virus and the nanotechnologies used in the special military operations. I think this is an interesting contrast.

It is useful to note here that one of the main differences between the Final Fantasy games and the others is that these are discrete narratives, which are not connected to each other directly. But, Metal Gear Solid, Tekken and Resident Evil are all sprawling narratives with 7 or 8 games in each series, enabling a much deeper "shadow narrative" of underground collaborations between corporations, science and government. These narratives are also deeply concerned with ties to the US government and worldwide conspiracy theories. The anxiety is all-encompassing, including not only bioethics but nuclear energy, terrorism, capital monopolies and corruption at all levels of society, industry and the military.

Contextual convergence and transmedia discourse

Once I started thinking about bioethics in Japanese games, it surprised me just how much of it appears in games of the mid-1990s. When you look at the release dates of the games I've been talking about, they all converge around the year 1996. This was the year Dolly the Sheep was cloned, sparking a great deal of discussion over bioengineering and cloning worldwide. Some saw it as the culmination of research that had been intensifying through the 1990s, a miracle of human creation. Others considered it unethical, as humans should not be tampering with the natural world. Dolly's health was followed obsessively in the media, and when she was not 100% healthy, many saw this as proof that bioengineering was unethical and immoral.

In Japan and other Asian countries, this anxiety was compounded by the Buddhist conviction that a person's body should remain whole and untampered with, both in life and after death (Namihara 1997). Organ donation in Japan is historically very low compared to Western countries (Hoshino 1997). Embryo cloning was banned in Japan in 2000. This was big news around the world (see for example CBS News 2000). This ban affected things like stem cell research, which was also big news in the late 1990s and early 2000s. Japanese government discussion of stem cell research continued through the next ten years and was generally criticized as being very slow to come to any decisions (see Sleeboom-Faulkner 2014). These days, Japan leads the world in stem cell research, but it was a different matter in the 1990s.

A more detailed law on "human cloning and similar techniques" in 2001 banned the transfer of embryos, human or animal, which affected people seeking assisted reproductive technology (ART). So, in Japan, the regulations on IVF and type of donor sperm and egg used are extremely strict. Apart from cloning, other ART techniques are voluntarily regulated by the Japan Society of Obstetrics and Gynecology. Surrogacy is still a very difficult problem in Japan since the legal mother of a child is whoever has carried that child to term. The anxiety surrounding this issue is shown very clearly through the character EVA in Metal Gear Solid—all the "enfants terribles" are actually products of a somatic cell nuclear transfer procedure and surrogacy. Following this, the Cartagena Act of 2003 also restricted genetically modified organisms (or GMOs). No GMO crops are grown in Japan for commercial purposes. All these laws in the early 2000s may be seen as emerging from the intense discussion of bioengineering and bioethics in the late 1990s.

As we've seen, the particular games I've examined here all converge on the same point, revolving around the year 1996. They were developed during a time of heightened interest in issues of cloning, bioengineering and uses of human genetic material. These issues were debated on television and in the newspapers, in journals and magazines and in the popular fictions of manga, literature, anime and videogames. This is what makes a "discourse"—various texts across different genres and narrative modes, coming together to reflect on and problematize a common subject. In other words, the story of Japan's anxiety over bioethics is conveyed to us in multiple ways, through multiple media, multiple art forms and multiple modes of storytelling and character creation. All these games give us different kinds of authorial roles, experimental art and narrative modes, whether linear or branching, easily accessible or horrendously difficult, and discrete individual stories or sprawling conspiracies. This is why I look at these games and think of them as a transmedia meditations on a particular problem.

Conclusions

In conclusion, I hope to have demonstrated that complex storytelling exists in Japanese videogames beyond the JRPG— across generations of platforms and hardware, across art media and across genre. I have put forward a couple of new ways of thinking about "transmedia" storytelling, both within a single game text and across a number of game texts from different genres and narrative structures. I hope to have shown that these ways of thinking about "transmedia storytelling" can give us a broader picture of what is going on in Japanese games as artistic products reflecting any particular time and space. Games give us a vision of their social, cultural and historical context. This vision is conveyed to us "across and through" different platforms, genres and generations of hardware; "across and through" different uses of art, space and dimension; and "across and through" different modes of narrative access, character development and world-building. It's also a refracted vision, as required by the multifaceted and complex nature of historical consciousness in modern Japan. The "transmedia" stories of Japanese games are multi-layered and disjointed, like Japan's own history. To understand Japan's twentieth century, perhaps the refracted vision of videogames is not only useful but also necessary.

Works cited

Aarseth, Espen J. (1997) Cybertext—Perspectives on Ergodic Literature, Baltimore: Johns Hopkins University Press.

Ashcraft, Brian (2017) "Persona 5's In-Game Locations Compared To The Real World," Kotaku (original post 27 September 2016; updated 10 April 2017) https://kotaku.com/persona-5s-in-game-locations-compared-to-the-real-world-1787125885

Last accessed 27 November 2017.

Atkins, Barry (2003) More than a game: The Computer Game as Fictional Form, Manchester, UK: Manchester University Press, pp. 23.

Castle, Matthew (2014) "Interview: Shu Takumi on the Phoenix Wright trilogy," Official Nintendo Magazine (16 June; archived on 9 October 2014). Last accessed 27 November 2017.

CBS News (2000) "Anti-cloning Law Passed in Japan," CBS News (November 20). https://www.cbsnews.com/news/anti-cloning-law-passed-in-japan/ Last accessed 27 November 2017.

Hoshino, Kazumasa (1997) "Bioethics in the Light of Japanese Sentiments," in Japanese and Western Bioethics: Studies in Moral Diversity, ed. Kazumasa Hoshino, Dordrecht, Boston and London: Kluwer, pp. 13-23.

Hutchinson, Rachael (2007) "Performing the Self: Subverting the Binary in Combat Games," Games and Culture 2:4 (Fall), pp. 283-299.

Hutchinson, Rachael (2015) "Race and Gender Stereotypes in Japanese Fighting Games: effects on identification and immersion," NMEDIAC: Journal of New Media and Culture, 10.1 (Summer). http://ibiblio.org/nmediac/summer2015/GenderStereotypes.htm Last accessed 27 November 2017.

Hutchinson, Rachael (2016) "Distancing War: Japanese Videogames and WWII," Replaying Japan.

Hutchinson, Rachael (2017) "Representing Race and Disability: GTA San Andreas as a Whole Text," in Gaming Representation: Race, Gender and Sexuality in Videogames, ed. TreaAndrea Russworm and Jennifer Malkowski. Bloomington: Indiana University Press, pp.164-178.

Itoh, Project (Itō Keikaku) (2012) Metal Gear Solid: Guns of the Patriots, trans. Nathan Collins, San Francisco: Haika Soru.

Jenkins, Henry (2006) Convergence Culture: Where Old and New Media Collide, New York: New York University Press, pp. 293.

Lewis, Robert (2014) "A Shenmue pilgrimmage: Visiting the scenic real-life locations from Sega's game," Venture Beat. (September 7). https://venturebeat.com/community/2014/09/07/shenmue-a-gamers-pilgrimage/ Last accessed 27 November 2017.

Maeda Ai (1982) Toshi kūkan no naka no bungaku. Tokyo: Chikuma Shobō.

Murray, Janet (1997) Hamlet on the Holodeck: The Future of Narrative in Cyberspace, New York: Free Press, pp. 51.

Namihara, Emiko (1997) "The Characteristics of Japanese Concepts and Attitudes with Regard to Human Remains," in Japanese and Western Bioethics: Studies in Moral Diversity, ed. Kazumasa Hoshino, Dordrecht, Boston and London: Kluwer, pp. 61-69.

Newman, James (2016) "Kaizo Mario Maker: ROM hacking, abusive game design and Nintendo's Super Mario Maker," Convergence: The International Journal of Research into New Media Technologies (15 November) http://journals.sagepub.com/doi/full/10.1177/1354856516677540 Last accessed 27 November 2017.

Newman, James (2017) "'Slower, Squashed and Six Months Late': Playing Japanese Videogames in Europe 1991-2017," Replaying Japan.

Picard, Martin and Pelletier-Gagnon, Jérémie (2015) "Geemu, Media Mix, and the State of Japanese Video Game Studies," Kinephanos 5.1 (December). http://www.kinephanos.ca/2015/introduction-geemu-media-mix-en/

Sleeboom-Faulkner, Margaret (ed.) (2014) Global Morality and Life Science Practices in Asia: Assemblages of Life, London: Palgrave Macmillan.

Steinberg, Marc (2012) Anime's Media Mix: Franchising Toys and Characters in Japan, London and Minneapolis: University of Minnesota Press.

Thornber, Karen (2009) Empires of Texts in Motion: Chinese, Japanese, and Korean Transculturations of Japanese Literature, Cambridge, MA: Harvard University Press.

Yiu, Angela (2016) "National Literatures and Beyond: Mizumura Minae and Hideo Levy," in The Routledge Handbook of Modern Japanese Literature, ed. Rachael Hutchinson and Leith Morton, New York and London: Routledge, pp. 227-240.