The GamiMedia Model: Gamifying Content Culture

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Abstract. In Japan, gamified media has recently become popular. Among Japanese youth, one manifestation of this trend is the expansion of original media content to create fanfic content. This process changes passive consumers into active agents with the ability to advance society. However, no model currently exists for discussing and analyzing this phenomenon in contemporary Japanese anime, comics, and games—media whose fictionality penetrates the real world. In this paper, we develop the *GamiMedia* model to addresses this need. Because the model explicitly accommodates transmedia storytelling concepts, it can be used to explain how the fictional stories in Japanese media content are extended into the real world. The model presented in the paper may aid the design of a *digital-physical hybrid world* that could improve our lifestyles.

Keywords: game analysis, digital-physical hybrid design, culture-based design.

1   Introduction

The "*Cool Japan*" [20] concept was coined in 2002 to describe Japan's emergent cultural power. Japanese anime, comics, and games have become recognizable symbols of the "*Cool Japan*" trend. The Japanese government planned to expand Japan's economy by exporting this cultural content abroad. It was proposed that Cultural power in "*Cool Japan*" could be used to enhance digital hybrid artifacts [8, 11, 16, 17]. Studies showed that such an approach enables passive users to become active agents with the power to advance society. Specifically, as shown in [12, 14, 15], incorporating fictionality into the real world may offer a way to alter human attitudes and behaviors to achieve better lifestyles. However, no model is currently available for discussing and analyzing this phenomenon in contemporary Japanese anime, comics, and games—media whose fictionality penetrates the real world. Such a model should explicitly represent the meaning of objects in the content and identify Japan's unique cultural concepts.

In Japan, gamified media has recently become popular. Among Japanese youth, one manifestation of this trend is the expansion of original content to create fanfic content. This content is published on social networking sites. The collective, community development of this content has contributed to the emergent cultural phenomenon that is the essence of "*Cool Japan*". Existing models, including *Robin Hunicke*'s *Mechanics-Dynamics-Aesthetics* (MDA) framework [5] and *Jesper Juul*'s *Half-Real* model [6] are not suitable for analyzing the meaning of this cultural content and therefore have difficulty explaining the cultural gamification phenomenon.

In this paper, the *GamiMedia* model is developed to address these problems. Because the model explicitly accommodates transmedia storytelling, it can be used to explain how the fictional stories found in Japanese media content are extended into the real world. After presenting an overview of the *GamiMedia* model in Section 2, we use the model to analyze four popular Japanese games in Section 3. These case studies demonstrate how Japanese media content penetrates the real world. In Section 4, we discuss the cultural implications of the model when it is used to design media content. In particular, we describe the development of fictional stories that can be integrated into the real world. We also suggest that incorporating universal ideological messages may make the content more acceptable to a variety of cultures. Section 5 concludes the paper.

2   The GamiMedia Model

In the *GamiMedia* model, each *GamiMedia* component contains at least one of the following three elements: Dynamics [1],Visuals, and Narrative. In our model, the Aesthetic dimension of the MDA model is divided into the Visuals and Narrative dimensions. In addition, a *GamiMedia* component is linked to another *GamiMedia* component when the meaning of that *GamiMedia* component is explained by the other *GamiMedia* component. This model enables us to determine how the meaning is constructed in the game.

In this section, we provide an overview of the *GamiMedia* model by analyzing Jason Rohrer's Passage,[2] which was released in 2007. The game lasts exactly five minutes and takes human life as its theme. An analysis of Passage shows that a player understands the meaning of the game by relying on metaphors represented by visual objects and by observing the interactions among these visual objects during the game. Because the metaphors are not culture-specific, most players can easily understand the meaning of the game.
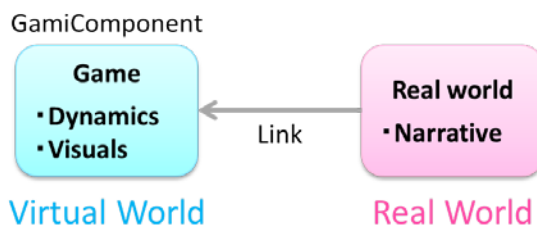

Fig. 1. GamiMedia Model of *Passage*

Passage represents an individual's life. The game's *visuals*, including treasure chests and obstacles, and the character's aging process indicate the main character's gender. However, meaning is communicated through more than *visuals*. The *dynamics* also

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[1] Our definition of dynamics is similar to the concept of procedural rhetoric [2].
[2] http://hcsoftware.sourceforge.net/passage/

help players understand the concept of the game. For example, "*The game has a time limit,*" "*A male leading character couples with a female character when he approaches her,*" and "*The score increases when the character touches the treasure chests*" also communicate meaning to the player. The second *dynamic* represents "*marriage*"; the third represents "*earning money*". There are also obstacles near some of the treasure chests, making it difficult to collect the treasures. This represents the principle that people must work hard and overcome difficulties to receive rewards in life. Treasure chests and obstacles in the game are metaphors for the rewards and trials, respectively. The role of the *visuals* is to provide simulated objects or metaphors, and the role of the *dynamics* is to give them meaning. *Passage* does not provide any textual messages, but the players understand the essence of human life while playing the game because of their experience in the real world. Therefore, as Fig. 1 shows, the meaning of the *narrative* is defined outside of the game, and there is a *link* between the game and real world experience.

3   Case Studies

In this section, we analyze four games using the *GamiMedia* model: Nintendo's *Animal Crossing*,[3] Namco's "*Tales of*" series,[4] Nintendo's *Pokémon*,[5] and Broccoli's *Uta no Prince-sama*.[6] The analyses focus on the games' transmedia storytelling, exploring how the original game is expanded into other media, such as novels, anime, social media, and festival events. The approach can also explain the phenomena of Japanese fanfic and gamification and offers guidelines for exporting such cultural phenomena to foreign countries.

3.1   Story-Centered Game: "Tales of" Series

The "*Tales of*" series produced by Namco includes the *Tales of Phantasia*, *Tales of Destiny, Tales of the Abyss*, and others. Each game is a story-based role-playing game whose stories therefore play a prominent role. In the "*Tales of*" series, the stories exist exclusively in the game world. The stories are clearly presented through a series of messages that help players interpret the *visuals* and understand the characteristics of and the relationship among the characters in each game. To add value to the game, some character goods can be purchased at an annual two-day event called the *Tales of Festival*. In the "*Tales of*" series*,* the purpose of character goods and events is to increase empathy toward the games' characters; they do not have a direct effect on the games' content. Novels, anime, and smart phone applications based on the games have been produced. The game components used in each media element differ, as shown in Fig. 2. The novels contain only *narratives*, and the anime, though omitting the *dynamics* present in the original games, retain their *visuals* and the *narrative* arcs. If these media add meaning to the original games, they qualify as examples of transmedia storytelling.

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[3] http://en.wikipedia.org/wiki/Animal_Crossing
[4] http://en.wikipedia.org/wiki/Tales_(series)
[5] http://en.wikipedia.org/wiki/Pok%C3%A9mon
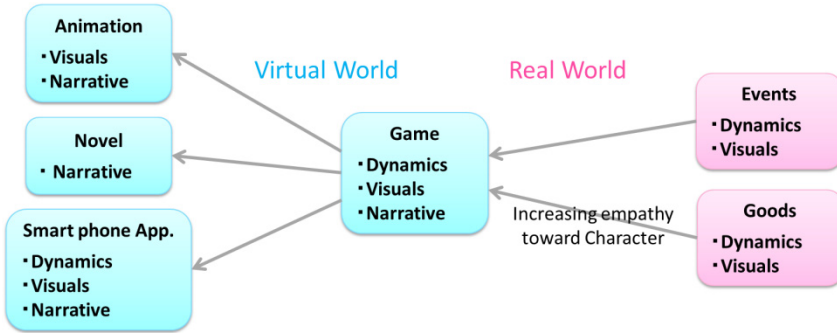[6] http://en.wikipedia.org/wiki/Uta_no_Prince-sama

Fig. 2. GamiMedia Model of the "Tales of" series

3.2 Real Simulation Game: Animal Crossing

Animal Crossing is a community game published by Nintendo. This game simulates aspects of human life. However, all of the game characters, except for the player, are animals. In the game, a player can communicate with the animals, collect items such as furniture and clothes, arrange his/her own house and village, and participate in several seasonal events. Each event is strongly associated with actual human activities. The game simulates the *dynamics* of the real world, but they are represented in different forms through attractive *visuals. Twitter* and *Miiverse*[7] offer players information about the seasonal events. The *Animal Crossing* character's certified account tweets information about events in the game and the distribution of rare furniture. The character's tweet is consistent with the game character's personality, which maintains a sense of reality.[8] *Miiverse* is a service that allows players communicate with other players across the globe. It is accessible via *Wii U* and *Nintendo 3DS. Miiverse* hosts a community for each *Wii U* and *Nintendo 3DS* game, including one for the *Animal Crossing* community. Through the *Miiverse* community, players can send and share
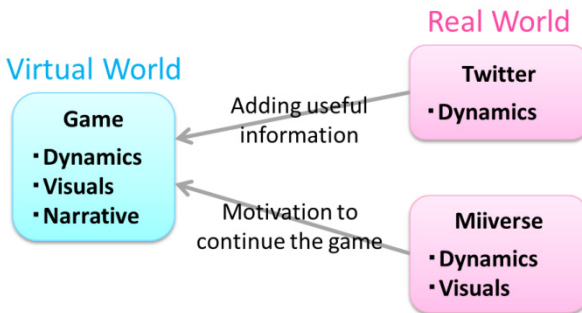

Fig. 3. GamiMedia Model of Animal Crossing

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[7] https://miiverse.nintendo.net/

[8] In [12, 14], we discuss how reality is maintained when the real world and the fictional world are integrated.

impressions, questions, and information about *Animal Crossing* via text message or by drawing pictures. They can interact with others by sending a message and pressing the *"Yeah"* button. In some cases, these interactions contribute to the game's development. For example, players can visit other players' villages by exchanging a unique friend code. In another player's village, it is possible to obtain rare items that he/she does not have. In addition, the existence of friends motivates a player to continue playing the game. As shown in Fig. 3, the *dynamics* produced by *Twitter* and the *dynamics* or *visuals* provided by *Miiverse* expand the game's potential. The information available through *Twitter* reminds the players about game events. In addition, communication with other players can enhance the game's events and motivates players to continue to play *Animal Crossing*.

3.3   Transmedia Game 1: Uta no Prince-sama

The important elements of *Uta no Prince-sama* are Love and Music. The main female character enjoys falling love with boy singers, who are typically called *Prince*; her bond with her favorite *Prince* is deepened through music. A player chooses her favorite *Prince* from 11 main boy singer characters. *Uta no Prince-sama* offers an immersive experience for female players. The game is expanded by collecting goods and attending festival events. Each boy singer's goods are for sale, and a player can purchase her favorite *Prince*'s goods. The goods are designed to appeal to a typical female and include key holders, accessories, dolls, and fragrances. Some goods are fictionally promoted as being *"produced by Prince,"* and a player can purchase the goods with a message card from *Prince*. In addition, festival events are staged whose concepts correspond to the themes of Love and Music.
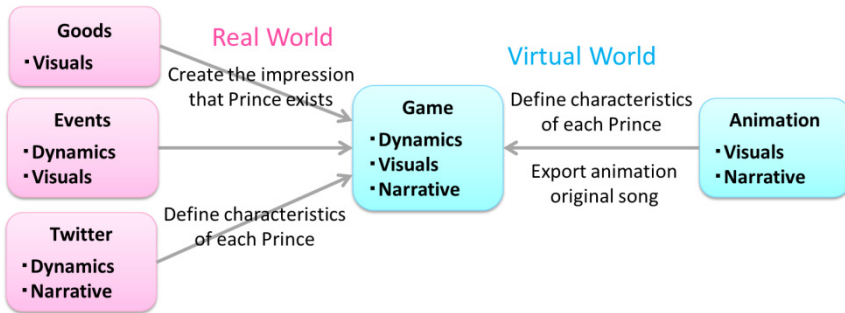

Fig. 4. GamiMedia Model of Uta no Prince-sama

The festival event is often held in a popular dating spot, such as an amusement park or karaoke room. This creates the sense that the participant is dating her *Prince* not only in the game's world but also in the real world and increases her empathetic feelings toward *Prince*. The anime and conversations hosted on *Twitter* offer additional stories that differ from the game's story. In addition, the boy singers perform original songs in the anime that can be imported into the game. In *Animal Crossing*, only one character tweets information about the game on *Twitter*. In *Uta no*

Prince-sama, each of the 11 boy singers have their own certified accounts and communicate with each other via *Twitter*. Through these interactions and the anime series, the players learn more about each singer and their relationships with each other. Because boy singing groups are popular in Japan, many females believe in the realistic nature of their *Prince*. It is difficult to date a real singer, but it is possible to date *Prince* in the game. The fulfillment of this desire is used to engage females in the game. The *dynamics*, *visuals*, and *narrative* are deployed well in each medium to create the *Uta no Prince-sama* world, making it another good example of transmedia storytelling. Fig. 4 shows how the multiple media channels can be organized using the *GamiMedia* model. The virtual world, including the game and the anime, reveal the characteristics of each *Prince*. The sense of each *Prince*'s existence is produced by goods, events, and *Twitter* conversations in the real world, all of which contribute to the player's love of her favorite *Prince*.

3.4   Transmedia Game 2: Pokémon

The basic concepts of *Pokémon* are the battle and the collection of *Pokémon* throughout the game story. Some players value the battle while other players value collecting and amassing *Pokémon*. *Pokémon* is an open game, which means that enjoyment can be felt even after completing the game. The *Pokémon world* contains multiple media channels through which the details of the world are defined using a transmedia storytelling concept, including *Pokémon*-related comics, animated cartoons, movies, card games, festival events, amusement parks, and character goods. Each medium is synergized with the game. Movies and festival events often provide players the opportunity to collect rare *Pokémon*. Several legendary *Pokémon* cannot be collected by only playing the game and must be collected at the *Pokémon* movie or festival events. The movies and events are therefore considered part of the game. Like the original video game, card games and amusement parks also have the *agency property* [15].

In the arcade game *Pokémon Tretta*, whose concept is also to battle and collect *Pokémon*, tangible toys, paper cards also called *Pokémon Tretta,* are collected. Because of the cards' tangibility, a player feels like he/she "*is a Pokémon trainer*" in both the real and game worlds.

Animated cartoons and character goods immerse the player in the game's world. The *Pokémon* cartoon has been broadcasted at the same time and the same day every week for more than 15 years in Japan. In addition, *Pokémon Center*, a character goods shop, has stores located throughout Japan. *Pokémon Center* has attracted many visitors seeking to immerse themselves in the *Pokémon* world outside of the game world. The regularly broadcasted cartoons and a variety of goods improve *Pokémon*'s integration into the real world. Each *Pokémon*'s detailed characteristics are defined in the cartoon's story, not in the game. The collaboration among the media channels increases the sense of reality and imbeds the *Pokémon* story in the real world. Fig. 5 shows how the multiple media channels can be understood using the *GamiMedia* model. In *Pokémon*, collaboration among many *GamiMedia* components and links immerses players in the *Pokémon* world. In these ways, the *narrative* of the virtual *Pokémon* world, whose leading character is the player himself/herself, enters the real world.
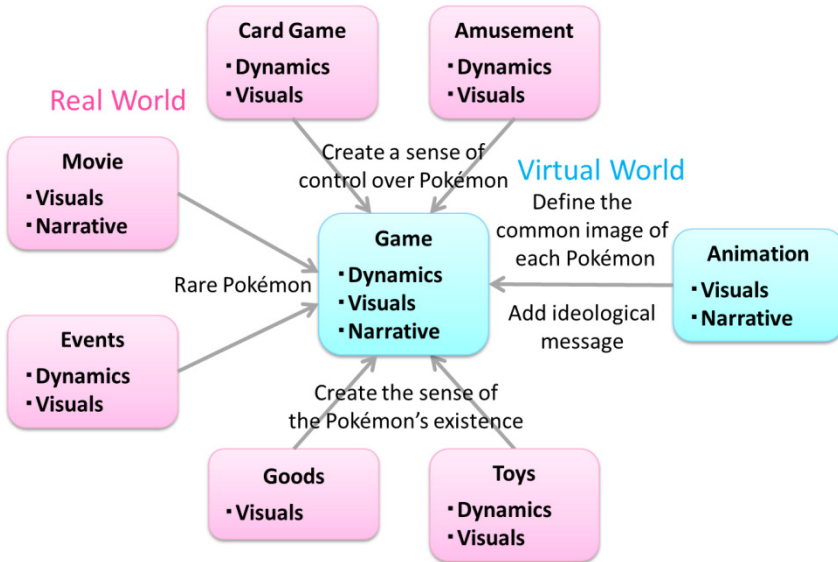
Fig. 5. GamiMedia Model of Pokémon

4 Cultural Implication

The design of media content such as anime and games is strongly associated with the culture in which it is produced. As shown in [15], the *GamiMedia* model can be used to embody fictional stories in the real world. If the fictionality does not match the players' culture, the player does not perceive the fiction as realistic. In this section, we discuss the cultural implications of the model when it is used to design media content.

4.1 Culture-Based Design

Tokimeki Memorial is a dating simulation game developed by Konami and the first game in the *Tokimeki Memorial* series.[9] Because the game's content depends on an understanding of Japanese culture, its American version, *Brooktown High*,[10] was significantly modified to suit American culture. For example, the typical social relationships among Japanese and American high school students are significantly different. Because social interaction is a fundamental theme of the game, changing the theme requires a complete re-implementation of the game. It is therefore difficult to modify *Tokimeki Memorial* for other cultures. On the other hand, when popular Japanese anime are exported to other countries, it is typical to change the characters' names. Some of the goods typical in Japan are also changed to become more appealing in other countries. This translation process is not difficult if the characters and goods are easily replaced by other characters and goods. The *GamiMedia* model can

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[9] http://www.konami.jp/gs/game/Girls_Side/
[10] http://www.ign.com/games/brooktown-high/psp-826688

show whether the translation will be easy or not because it explicitly specifies these characters and goods and defines their meanings.

One way to create media content that will appeal to people of different cultures is to adopt the cultural events or goods of those countries. If the content reflects the events and goods of the players' cultures, their empathy toward the game will increase.

For example, in *Animal Crossing*, players can participate in various seasonal events. In mid-August, players can participate in "*Obon*," during which the player acquires symbolic objects, such as "*Cucumber Horse*" and "*Eggplant Cow*." "*Obon*" is an important Japanese holiday, and these objects are cultural metaphors. If players understand the cultural background of "*Obon*," their interest in the game will increase. Because *Animal Crossing* contains various seasonal events from different counties, the possibility that players from different counties will be satisfied by the game is high.

Using transmedia storytelling is an advantageous approach because a variety of media can be used to provide details about other cultures' events or goods. The potential for using games to teach about other cultures is notable. Many social problems arise from misunderstanding other cultures' religions. Games could address this problem by teaching players about the traditions and beliefs of other cultures. Furthermore, the *GamiMedia* model allows *GamiMedia* components to be replaced by other components that are familiar to another culture or to integrate stories that explain the meaning of elements in the components. This characteristic has the potential to improve the treatment of cultural content.

Japanese anime studios have recently begun to adopt 3D computer graphics (3DCG) for economic reasons. When an animated production is based on a game, the game's 3D character models can be used to create the animation. Recent releases such as *009 Re:Cyborg*[11] and *Arpeggio of Blue Steel*[12] used 3DCG in almost every scene. All of the objects and backgrounds, including battleships, buildings, and special effects, were also represented by 3D models. This approach facilitates the modification of characters and goods to reflect the cultures of different audiences.

The *GamiMedia* model is a useful tool for analyzing the consistency of the content represented in different media while maintaining its connection to reality. The design patterns presented in [12, 14] provide guidelines for creating attractive media content for different cultures. In addition, transmedia strategies increase the possibility of embodying this media content in the real world and altering attitudes and behaviors [13, 15]. In the following subsections, we discuss two methods for creating media content that can be changed to reflect the player's culture.

4.2   Transmedia Storytelling Design

Transmedia storytelling is an effective tool for integrating a fictional story into the real world [3, 7]. When using transmedia storytelling, media content is fragmented into multiple media and distributed in several locations. If an anime series and a game are designed for transmedia storytelling, they are easily incorporated into the real

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[11] http://009.re-cyb.org/
[12] http://aokihagane.wikia.com/wiki/Aoki_Hagane_no_Arpeggio_Wiki

world because the fragmented media content can appear anywhere at any time through the use of nearly ubiquitous projectors and displays [15]. In this subsection, we present two examples of how narratives originally appearing in Japanese anime can easily be expanded through transmedia storytelling and incorporated into the real world.

The first example is the *Fate* series,[13] a *Type-Moon* media collective. The main elements include battles called *Holy Grail Wars* in which *Masters*, typically accomplished magi, summon *Servants* and *Heroic Spirits* as they battle each other. The last remaining pair claims the *Holy Grail*. The series began with the visual novel *Fate/stay night* and has developed many spinoffs under the "*Fate*" name. For instance, *Fate Zero* is a popular spinoff and prequel of *Fate/stay night*. A new spinoff can be easily created, even in a different cultural context, because the battles (battle royale) in which the characters destroy each other until only one remains is typical of role playing games, and the *Servants* in the series include famous heroes from world literature, such as *King Arthur* and *Gilgamesh*. A new story can also use new heroes and heroines that are popular in any culture as long as it maintains the atmosphere of the *Fate* series. Therefore, defining a basic battle style makes it possible to create a variety of stories that share similar qualities. Analysis shows that any fan community can create a new story in the *Fate* series independently. By embedding the story in their own cultural context, players feel that the story becomes more realistic.

The second example is *AKB0048*,[14] a story based on *AKB48*, a singing group popular in Japan[15] and other Asian countries. *AKB0048* is a fictional singing group that resists the existing government system. Each singer uses an *AKB48*'s singer's name, and her basic personality is inherited from the original singer. Fans in Asian countries enjoy the story because they are familiar with the *AKB48* singers. The storyline easily accommodates new stories through the creation of new characters who inherit the basic personality traits of the original singers. Therefore, it appears to be effective to create characters who inherit qualities from well-known people. The story is temporally asynchronous with current events and is therefore not suitable for integration into the real world. However, the strong connections between the current culture and the culture depicted in the futuristic story lend a sense of reality to the fiction.

The *GamiMedia* model describes how the new story can maintain the qualities of the original story by extracting the stories' common structures.

4.3   Designs with Ideological Messages

Currently, virtual characters are ubiquitous in daily life. Famous *Disney* characters such as *Mickey Mouse* and *Donald Duck* can provoke empathetic feelings regardless of the setting, and *Hello Kitty* and *Pokémon* are now found all over the world [1]. In cartoons and games, each virtual character has its own personality and story, which can be used to convey special information and messages. If people are familiar with the fictional narrative behind a cartoon or game, the action or interactions of the

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[13] http://typemoon.wikia.com/wiki/Fate_series
[14] http://akb0048.wikia.com/wiki/AKB0048_Wiki
[15] http://www.akb48.co.jp/

story's characters will easily recall the story elements without additional cues. Daily life is becoming increasingly complex, and our ability to manage significant information is crucial. In modern society, there are many social problems that need to be solved urgently, but it is difficult to convey important ideological messages succinctly [9, 13].

Ideological messages are often deployed in literature and movies to increase the tension of the stories and maintain their reality or consistency [19]. The interpretation of these ideological messages is usually universal. Thus, once incorporated into stories, these messages can be easily understood across cultures. In this subsection, we describe two examples of the use of universal ideological messages in stories. These examples are from recent Japanese animated television series, indicating that imbedding ideological messages in this media form is common in Japan.

The first example is *Arpeggio of Blue Steel*. In this television series, a humanoid life form that pilots the submarine *I-401* acquires a human mind and begins to make decisions through her ego instead of following others' orders. The story tells a typical story of the growth of a young person learning to face the demands of the real world. Other humanoids also encounter mental conflicts as they become conscious of their egos. The ideological message is the importance of accepting other people; we begin in isolation, like the humanoids, but as we accept others, we grow to be able to meet the challenges of the real world. Because the message is familiar to most cultures, a story based on this message can be easily understood in any cultural context.

The second example is *Gatchaman Crowds*,[16] a 2013 television anime series based on the 1972 anime series *Science Ninja Team Gatchaman*. The *Gatchaman* are warriors who fight in special reinforced suits that manifest their unique spiritual powers. The ideological message of the series is to indicate the role of a hero in an age in which social media affects citizens and politics may soon become controlled from the bottom up. In such a society, it is difficult to identify the antagonist. Because of this uncertainty, a hero cannot solve a problem or identify the evil that he needs to fight by himself. This message is also universal.

However, ideological messages can become diluted when the original story is combined with other stories. For example, *Arpeggio of Blue Steel* is currently being used in a game called *Kantai Collection*,[17] a popular online game in Japan. The game borrows its characters and part of its storyline from *Arpeggio of Blue Steel*. Similarly, *Gatchaman Crowds* is set in *Tachikawa*, a city in the Tokyo Metropolis. The real *Tachikawa* plans to host many attractions related to the series. It is more difficult to communicate the ideological message through *Kantai Collection* or during events in *Tachikawa* because understanding the message is not the purpose of the game or the events, which are meant simply to entertain. Future studies should examine how to effectively incorporate ideological messages into transmedia storytelling [11, 17]. The *GamiMedia* model represents the first step toward discussing the integration of these ideological messages into the real world through transmedia storytelling.

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[16] http://gatchaman.wikia.com/wiki/Gatchaman_Crowds
[17] http://en.wikipedia.org/wiki/Kantai_Collection

5   Conclusion and Future Directions

Games are half real and half fiction [6], and integrating the fiction into the real world increases engagement and motivation. The *GamiMedia* model demonstrates how fiction can be seamlessly integrated into our daily lives. However, we need to investigate how the relationship between fiction and reality should be controlled. A magic circle concept [18] could provide a model for controlling the boundary between fiction and reality on a case-by-case basis, allowing appropriate feedback to be offered to a user about his/her treatment of his/her fictional situation.

We are enhancing the *GamiMedia* model in the following two directions. First, the model is being modified to consider individual personality traits when designing transmedia content. As indicated in [10], one's preference depends on one's personality. To attract more users, media content should appeal to multiple types of personalities. The value-based design framework [8, 16] aids the design of such media content. By using participatory design within the framework, it is possible to create media content with broad appeal.

Second, the model is being used to formulate a critical design methodology for media [4]. Designing media content containing ideological messages is usually highly experimental. The critical design approach provides a basic foundation for creating more ideological content for addressing serious social problems.

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