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Immersive Technology Uses in Interactive Media: A Collection of Case Studies

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Abstract

A collection of case studies that combine immersive technologies such as augmented and virtual reality in various contexts are introduced to outline some of the signals and trends in emerging interactive media. A series of authors share uses of AR/VR/MR in a wide range of fields including tourism, education, archeology, communication, and more. Common themes, affordance, and challenges are pulled out and used to extrapolate likely trends moving to the future. This work also starts to build an overall framework to evaluate immersive media implementation strategies and research methodologies.

Keywords: Immersive Media, Augmented Reality, Virtual Reality, Extended Reality, Immersive Media Design, Virtual Environments, Augmented Learning

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Introduction

As the technologies that power immersive media become more ubiquitous, affordable, and easier to use, we are seeing a wider breadth of uses in an increasingly broadening scope of disciplines. Likewise, as researchers and educators, we are finding and experimenting with new approaches, affordances, and best practices of using technologies like augmented and virtual realities in classrooms and other educational settings. In an attempt to gain a more multidisciplinary view of these signals we have collected a range of case studies that implement these technologies in diverse fields of study. Some of the emerging findings suggest that motivation and approach are connected to the goals of the technology use. So it seems prudent to try and understand at least in part what using immersive technology can bring to the message or essence of a media project in order to determine if it adds value and if so, how to best leverage the technologies. Moreover, some of our case study researchers are growing increasingly concerned about the privacy and data collection implications, particularly in classrooms, of these technologies (Hawkinson & Klaphake, 2020) and of the business practices of the companies that manufacture and control these devices. While some authors are wary of the remaining limitations and drawbacks in need of perhaps some enhancements to bring virtual experiences closer to the realities they seek to emulate, overall, the authors are encouraged with the growing potential of the technology to expand access to places and experiences in different contexts, especially during a pandemic.

Case Study 1: Implementing Web VR for Facilitating English Language Acquisition

Amelia Ijiri - Kyoto Institute of Technology

Mehrasa Alizadeh - Osaka University

This is a use case of the implementation of a My Hometown VR project in a 15-week course called Digital Media Projects using English. The course was taught during the COVID-19 pandemic, which caused uncertainty about whether the class would be conducted face-to-face or online. Since My Hometown is a fully online resource with all materials available through its portal, this was seen as an advantage. An online pivot occurred about 5 weeks into the semester, and this class began meeting online for discussions. The My Hometown platform has a message board for communicating with the teacher, and a Discord server was set up for questions. The course could have been conducted entirely online asynchronously.

Background

My Hometown Project was kicked off in April 2019 as a face-to-face class project, and in the beginning Google VR apps, Expeditions and Tour creator, were used to get students to create virtual tours of their hometowns. Tour guiding was conducted in class with students taking their classmates on virtual tours of their hometowns viewed on mini VR goggles that were attached to smartphones. A BYOD approach was adopted in relation to the use of smartphones; however, the mini VR goggles were provided by the instructor. This setup worked well before the COVID-19 pandemic when all classes were face-to-face. For more details on this first iteration, readers are recommended to refer to Alizadeh and Hawkinson (2021). Nevertheless, in 2020 after the emergency shift to remote teaching and learning, it was impossible to continue with smartphone VR, given that the Expeditions platform mandated the connection of the tour guide and tour participants to the same local network. Soon after, Google decided to shut down its VR applications. All these triggered the shift to WebVR, which turned out to be more accessible causing minimal levels of physical discomfort such as sickness or fatigue and which helped expand the scale of the project

beyond borders. Since then, My Hometown Project has witnessed international growth with collaborators from Indonesia, Malaysia, China, and Vietnam and now has its own independent platform.

Participants

A remarkable percentage of students conduct graduate work in the fields of architecture, design, informational technology, chemical engineering, and biology at this university. Four undergraduate students enrolled in this elective course: two chemistry majors, a biology major, and a design major.

Project Description

Alizadeh and Hawkinson's book chapter, "Smartphone Virtual Reality for Tourism Education: A Case Study" was analyzed before implementation in order to glean insights into the feasibility of offering a virtual reality class with the current technological affordances available at the university.

Immersive Design

According to the research of Alizadeh and Hawkinson (2021), VR-enabled learning on low-cost VR viewers, such as Google Cardboard, are prone to self-reported shortcomings, including eye strain, dizziness, nausea, and neck/back strain. Therefore, a decision was made not to introduce headsets but, instead, to require only a computer-based browser for the project. In addition, the network bandwidth required for this project could be problematic in the classroom, so the class relied on conservative technology: only requiring students' Gmail (for an e-portfolio as required for university assessment and browser-based Thinglink and My Hometown). These simple browser-based tools worked with the available broadband, and students did not report any issues with using them on their laptops.

Course Content

The course was divided into ten stages. The first five stages focused on setup and theory. Topics covered included the experience economy, the reality-virtuality continuum, and the art of storytelling. The last five stages focused on creating a multimedia tour of each student's hometown, including artifact curation, narration, and navigation.

Student feedback

Each student produced an individualized VR tour of their hometown. One of the major affordances of the course is the fact that students create their tours through the lived experiences of a resident of that location. Oral feedback was collected during the weekly Zoom chats, and students reported that this aspect was a high point of the course. It was particularly meaningful for students who already enjoyed writing blogs or producing digital content, such as the case of one student who was an avid blogger and another student who maintained an active Instagram account. One example of how the students creatively produced original media was the soundtracks to their tours. One student played her guitar-like instrument, a shamisen, which is native to her region, to create an original soundtrack for her tour, while another student used additional applications, such as Audacity, to layer sound

effects for their tour. In these cases, their level of involvement in the creation progressed beyond what was required in the course, which was to select a royalty-free MP3 file.

Conclusions

As the field of digital humanities continues to grow, we are likely to see a rise in collaborative web-based projects across institutions. My Hometown is an internet-based course at the intersection of storytelling and VR that allows students to personalize their digital presence by showcasing a location important to them. When students create and curate their content through this process of participating in a course that highlights the study of current theories, such as the experience economy, and easy-to-use online tools, such as Thinglink, they connect their learning beyond the classroom and beyond the university to the larger global digital landscape.

Case Study 2: Developing immersive learning experiences for “Emaki-mono”, Japanese historical narrative picture scrolls.

Kojiro Yano, Osaka Institute of Technology

Eri Yokoyama, Osaka Institute of Technology

Introduction

According to The Courses of Study for Middle Schools by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT), students should learn traditional linguistic culture in the subject of Japanese language. More specifically, students are expected to have opportunities "to be exposed to the world of classic literature," and "enjoy the world", as well as "to be exposed to the viewpoints and ways of thinking expressed in classic literature and imagine the characters and author's thoughts.". On the other hand, according to a MEXT's nationwide survey of students, Japanese literature is one of the lowest favored subjects in schools. One of the possibilities to address this problem is to use information and communication technologies (ICT).

VR Ban Dainagon Emaki

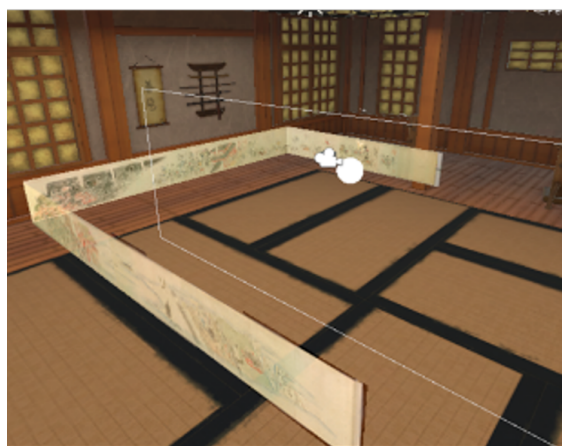
We developed *VR Ban Dainagon Emaki*, a virtual reality experience for learning a Japanese traditional picture scroll. In the Heian period, illustrated scrolls, called Emaki or Emakimono, were highly popular. The earliest extant examples date from the 12th century. They include fictional tales such as the famous Genji Monogatari Emaki (Picture Scroll of the Tale of Genji). Here excerpts from the text are alternated to paintings of representative scenes. This format quickly gained favor, and was used continuously throughout the medieval period and into the Edo period.

Bandainagon Emaki is said to have been made in the late Heian period, at around the 12th century. It is a narrative picture scroll depicting the Otenmon Incident in 866. As a typical example of the feature of emaki, the first roll of Bandainagon Emaki has a scenery of fire at Otenmon (the red-painted front gate) which depicts flaring Otenmon, crowds of viewers, government's officers trotting down on to the site upon receiving information, and so on, in a few meters long series of pictures.

Learning classic literature is not easy for students, but learning Emaki involves further challenges, such as missing text, varied interpretations, and media/art literacy deficiencies

that might be less pronounced with text literature. However, VR Bandainagon Emaki can help resolve these issues by following ways. First of all, students can easily view the whole scroll of an Emaki in a virtual space since there's no limit for the display size. If you surround them by the scroll, they only have to rotate their head to skim through it. This would help students to understand how the story of an emaki is organized. For our VR app, we obtained the photos of the Emaki from National Diet Library Digital Collections and stitched them together into three images, and arranged them in a C shape. In this way, students can easily grasp, literally, the big picture of the story, in which the first part describes people rushing to the gate where the fire accident is happening, the second part shows the burning gate and the third part hints who plotted the arson. The VR app, developed on Unity game engine, was made available first for Oculus Go and later for VIVE Focus Plus. On both devices, users can walk in the virtual room, take a closer look at the Emaki or just look around to experience the world of the Emaki in an immersive fashion.

Overview of the virtual room



Player's view



Figure 1. A view of VR Bandainagon Emaki virtual environment

The second benefit of using VR is to make students more interested in the characters on an Emaki. It is well known that seeing people in an immersive environment makes the users feel empathetic toward them (Schutte & Stilinović, 2017). Moreover, embodiment, namely being able to influence virtual space by the user's own body, is also known to enhance learning (Johnson-Glenberg et al., 2020). In VR Bandainagon Emaki, we animated the characters using Live2D, a 2D animation authoring tool widely used for games and anime. Live2D allows animated 2D characters directly from source images. We extracted characters from Emaki images on Adobe Photoshop and applied "art meshes" (polygons), which can be deformed by parameters. The meshes can be applied to different parts of the character's body, such as eyes, mouth, head, and limbs, and changing their shapes by adjusting the parameters allows expressions like blinking, talking, nodding or running. These expressions greatly expand the expressiveness of characters and enable the characters to play out the stories more effectively.

Finally, VR allows multiple users to view an Emaki together. Organizing students into groups and letting them work as a team to discuss the interpretation of an Emaki can improve the motivation of students and the understanding of source materials. One of the authors has practiced an active learning approach of Emaki teaching, by printing out the whole Emaki and letting the students annotate it together by placing Post It Notes on the surface of the printout. This practice was possible because wide blank walls were available at the college,

but for those who do not have access to such space, VR can be used instead. We took the images from the original VR Bandainagon Emaki and installed them into a scene of Mozilla Hubs, a social VR platform, for multiplayer experiences. Unlike the original VR Bandainagon Emaki which was developed as a single user standalone software for VR HMDs, this Mozilla Hubs version is built as a WebXR app and viewable on both PC browsers and VRHMDs. A Mozilla Hubs room can be shared with other users by a URL and have conversations and add objects (e.g. images, marker lines) together. This would allow students to have discussions and annotate the emaki in a virtual space. Currently, only text and audio annotations are used for learning aids, but we plan to add character animations, as in the original VR Bandainagon Emaki, to this experience.

Case Study 3: Simulating international diplomacy using VR technology at Model United Nations

Angus McGregor - Kyoto University of Foreign Studies

Eric Hawkinson - Kyoto University of Foreign Studies

Introduction

Model United Nations (MUN), with a history of over 70 years, is an established learning activity conducted around the world as a means of simulating international diplomacy, deepening students' understanding of the role of the United Nations, and increasing awareness of global issues. MUN requires students to role-play, research and establish positions that may be very different from their own personally. In 2020 and 2021 the Japan University English Model United Nations (JUEMUN) was conducted solely online due to the ongoing COVID-19 pandemic. After the JUEMUN online conference was successfully concluded in summer of 2021, the idea of combining VR and MUN simulations was considered in order to allow student delegates the chance to participate with avatars in a VR environment while conducting an MUN meeting. Faculty were interested in observing the effects of how simulations in this virtual environment could be utilized to further develop students' negotiation strategies for use in face-to-face MUN events.

Organization and Planning

Seven students from Kyoto University of Foreign Studies' Global Studies department were chosen based on their prior MUN experience and their expressed interest in exploring English negotiation strategies for use in future MUN conferences. These students included both Japanese and international students and for all participating students English was considered to be their foreign language. Sessions were organized around simulating the United Nations Security Council (UNSC) with three 90-minute sessions being conducted over 3 weeks. During the simulation student delegates convened to discuss and create a UNSC presidential statement on behalf of the international community regarding the recent withdrawal of the United States from Afghanistan, which concluded on August 30th, 2021.

Virtual Learning Environment Design

WebVR was chosen to be the platform from which to create a virtual replica of the United Nations Security Council Chamber. WebVR uses open standards like Open WebXR and A-Frame programming to make the content as accessible as possible to as many devices, operating systems, and Internet browsers (Neelakantam & Pant, 2017). The virtual learning environment was created to be a digital twin of the actual environment in New York but with

added features and items that might assist in the simulations, such as private meeting rooms and document viewing screens (Stiles, 2000).

Orientation Session

All participants joined a 60-minute orientation session conducted online in the UNSC VR environment. Faculty explained the schedule, objectives, and introduced the VR replica of the UNSC chambers. From early on in the session the 7 student delegates quickly became comfortable accessing the VR environment, controlling their self-designed avatars, and maneuvering around the VR UNSC chambers to explore the main meeting room and 4 adjacent meeting rooms which could be used for private consultations.

Session 1

All participants joined a 90-minute session that began with Formal Consultations, with each of the 7 student delegates delivering their 90-second opening remarks from their assigned seats at the large round table, similar to the actual UNSC table in the main UNSC meeting chamber. Speeches included their country's or organization's understanding of the situation and their objectives for drafting the official presidential statement on the issue of the chaos that was being created during and after the United States recent withdrawal from Afghanistan in the summer of 2021. Upon the conclusion of the 7 speeches, the floor was opened for questions regarding the content of the speeches. As this is similar to an actual face-to-face MUN meeting, the delegates were very adept and efficient at moving through this part of the simulation.

After Formal Consultations, the president moved the meeting into Informal Consultations in which delegates were able to move around the chambers to have either public or private negotiations with each other regarding draft clauses they wished to see added to the draft statement, which was due at the end of session 1. Faculty moved their own avatars around the environment observing several private discussions and noticed that delegates were: 1. staying in their assigned character roles; 2. using diplomatic language that they had been taught; and 3. working diligently on trying to negotiate the presidential statement clauses, while protecting their own national interests. By the end of the UNSC Session 1 the student delegates had submitted over 20 draft clauses to a Google document, which would be considered for the presidential statement. Clauses were concerned with the following topics: 1) Care for refugees; 2) Establishing a safe zone in Kabul for UN aid organizations; 3) UN support for bilateral or multilateral negotiations with the current Taliban government of Afghanistan; 4) The freezing of international assets of the Afghanistan government; and 5) The condemnation of superpowers hastily abandoning their regional responsibilities.

Session 2

Session 2 opened again with Formal Consultations for opening remarks, and then the president quickly moved the session into Informal Consultations for students to continue negotiating and amending the draft clauses for the presidential statement. Negotiations mainly centered on whether or not the UNSC could agree to support bilateral negotiations over multilateral negotiations, the establishment of a safe zone in Kabul, and whether or not the UNSC could support the freezing of Afghanistan's international assets. Faculty observed that delegates stayed in character, following their objectives, as they negotiated the contents of draft clauses, writing amendments that would move the members closer towards

consensus. Student delegates utilized the 4 meeting rooms in the VR environment, often moving from room to room to discuss with fellow delegates. By the end of the simulation, student delegates had submitted and amended 20 clauses to be included in the UNSC presidential statement and reached consensus on the document.

Conclusions

Student delegates seemed to show more willingness to stay in character in the VR game-like environment than what has been observed of these same students participating in face-to-face and online MUN simulations. Furthermore, the online gaming environment provided a fun activity for students to engage in, while also learning about international diplomacy. Further research is needed to develop the use of VR environments in MUN simulations as a way to: 1) practice and prepare negotiation skills and techniques for use in face-to-face MUN conferences; and 2) develop an alternative platform for new Model United Nations activities to develop.

Discussion and Conclusion

These case studies have revealed some common threads and signals toward best practices for designing learning experiences with immersive media. One of the main considerations from all of the studies was that the use of immersive technology adds value to the learning. Whether the learning goals of these studies could objectively be better met with different tools and approaches is open to debate, but each of these studies was carried out, at least in part, in order to explore new ways in which immersive media might enhance the learning experience, and possibly improve learning outcomes. Such improvements are made possible through an examination and deeper understanding of how augmented and virtual realities are designed and used. It is our hope that these case studies illuminate how immersive technologies can have a high potential for impact, especially in making experiences and materials more widely accessible, while being highly dependent on the design, limitations and implementation of the tools (Hawkinson et al., 2015).

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- ** Full articles on these case studies and developments may be found at <https://togetherlearning.com/research>

Playing through the Pandemic: The Social and Emotional Gratifications of Gaming during the COVID-19 Pandemic in Japan

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Abstract

While most industries were hit hard during the early stages of the COVID-19 pandemic, the global game industry was not only resilient—it was thriving. With a dramatic reduction of business activity and opportunities for social interaction due to widespread social distancing and stay-at-home orders, gaming not only served as a pleasant distraction, but it provided players with social gratifications and a sense of achievement in a time when the monotony of daily life made it hard to recognize our daily accomplishments. Like most countries with a large gaming population, Japan was no exception. Although some studies have suggested that problematic gaming is related to coping and escape, socialization and personal satisfaction as reasons for playing, this presentation explores the positive social and emotional gratifications associated with gaming. In order to do so, by means of discourse analysis, this presentation reveals the interpretation of results from a large-scale survey obtained with the cooperation of Tokyo-based GameWith Corporation. The overall findings reveal that almost 90 per cent of respondents agreed that gaming not only helped them to cope, but helped them to connect with others in an often immensely isolating stay-at-home context.

Keywords: Gaming, Gratifications, Isolation

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Introduction

The constant cycles of stay-at-home orders and travel restrictions spurred by the COVID-19 pandemic have undoubtedly proved challenging for people worldwide and even Japan where restrictions on movement were simply requests. In such unprecedented circumstances, people nevertheless found individual means of coping and tried to adapt somehow. While some distracted themselves with new hobbies such as gardening or baking, others sought social interaction on digital platforms to deal with the loneliness. It has been argued that social distancing resulted in loneliness, fatigue and even depression. Moreover, even before COVID-19, “depression was already considered one of the major diseases of this century, and this risk escalates with social isolation” (Kleiman et al., 2020). Other studies have also reinforced that symptoms of anxiety and depression have increased substantially during the COVID-19 pandemic (Shanahan et al., 2020). Hoping to alleviate these feelings of loneliness or even depression, statistics show that there was an increased use of ICTs such as TV, online gambling platforms, and video games in 2020 (Ángeles López-Cabarcos et al., 2020). In particular, online game streaming platforms such as YouTube Gaming and Twitch reported a 10% increase in audiences and game distributor Steam reported the highest number of active users in its entire history (Stephen, 2020). In fact, the World Health Organization even teamed up with the game industry’s #PlayApartTogether initiative to promote physical distancing.

Japan was no exception in this global surge of online gaming. Similar results were also observed in Japan in a mass online survey conducted by Tokyo-based GameWith Corporation. The findings revealed that almost 90 per cent of respondents agreed that gaming not only helped them to cope, but helped them to connect with others in an often immensely isolating stay-at-home context (see Figure 1).

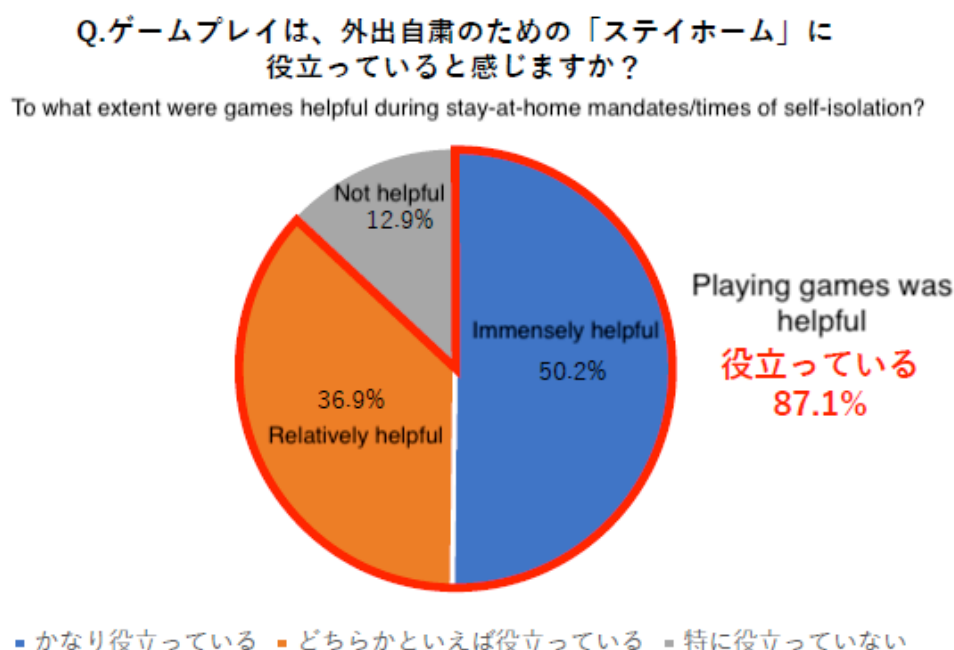


Figure 1: GameWith Survey Question 5

In this context, one might assume that more direct forms of online social interaction such as video calls or messaging services offer more meaningful interaction, so what kinds of

gratifications did online gaming offer? This presentation explores the positive social and emotional gratifications associated with gaming. In order to do so, by utilizing concepts from ‘Uses and Gratifications’ theory, this presentation reveals the interpretation of results from the aforementioned mass online survey obtained with the cooperation of Tokyo-based GameWith Corporation. As noted, almost 90 per cent of respondents agreed that gaming helped them to cope and to connect with others in a stay-at-home context, however, the factors that contributed to this and other notable gratifications heed discussion. Not only do the results and interpretations of this survey provide insight into social behaviour in Japan, but it refutes the common misconceptions that gaming is anti-social and unproductive.

Background and Methods

GameWith’s Company Profile

Prior to clarifying my methods of analysis, it is essential to briefly overview the survey conducted by GameWith Corporation. Launched in 2013, GameWith Corporation runs a website which provides the latest information on game releases, their respective reviews, and gaming tips or tricks from top gamers. Its website is not only available in Japanese, but also in English and Taiwanese Mandarin, meaning that it has a potentially large audience reach and user base. According to the company profile, they not only provide game-playing tips, but “are also creating the surrounding environment necessary for better enjoying games by providing such services as game reviews, video streaming and a user community” (GameWith, 2021a). Significant here is the user community that it boasts as a sense of community was cited by a number of the survey respondents.

Survey Participants, Survey Methods and Summary of Questions

As for the survey itself, it was conducted from June 24th to July 1st in 2020 and yielded 3950 responses from users from the age of 10 through to over 70. It was distributed online via a Google Form and later analyzed, upon which GameWith Corporation released the results online. The purpose of the survey was to gauge the extent to which users perceived gaming was helpful for them during the early stages of the pandemic. Although the majority of the questions were closed, multiple-choice questions to gain simple quantitative data, there were “Other” options which allowed respondents to make comments or expand on their responses. The only open-ended questions were: “If you have methods of limiting or controlling your game playing time, what do you do?” and “What are some of the titles of games you played during the stay-at-home mandates?”. The remaining closed questions asked respondents about their age, gender, the amount of time they spend gaming since the pandemic started, who they usually play with, what the positive aspects of gaming were during stay-at-home mandates, and whether they thought gaming helped them during the pandemic.

Survey Interpretation Methods

While the intention of GameWith Corporation’s data analysis was to provide a simple summary of results of largely quantitative data, I wanted to take their findings a step further and examine them through a more critical lens. In order to do so, I accessed the survey data with permission from GameWith in early 2021 and began my own interpretation of the findings using concepts from Uses and Gratification Theory (UGT) which apply to gaming.

In 1973 media theorists Katz, Gurevitch, and Haas (1973), compiled a list of 35 needs of media users with both social and psychological functions, and thus sorted them into the following five categories: (1) Cognitive needs (acquiring information, knowledge and understanding); (2) Affective needs (strengthening aesthetic, pleasurable and emotional experiences); (3) (Personal) integrative needs (strengthening credibility, confidence, and status); (4) (Social) integrative needs (strengthening contact with family, friends, and the world); and (5) Tension release needs (needs related to escape, tension-release or diversion) (p.166).

Katz, Blumler and Gurevitch further developed UGT, essentially arguing that media use is active and diverse, and that the purposes of media consumption vary from person to person (1974). While UGT and the abovementioned social and psychological needs can arguably apply to most forms of media, I required a model more specific to gaming for my analysis. Therefore, I adopted the six dominant dimensions of video game motivations proposed by Sherry et al. (2006). Although debatable, the model proposes that the six dominant motivations for video game use include: (1) Arousal (games stimulate emotions); (2) Challenge (the feeling of accomplishment derived from game play); (3) Competition (gaming allows users to prove their mastery, dominance, or skills); (4) Diversion (games can be used to avoid stress or responsibilities); (5) Fantasy (video games allow users do things they cannot possibly do in real life); and (6) Social interaction (games allow social interaction) (Sherry, et al. 2006, p.218). While the cognitive needs described by Katz et al. are not explicitly listed in this model, I argue that the cognitive processes involved in mastering a game and its strategies are represented in the category “Competition”. Thus, based on these six key motivations, I analyzed both the processed and raw data to ascertain the various gratifications users derived from gaming during the initial COVID-19 outbreak in Japan.

Findings and Analysis

1. Arousal

As noted, the first motivation, arousal, simply refers to the stimulation of emotions. Aside from media studies scholars, psychologists and behavioural scientists have also acknowledged that games elicit positive emotions. For instance, “puzzle games have been empirically shown to trigger positive emotions”, and that “individuals consciously turn to these games to regulate their emotions” (Granic, Lobel, & Engels, 2014, p.72). Renowned game designer and author Jane McGonigal also argues that some of the most intense positive emotional experiences are triggered while playing video games (McGonigal, 2011). Thus, when considering the ways in which games were effective (or beneficial) during the stay-at-home orders, it is unsurprising that the majority of respondents agreed that games were a means of stress relief or a way to alter one’s mood (see Figure 2).

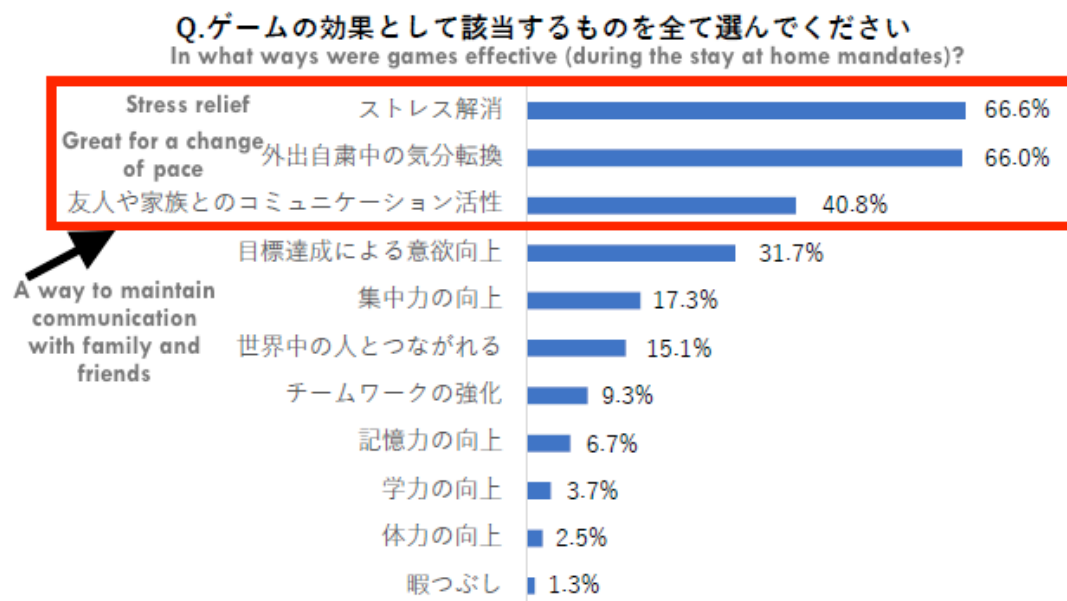


Figure 2: GameWith Survey Question 6

Furthermore, the survey also found that the most popular games among respondents were as follows: (1) *Monster Strike*, (2) games belonging to the *Pokémon* franchise, (3) *Fortnite*, (4) *Animal Crossing*, and (5) *Puzzle and Dragons*. While *Monster Strike* and *Puzzle and Dragons* incorporate elements of puzzle games, *Pokémon* (mostly an RPG involving battles), *Fortnite* (a battle royale survivor game) and *Animal Crossing* (a simulation game set in a village) arguably evoke a range of emotions. For instance, emotions can range from fear and frustration in trying to survive in *Fortnite* and *Pokémon* to joy and satisfaction from making friends and catching bugs to get daily rewards in *Animal Crossing*.

2. Challenge

One of the primary reasons for game play is undoubtedly the desire for a challenge and the associated feeling of accomplishment derived from it. For Granic, Lobel, and Engels, games continuously provide new challenges for a reason. That is, as soon as a player masters one task, “the rules change drastically, frustrating players and often triggering anxiety while also forcing players to “unlearn” their previous strategies and flexibly switch their appraisal systems to uncover the new rule structure” (2014, p.72). In turn, this may promote “the ability to flexibly and efficiently reappraise emotional experiences, teaching players the benefits of dealing with frustration and anxiety in adaptive ways” (2014, p.72). In the context of an unprecedented pandemic where we have had to unlearn our previous ways of living and adapt to the “new normal”, it is easy to see how games, with their ever-changing rules and strategies, might simulate or reflect real-world situations. In a sense, overcoming these new simulated challenges may be therapeutic. As Figure 2 illustrates, 31.7% of respondents thought that games increased their desire to reach goals and thereby feel a sense of accomplishment. This need to feel challenged and successfully accomplishing a task is something that life in lockdown could not offer for many. This was evidenced with the rise of baking and gardening as hobbies which allow one to observe progress, be challenged and accomplish something. Whether attempting a new level in a puzzle game or learning how to fight with a newly acquired monster in *Pokémon*, I argue that constantly adapting to new challenges in game play during a pandemic was both therapeutic and reinforced the importance of developing coping strategies to overcome challenges.

3. Competition

While the aspect of competition was not explicitly mentioned by respondents as one of the gratifications they derived from gaming during the early stages of the pandemic, the respondents' choice of games seems to suggest a subconscious desire for competition. As multiplayer and MMOG (massively multiplayer online game) games, *Monster Strike*, *Pokémon* and *Fortnite* rely on teamwork for players to advance in competitions or challenges. Notably too, after *Puzzle and Dragons*, the sixth and seventh most popular games were *Fate/Grand Order* (a combat game) and *Apex Legends* (a battle royale game). Whether challenging a gym leader in *Pokémon* or fighting to survive or remain in the game in *Apex Legends* or *Fortnite*, some level of competition is involved. What is interesting, however, is that 9.3% of the respondents in the survey believed that strengthening teamwork is one of the beneficial aspects of gaming. One could infer that although there are common goals and a sense of competition in some of the abovementioned games, being competitive in a team is perhaps valued more than individual effort by Japanese gamers. Whether this is related to the idea that Japan has a collectivist society is debatable, but what is significant to note is that it has been argued that players of violent games that encourage cooperation are more likely to exhibit helpful gaming behaviours online and in daily life than those who play nonviolent games (Ferguson & Garza, 2011). What this overall signifies is a need for massive cooperation to defeat a common enemy or reach a common goal. In the context of a global pandemic, this may signify the mass cooperation of citizens to curve the spread of COVID-19 and defeat what might be considered a common enemy. Cooperative competition, it seems, was valued by the respondents in the survey.

4. Diversion

As evidenced in Figure 2, the top two benefits of playing games during the early stages of the pandemic were that games functioned as a means of stress relief and a way to alter one's mood. At the end of the table, the response “暇つぶし”(to kill time) was also given by 1.9% of respondents. If diversion in the context of gaming indeed refers to the practice of playing games to avoid stress of responsibilities, then the survey results indicate that gaming as a diversion from stress was one of the greatest gratifications for respondents during the stay-at-home periods in early 2020. This is also reflected in the choice of games. To elaborate, rather than time-consuming RPGs such as *Final Fantasy* or *Assassin's Creed*, puzzle games or games such as *Animal Crossing* can be easily stopped and resumed. However, the multiplayer or MMOGs (such as *Monster Strike*, *Fortnite* and *Apex Legends*) which were popular amongst respondents demand not only one's time, but one's commitment. That is, if your team is relying on you for support to advance in the game, it can be difficult to put the game down and consequently let the team down. While this could potentially lead to problematic gaming, under strict stay-at-home orders, gaming as a distraction needs to be recognized for its therapeutic effects. Clinical psychologists have also noted that games:

shift attention from whatever is disturbing a player's mind-set to the external, physical stimulus of the game. Like traditional grounding and mindfulness exercises, this shift helps calm the nervous system, and unlike other escapist activities such as watching a movie or television show or reading a book, video games are immersive. They fully engulf and distract the mind from worries and stress. (Wiederhold, 2021, p.1)

If we use the discourse of mindfulness to approach and understand gaming as a means of diversion, perhaps it also becomes easier to acknowledge the therapeutic attributes.

5. Fantasy

In game studies discourse, fantasy generally “involves trying our new activities/identities in virtual game worlds which are not possible in everyday life” (Marino et al., 2020, p.618). Whether one assumes the role of a character in the game world or simply engages in activities that are simply not viable in one’s real life, the fantasy aspect of gaming satisfies one’s needs or desires to temporarily depart from the mundane or ordinary and invites players to explore, achieve, and succeed in the virtual game world. While the respondents in the survey did not explicitly mention or refer to the fantasy element of gaming, the aforementioned games which the respondents overwhelmingly favoured perhaps indirectly indicate that the respondents sought some degree of fantasy in game play. In 2020 when anything from travelling overseas to meeting friends became mere fantasies, even taken-for-granted aspects of daily life could be considered a fantasy when in lockdown. While some enjoyed defeating monsters or dragons in *Monster Strike*, *Pokémon* and *Puzzle and Dragons*, others enjoyed the simple pleasures of gardening or catching bugs in *Animal Crossing*. On the other hand, battle royale games such as *Apex Legends* or *Fortnite* perhaps tapped into our deeper anxieties and desires during the pandemic—a will to defeat a common enemy and to stay alive. While this may uncannily reflect the reality of 2020, the gap between reality and the virtual game worlds of *Apex Legends* and *Fortnite* is the presence/absence of weapons. Being shooter games, players in *Apex Legends* and *Fortnite* are armed with weapons which are used to defeat enemies. However, in early 2020 there were no available means to defeat what was slowly becoming a universal enemy for citizens worldwide. Being armed, having weapons and essentially power to eliminate an enemy was, I argue, the element of fantasy which struck a chord with not only many of the GameWith survey respondents, but players worldwide.

6. Social interaction

When social settings and occasions shifted online due to restrictions on movement in most countries in the early stages of the pandemic, taken-for-granted office chit-chat and catching up with friends over a beer or coffee were no longer options for some. In Japan, for students or singles living alone or away from home, the initial stay-at-home orders were particularly challenging. In early 2021, the situation reached the point where Japan eventually appointed its first minister with the specific role of “combating the country’s loneliness and isolation crisis that has exacerbated during the coronavirus pandemic” (Ryall, 2021). While messaging and video calls provide some relief, people’s availability, response time and willingness to use online communication tools varies. While games are by no means the ultimate solution to this problem, the vast amount of people engaged in social multiplayer games at any time of the day means that someone somewhere is always available to interact with. GameWith’s survey results (see Figure 2) also reinforced the importance of social interactive functions of games with 40.8% of respondents agreeing that games were a means to maintain communication with friends and family. Another 15.1% of respondents noted that one of the other benefits of playing games was being able to connect with people all over the world. Figure 3 (Question 7 in the survey) further confirms whom the respondents mostly enjoyed playing with.

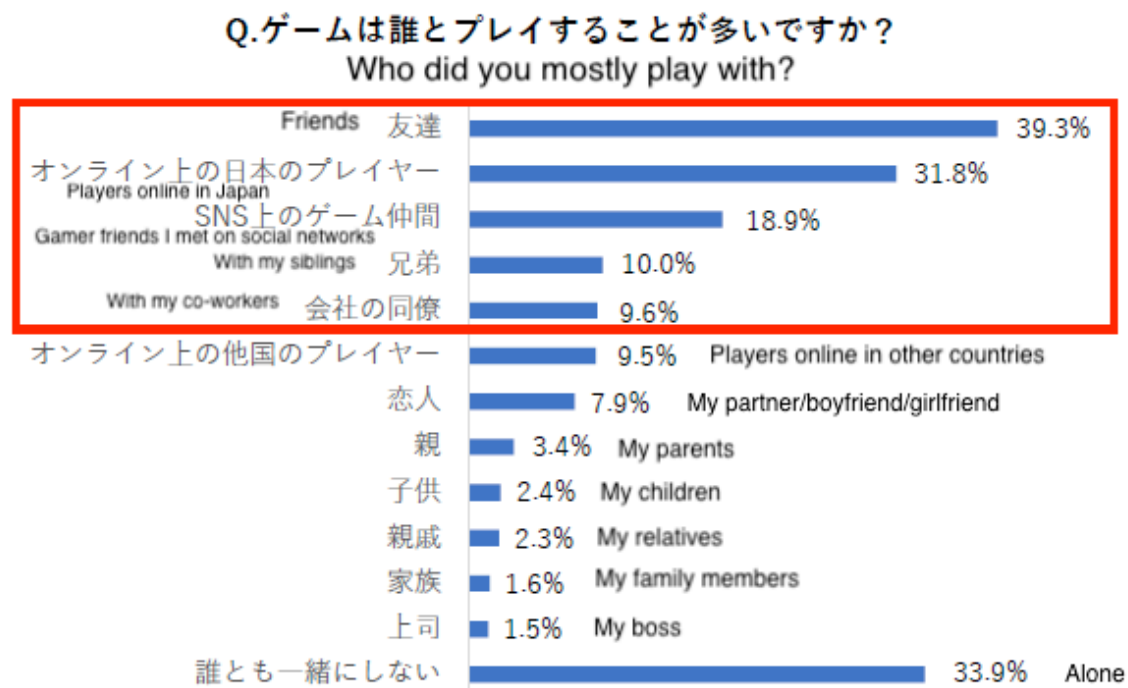


Figure 3: GameWith Survey Question 7

Although playing with friends or alone seemed to be the most common responses, over 40% of respondents reported to have played with fellow players of the same games both in Japan and worldwide. An additional 18.9% of respondents played with gamer friends whom they had met over social network platforms. What this indicates is the importance of a dedicated online gaming community which is usually present and “there for you” when immediate family members, co-workers or friends may not be able to be. Needless to say, these relationships and social interactions through games can range from superficial to significant. However, the sense of belonging, being part of team, and having common goals cannot be dismissed.

This need for social interaction was also reflected in the fact that the five most popular games amongst respondents were multiplayer games. Aside from excessive screen time, games like *Monster Strike*, *Pokémon* and *Puzzle and Dragons* hardly get criticized from concerned parents. However, battle royale games *Fortnite* and *Apex Legends* are often dismissed as being too violent or accused of encouraging violent behavior. Some psychologists have acknowledged that games like *Fortnite* are “fairly bleak” in the sense that players fight it out in a battle royale until only one is left alive. On the other hand, they have also acknowledged that these games provide “an unusual social media network – a place where friends can come together with a common interest, catch up and play to relax and unwind” (Etchells, 2021). Moreover, a large-scale U.S. study found that teens who played games with civic experiences (such as the MMOG *Guild Wars 2*) were more likely to be engaged in social and civic movements in their everyday lives (Lenhart et al., 2008). Whether menial or meaningful, I argue that these game-facilitated interactions satisfied people’s needs for otherwise taken-for-granted office chit-chat or catch ups with friends that were no longer viable. Thus, rather than dismissing such MMOGs as violent or addictive, they ought to be reevaluated as platforms for meaningful social interaction which encourage cooperative competition and teamwork.

Conclusion

With the future still unclear and circumstances changing on a daily basis, the coping strategies we developed in 2020 to deal with the drastic changes in our lives and livelihoods are still with us. While many industries have suffered or collapsed since 2020, the video game industry has thrived. Marston and Kowert suggest that the popularity of games during the pandemic is partly due to the fact that games are “playful, fun, interactive spaces [which] differentiates them from other forms of mediated communication, such as text messaging or social media”, and they “allow individuals to connect through play, which is an important facet of psychological well-being throughout the lifespan” (Marston and Kowert, 2020). This was indeed also reflected in GameWith Corporation’s survey findings. As I have demonstrated, the survey found that gaming not only helped alleviate stress and feelings of loneliness, but it brought people together. Depending on their needs, some players sought arousal (emotional experiences), competition (such as collaborative competition in MMOG battle royale settings), or challenges (adapting to new challenges in game play and the feeling of accomplishment derived from it). Others sought a diversion or fantasy to temporarily depart from the somewhat bleak reality of daily life in a pandemic. However, what was significant was the recognition that games function as a platform for social interaction with 40.8% of respondents agreeing that games were a means to maintain communication with friends and family members. Given the large sample size, it is possible to make some concrete inferences from the quantitative findings. One of the caveats of the survey, however, was the lack of complex, open-ended questions. Adding several open-ended questions to allow respondents to expand on their answers or provide anecdotes would have provided far greater insight into their needs, concerns and desires. Furthermore, a focus group or interviews with a handful of respondents would have also been fruitful. For instance, GameWith Corporation’s follow-up survey in June 2021 found that 69.7% of respondents agreed that playing games helped to alleviate feelings of loneliness in 2021 (GameWith, 2021b). However, without some kind of qualitative data it is difficult to gain further insight into the extent to which games, or the respondents’ use of them, helped alleviate feelings of loneliness. In any case, the pervasiveness of games as an immersive form of entertainment which brings people together is unquestionable and perhaps we may never witness “Game Over”.

Acknowledgements

Special thanks go to GameWith Corporation for conducting the survey and sharing the findings with me for this collaborative project. Their work contributes to the existing body of research which aims to spread awareness of the positive social, affective, and therapeutic attributes of gaming.

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Exploring the Intersections of Cultural Performance Practices and Wearable Technology

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Abstract

Wearable technology has seen an increase in developments over the last two decades of commercial products and devices. Some of these sectors that boast new and unique innovations in wearables include the health and medical field, military, space exploration as well as wearables being produced in the creative industries such as fashion, film, and the performing arts. These innovations owe a debt to early technology that was wild and creative for its time but has now been made possible due to human achievements in technological advancements. This research explores using existing technologies to augment or progress traditional performing arts practices that have deep historical roots. These practices include the Mevlevi or Whirling Dervishes of Turkey and Spanish Andalusian flamenco. Throughout this exploration, a device was created that is meant to be interacted with by the user/performer. It is a wearable device that can be attached to clothing or held in the palm of the performers hand and used as an extension of the body or a wearable musical instrument. The intersections between these historically rich practices become clear when analyzing movements, origins, language, spiritual connections and music. The wearable devices track and capture meaningful movements of both practices which in turn becomes a new immersive digital experience for an otherwise traditional art form.

Keywords: Wearable Technology, Sonic Art, Performance, Cultural Performance, Dervish, Flamenco

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Introduction

Developments over the last several decades have seen innovation in the fields of robotics engineering, medical and healthcare sectors, the military, commercial devices, and the performing arts. Applying technology to clothing that could serve an artistic and performative purpose opens the possibilities for speculative exploration. This could be using electronic circuits to operate on the body as mechanisms for producing a number of actions including emitting sounds by attributing gestures to them, controlling other factors such as lighting on stage, and transmitting tactile cues that inform the wearer that they have initiated an action to which something was output. Immersive experiences that utilize sound can be created as a way to allow a wearer to gain more control over what outcome their movements will make. The body can be a tool in creating compositions and as an accompaniment to other instruments on a performing arts stage or as a stand-alone act. Haptic mechanisms can also contribute to the sensory experience. The performer initiates sound that provides feedback through tactile cues. These vibrations also mimic the reverberations felt when using physical instruments close to the body. By creating devices for costumes or attaching sensor systems on the body, performers can engage with interfaces that enhance their performance. Wearable technology is a rapidly growing field of research that will continue to be in demand for use commercially.

The main focus of this research is to explore using existing technologies in creative ways by developing a device that can be embedded or attached to clothing which tracks and captures movements of the wearer and emits sounds. The inspiration for a performance piece using these sound costumes are derived from the rich cultural traditions of the Mevlevi Dervishes of Turkey and Andalusian Spanish Flamenco. These two practices have centuries-long traditions that have been deeply rooted and developed by merging and absorbing cultures to hone distinct practices that are recognizable the world over. The potential implications can lead to the preservation of cultural heritage by digitizing these movements and cultivating new performance works as well as developing more streamlined systems that can be integrated into clothing in a sustainable and practical way.

1. Developments in Wearable Technology

Humans have recently begun to integrate technology into their clothing and on their bodies for the purpose of enhance most everyday functions. Wearable technology can be defined as a category of electronical devices that are attached to the body, embedded into textiles and fabrics or even implanted onto the human skin. Seymour (2009) states that fashionable technology or wearable technology also has a purposeful function such as delivering computational data while creating meaningful design that is aesthetically pleasing. Sazonov (2014) further describes wearable technology as having components such as small computers that provide feedback to the user through various ways of communication such as sensing and processing that information through to an application.

The idea of human augmentation in wearables has been incremental over the last few decades but it is now becoming more of a reality. Raisamo et al (2019) comment that human augmentation is a means by which technology is somehow integrated through the use of wearables especially, as a way to enhance human capabilities or productivity. It is arguable that humans have already augmented themselves to a certain degree by using and carrying portable devices such as smartphones and smartwatches that transmit and deliver information at the touch of a button (Balanganur, 2020). Humans have for centuries been seeking ways of adding to or extending what is already on their bodies in an effort to minimize human labor but

also to adorn themselves with useful gadgets and devices that enhanced their daily lives (Ryan, 2014). Some of these inventions include the wrist or pocket watch, and eyeglasses up until one of the first truly wearable pieces of technology that also transported music, the Sony Walkman (Ryan, 2014).

1.2 Wearable technology applications

Wearable technology roughly falls under three main categories: consumer devices, wearables for the health sector and health-related applications, and textiles or skin-based applications that have been integrated with technology in some way (Mikhailchuk, 2017). Advancements in the health sector have provided the bulk of research being done in wearable technology but consumer products are increasingly becoming in higher demand with a market that is now flooded with a gadget for almost any need or purpose. Just about anything that can be attached to the body whether it is a ring, a hearing aid, glasses, socks, a watch, footwear or jewelry, can be connected wirelessly or through Bluetooth to feed data to a source.

Wearables are expanding into several different markets such as healthcare, sports/fitness, military, security and defence, gaming, smart homes, as well as crowd sensing/interaction. With these areas targeting consumers that are not just for a niche market such as high fashion, the possibilities of integrating technology into clothing is inevitable. Therefore, this research aims to develop and apply technology to clothing that provides an enhanced or augmented experience in the area of the performing arts by integrating technology seamlessly onto garments.

With the advent of the internet and the development of the Internet of Things wearable devices has been flooding the market of wearable consumables now for the past few decades. To be more precise, since the highly marketable Sony Walkman was introduced on 1979 (Frazen, 2014), wearable computing devices have morphed into a field that can now include anything from an Apple iPod to Google Glass and numerous iterations of smartwatches, headsets and even jewelry. These and many other commercially available products for consumer use are at the forefront of wearable technology and are gaining momentum. With the ever-changing socio-economic global climate and the advent of 5G technology, the demand for using wearable technology as a necessity for humans to function at a faster and more efficient pace will likely increase dramatically over the next 10 to 15 years.

2. Wearable Technology in Fashion, Costume and The Performing Arts

The world of fashionable wearable computing or using technology in the performing arts as it is known today may have started with the wearing of electrical diadems created by Gustav Trouvé for a dance/ballet performance of 'La Farandole' in Paris that was worn by ballet dancers in 1884 (N.A., 1884). Trouvé may have developed one of the first electrical interfaces- an example of wearable technology used in performances on stage (Sjuve, 2008). These illuminated headbands were a key innovation of their time and paved the way to incorporating small-scale electronics by integrating them into clothing or for use on the body and in the performing arts milieu (Hughes-Riley et al, 2018).

Within the last two or three decades, wearable technology has served a vast array of aesthetic experimentation on the body using textiles, conductive materials, sensors among other things, to augment garments in a way that was never thought possible. These explorations have been the result of necessary collaboration between engineers and scientists. In 2006, Philips Design

created along with fashion tech designer Nancy Tilbury, the *Skin Probe* project for which they designed two dresses: the *Bubelle Dress* and the *Frisson Dress*. Both dresses were an exploration into sensing using the body to project information or emotion onto a fabric using biometric sensors (Weir, 2007). Antic (2011) describes the project as Philips Design's prototype to test its viability in the future mainstream market of clothing that could be integrated with technology. The *Bubelle Dress* in particular was made up of biometric sensors that detect the wearer's heartrate which could then be translated as a color in the form of a bubble shape displayed by LEDs. This interplay and interaction of how wearers might conceive of using technology to relay information to their surroundings was an experiment that began to set the world of just couture fashion apart from fashion that had a function or purpose hence, wearable technology.

Costumes and fashion pieces that have been created for the stage for performing arts practice such as musical theatre, rock and pop stage shows or spectacles, circus performance among others have all begun to test the possibilities of how technology can be used to enhance garments and performances in this area.

Schneegass & Amft (2017) explain that in the last two decades, pop star performers and celebrities have been looking to enhance their on-stage performances with technology whether it be in the form of flashy LED lit costumes or perhaps even controlling certain aspects of the show's spectacle such as lighting or sound. One of the more well-known artists to explore this intersection between fashion and technology has been Lady Gaga. In 2013, Studio XO and TechHaus (Lady Gaga's technology design team) collaborated to create the *Volantis* also known as the *Flying Dress* in which she actually flew. The dress was unveiled at the launch of her ArtPop album and is created with six battery powered rotors that can lift the wearer a few feet of the ground and propel them forwards (Howarth, 2013).

Wearable technology in the performing arts must be evaluated in all fields whether it be for the stage, musical performance or in cinema. In the world of fashion technology alone, there can be many sub categories such as art-related fashion tech, high fashion tech and/or just fashion technology. There are several crossovers as well such as designers who were trained as engineers or scientists who have collaborated with fashion designers to develop new ways of implementing technology into clothing while others are focused more on the performative or entertainment aspect of using technology in clothing, costume or fashion.

Fashionable Wearables

Fashion designers have for the most part over the last three decades, embraced technology in one form or another; whether implementing technology in aspects of the fashion show such as lighting, projections, illusions, sound and other effects as well as using technology as a medium for which to create fashionable garments from. Seymour (2009) remarks that the ideal partnership of scientists/engineers and fashion designers can result in creating truly functional and aesthetically beautiful wearable computing. Fashion designers are not necessarily proficient in programming tech for use in their fashion tech design pieces therefore this union of fields is not only crucial to the output of truly operative smart garments but also inevitable. Perhaps it was the work of Turkish-born Hussein Chalayan that in the early 2000's broke ground in this area of fashion tech with his wildly innovative designs in his Spring/Summer collection of 2000 where he debuted his *Remote-Control Dress*. Sometimes referred to as the 'airplane dress' *Remote-Control* is a manifestation of Chalayan's concepts of combining architectural structures with the human body (Quinn, 2010).

CuteCircuit is a company founded by Francesca Rosella and Ryan Ganz out of London, UK. Many of CuteCircuit's designs have now become synonymous with wearable tech pop - fashion. Their brand of functional wearables has gained notoriety amongst wearable tech designers. The Sound Shirt is another immersive garment that similarly uses haptics. It was created as a piece of clothing that could replicate the vibrations of instruments being played for the hearing impaired during a concert or performance. The shirt is totally wireless without any wires or visible cables, it is lightweight and provides subtle vibrations from 30 high resolution haptic actuators (Albano, 2020). The haptics provide an immersive experience for the wearer whether or not they are hearing impaired making it a uniquely innovative design.

2.2 New Digital Musical Instruments; The performative Body

A number of digital musical instruments have evolved over time that have claimed to solidify a foothold in the field of wearable electronics for the use of creating sounds or music. The Mi.Mu Gloves are an example how wearable technology can be used to create music for composition and performance. The gloves use gesture recognition with which to create sounds using dedicated software (Glover) that is designed to allow the user to program each gesture according to how they want to map sounds to them. Sawh (2019) remarks that the gloves were designed to make composing music easier for musicians and artists especially during live performances where the gloves enable performers to be more hands-off on their instruments and more creative with their hands and gestures. Adam Stark who is the company's director and lead creative force says that the gloves are meant for people to express themselves through movement (Brewis, 2019).

The Mic Tic¹ and the Enhancia Neova² wearable MIDI ring are other examples of creating music and sounds with the body using devices that are attached or worn on the body and are controlled by gestures and movements. The MicTic comes with two arm bands – one is for the controlling hand and the other is to manipulate sounds with that have been pre-chosen from a bank of sounds or musical genres on its compatible app. The Enhancia Neova MIDI ring is like an extension of the composer's mind in that the ring can change sounds that are played on an instrument based on the gestural movements of the wearer. For example, if the user is playing a piano and would like to play a key and change the pitch slightly or use vibrato, the user enacts a gesture that reflects the different musical terms.

The possibilities of creating devices for initiating music or sounds that accompany live performances or pre-recorded pieces reveal an exciting opportunity for exploration and development. Some pioneers in the field of using technology together with dance or performance include Merce Cunningham whose 1999 performance of *Biped* interlaced elements of dance alongside digital representations of the body on a screen behind the performers using motion tracking technology (Jacobs, 2020). Birringer (2002) expressed that technology has changed the way in which relationships between humans and machines interact with one another in spaces providing new bodily boundaries yet in turn using technological advances in the theatrical arts as a significant tool for creation. These digital tools can provide the potential to create and design unique pieces of work. One of the underlying interests that are significant to digitizing body movements is the scope for recording, preserving and archiving them. This could also be of interest for examining performance practices that have

¹ <https://www.mictic.com>

² <https://www.enhancia-music.com/product/neova/>

developed over centuries resulting in deeply rooted traditions that can be augmented or progressed in a contemporary performance setting.

3.1 The Digital Dervish

The inspiration behind creating a performance piece using a wearable device is the sacred practice of the Whirling Dervishes or Mevlevi Order of Turkey. The Dervishes have had a long and ingrained history in Turkish culture for centuries. It is one of the oldest known dance/performance/spiritual practices in the world and has recently been proclaimed an intangible cultural heritage of humanity in 2005 through UNESCO³. The practice of the *sema* which is the word for the sacred ritual that the Mevlevi order practice in their ‘turning’ performances, has rarely changed over the past several hundred years.

The most formative element in the way a Dervish moves adheres to the epithet that they ascribe to: whirling or turning. The movement during a *sema* of continuous spheres sometimes for an hour, is the physical embodiment of the metaphysical connection between the ‘dancer’ and the Almighty Creator. It is the abandonment of all worldly attachments and it is focused upon annihilating the temporal self through the recitation of *dhikr* or *zkr* (Pietrobruno, 2019). There have been tales passed down through Mevlevi tradition that Mevlana (Rumi) walked passed a goldsmith hammering and he felt compelled to start turning to the rhythm of the vibrations the metal made (Feuerlicht, 1975). Feuerlicht (1975) describes that the Mevlevi have argued that the *sema* is in fact not a dance because to some, dancing is frowned upon in Islam, but that they are turning and that everything including the clothing they wear has significant meaning.

Some of the more prominent figures in current contemporary art circles globally who practice versions of the *sema* include performance artist Ziya Azazi, Isha Kurun and Rana Gorgani who can easily be found on social media sites such as Instagram. Azazi explores the repetitive nature of turning dervishes and concedes that there are not only mystical and meditative aspects to turning, but mental transformations that occur when one whirls (Choksi, 2015). Performance artist and practicing Dervish, Sercan Çelik has used technology and electronic music to enhance his version of the traditional *sema*.

Highlighting certain aspects of the *sema* and the movement that is created from it using music or sound with technology can be a way of looking at the historical tradition through a contemporary lens. The differences lie within the subtleties where the audience is able to detect that something is unusual about the Dervish costume – it is a unique message that is being communicated by different means, through an audio-visual, immersive wearable technology experience. The ideal performer will be one who is available to be open-minded about creating a contemporary version of the *sema* but who also adheres to the formal elements of the traditional practice. There are practicing Dervishes who have declined to using technology in their practice since it is their intention to preserve the *sema* in its original form without any need for adding technology, lighting, music or visual effects.

The elements to be tracked and captured with the device the ‘Sound Drop’ (of which there will be three) on the Digital Dervish Dress are the rotating patterns of the *tennure* or skirt of the Dervish, the arm and hand movements and one device will be attached to the bodice (chest area) to use as another element of interaction. A sketch of the design for Digital Dervish Dress can be seen in Figure 1.

³ <https://ich.unesco.org/en/RL/mevlevi-sema-ceremony-00100>

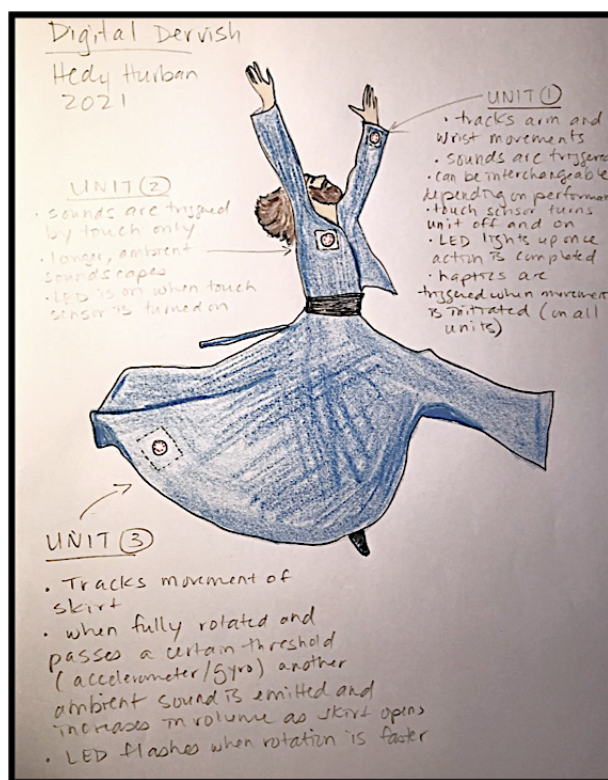


Figure 1: Digital Dervish sketch

The breakdown of intended use and how each unit will be programmed can be seen in Table 1.

Costume	Unit 1	Unit 2	Unit 3
Digital Dervish	<ul style="list-style-type: none"> • Tracks arm and wrist movement • Sounds are triggered based on gestures • Sounds are interchangeable • Touch sensors turns unit on and off • LED lights up when the action is completed • Haptics are triggered when movement is initiated 	<ul style="list-style-type: none"> • Sounds are triggered by touch only • Longer, ambient soundscapes • LED is on when touch sensor is turned on and can be turned off by touching once 	<ul style="list-style-type: none"> • Tracks movement of skirt • When fully rotated in open position and sensor passes a certain threshold, ambient sound is emitted • Sound increases in volume as skirt opens • LED flashes when rotation is faster

Table 1: Digital Dervish Units Described in Detail

3.2 Flamenco Sonic

Traditional flamenco is an expression of song, story, dance, and instrumental music usually accompanied by a Spanish guitar (*toque*), vocals (*cante*) and dance (*baile*) (Washabaugh, 1996). The practice of flamenco has also been recognized by UNESCO⁴ as an intangible cultural heritage of humanity in 2010. Flamenco is a way of making the music a visual experience and in many cases, an emotional one for both the performer and the audience. In popular culture, some of the most well-known flamenco dancers such as Carmen Amaya have dazzled the globe and introduced flamenco as a generically Spanish tradition. She was one of

⁴ <https://ich.unesco.org/en/RL/flamenco-00363>

the true leaders in the flamenco community and a world-renowned dancer. Although Carmen had a tiny frame, she commanded the stage and pounded the floorboards exhibiting her exceptional footwork – often referred to as the ‘Queen of Gypsies’ (Zatania, 2013).

One theory suggests that the word ‘flamenco’ stems from two words ‘felah-mengus’ which some claim roughly translates to ‘wandering country person’ but many Arabic speaking people contradict this loose translation and meaning (Nutter, 2020). The word is often attributed to the association with the Gitano or Gypsy Roma that originally migrated from parts of Southern India through to Europe and the Anatolian Peninsula between the 5th and 10th centuries due to the flamboyant and expressive dance they practiced with costumes of short jackets and thin legs resembling the likes of flamingos (Melegh et al, 2017).

The traditional formal elements of flamenco can be broken down by examining the generational overlaps in cultural history. The origins of the practice are blurred; most flamenco is associated with the Andalusian region of Spain but it’s roots may have come from further afield since the song traditions that influenced Gitano music in the Middle Ages were established by Islamic, Jewish and Christian traditions (Washabaugh, 1996). According to Akombo (2016) flamenco can be attributed to Gypsy culture which dates back eight centuries and specifically to the descendants of the Moors in that region of modern-day Spain. Totton (2003) suggests that the dance developed from the melting pot of cultures and descendants of Greek colonists, Sephardic Jews, Christians and Phoenicians. The music and form of narrative or story-telling began developing among these various cultures and the Gypsies who would perform with and amongst the Moors and the Jews shaped what is known as flamenco music today (Akombo, 2016). Leblon (1994) remarks that migrations from India through Persia of Gypsy people around the 5th century contributed to the development of the Romani language as well as the intermingling of musical cultures that they brought with themselves. As well as developments in song and body movements practices, musical instruments such as the *tambura*, a stringed instrument with a wide wooden base, the *cymbalom* (in Hungarian *cimbalom*), a stringed instrument played by using mallets, and the Persian *ney* or *nay* which is a reed instrument, were also experimented with throughout the Eastern and even Western European countries via the silk road (Leblon, 1994). Hayes (2009) writes that flamenco has become somewhat of a national identity of Spain and Spanish cultures but the Gypsies have also claimed it as a form of civil rights activism due to its origins.

Flamenco has garnered an incredibly visible sensibility in its form and associations that it has become recognizable almost the world over. The distinctive costumes and dresses worn by female dancers with large flowers worn in the hair and colorfully polka-dotted layered and ruffled dresses and shawls to the tightly fitting bolero jackets and trouser with crisp white shirts traditionally worn by men, flamenco can quickly be associated with something Spanish or of Latin origin. Many iterations of flamenco have also been explored in many different cultures but in pop culture as well. Assimilating within other cultural practices, the dance formation, costume and overall atmosphere of a flamenco performance has been seen in many different areas of film, television among others.

Some contemporary and well-known performers such as Macarena Ramirez and Israel Galván have cultivated their practice out of the need to contemporize or modernize traditional notions of flamenco. While Ramirez performs pure flamenco, she has also embraced new techniques and technologies to implement into her practice. Similarly, Galván who is considered to be one of the greatest flamenco dancers of all time, push the boundaries of how this practice can be augmented by using exterior elements such as sound and lighting to accompany his practice

with. Pure flamenco is a self-contained unit; it needs no reformation or alteration however, this branch of contemporary flamenco has used methods of augmenting the practice by inviting artists, musicians and dancers from other disciplines to interpret flamenco dance narratives.

The Flamenco Sonic Dress will be outfitted with the Sound Drop device using three separate units as with the Digital Dervish Dress as can be seen in Figure 2. One device will be worn on the wrist, one on the bodice or the hips and the third near the ankle.

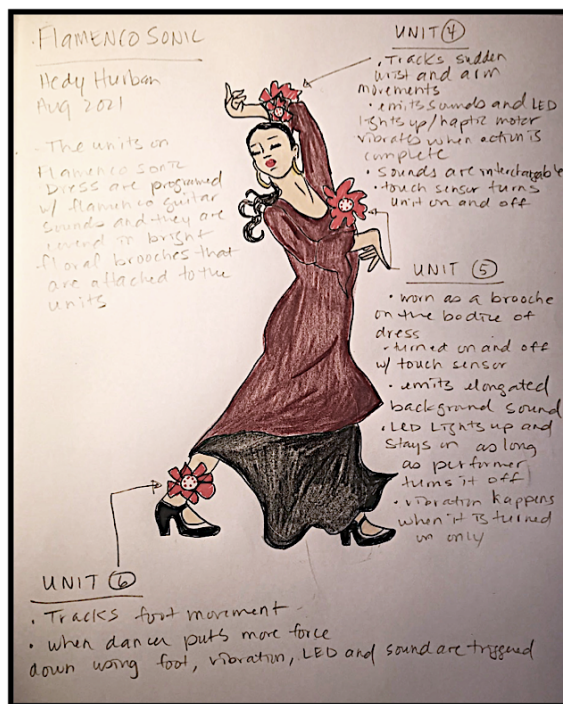


Figure 2: Flamenco Sonic

The movements and gestures will be emphasized according to how the dancer steps or uses the touch sensors on the devices. Each device will vibrate once the action has been completed alerting the user. The following table describes the use of the devices to be worn on the Flamenco Sonic Dress.

Costume	Unit 4	Unit 5	Unit 6
Flamenco Sonic	<ul style="list-style-type: none"> Tracks sudden wrist and arm movements Emits sounds (based on flamenco guitar) LED lights up when action is completed Haptics vibrate to cue wearer that action has been made Sounds are interchangeable Touch sensors turns unit on and off 	<ul style="list-style-type: none"> Worn as a brooch on the bodice of dress Turned on and off with touch sensor Emits elongated sound samples which finish, or can be looped LED lights up and stays on as long as performer turns it off Vibration initiated when it is turned on only 	<ul style="list-style-type: none"> Tracks foot movement When dancer puts foot down with greater force, vibration, LED and sounds are triggered

Table 2: Flamenco Sonic Units Described in Detail

4. Morphing the Dervish and Flamenco with Wearable Technology

Throughout this research, interesting links and connections have been made between the practice of the dervish and flamenco dance. There has been exciting cross pollination of music and dance style and practices from the southern regions of Spain through to Turkey for centuries. These influences between cultures bring together possibilities for exploring new performances while enhancing them with technology.

Some of these possibilities lie within the musical forms of both Spanish flamenco and classical Turkish music. When flamenco is performed as a Bulería, the song that is sung can be very expressive and emotional often with elongated and drawn out stanzas that carry on into exaggerated trills. It is the most fast-paced rhythmic form of flamenco using light-hearted banter, mockery, back and forth dialogue between singers, accompanied by *palmas* (hand clapping) and guitar (Andaluz, 2019). Similarly, many Mediterranean/Arabic song styles are performed using improvisational *maqam*, whether reciting Islamic prayers or poems, the melodic musical style is often interpreted as the musicians perform made up of invented melodies that are adapted to pre-existing rhythms (Touma, 1971).

The links between the two distinct practices will become clearer when the two performers begin to make contact. A fusion of music and movement will result in a performative piece using a bespoke device created to augment these practices in a contemporary performance setting.

4.1 The *Sound Drop*

The wearable device– the *Sound Drop* is created as a tool for augmenting body movement performances. The concept was to build a contained device that was completely wireless and communicates to a computer system via Bluetooth. There were several iterations of the device the first of which were compiling the components into sections and sewing them into fabric swatches to be then sewn as a patch onto a costume. It was found that after some testing, the sensors and battery within a fabric patch were inaccessible, awkward and not streamlined. Further testing proved that a small device could be built using the 3D printing of a casing that was designed to house all of the components which included an Arduino Nano, a gyroscope/accelerometer, touch sensor, 3.7-volt Lithium ion battery, a Bluetooth module and power boost charger as well as a haptic motor and twelve neo-pixel ring sensor. The design of the *Sound Drop* initially inspired by a flower bud and then morphed into a drop shape which is a smooth, organic representation of a drop of water. It fits inside the palm of the hand or onto other parts of the body via Velcro straps attached to the back of the casing. Various 3D printed versions using standard polyvinyl were created until an ABS-like resin was used to test the model as seen in Figure 3. The version on the far right (grey) is the preferred material. It was found that the resin prototype proved to be the most suitable design due to its slight pliability and smooth texture after being cured.

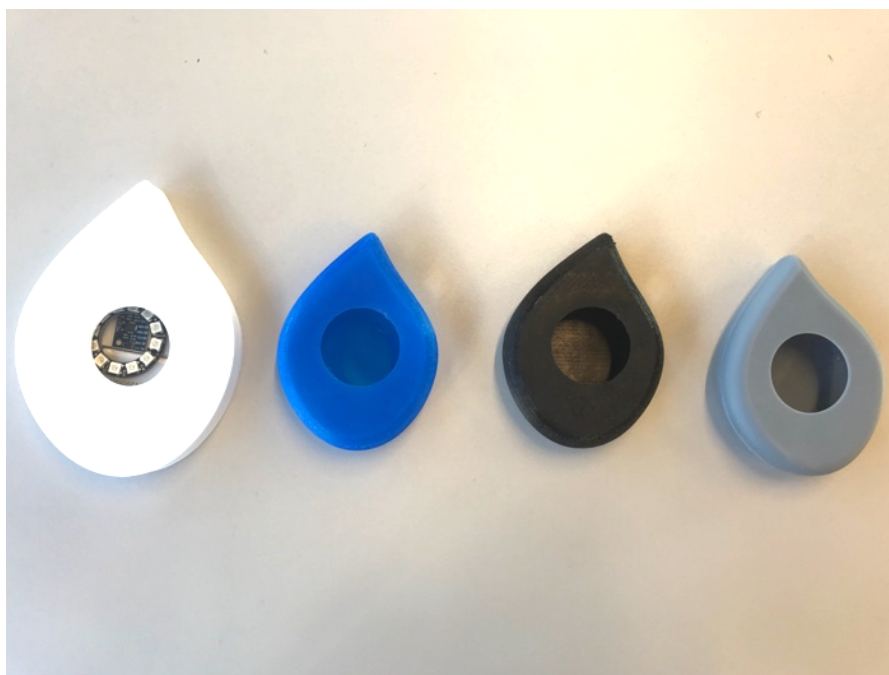


Figure 3: Variations of *Sound Drop* 3D printed in Polyvinyl and Resin

The *Sound Drop* is programmed to react to movements or gestures of a performer. The device reacts when a threshold is met whereby the LED neo-pixel ring is initiated along with the haptic motor. The wearer can feel the subtle vibration of the device which acts as a tactile cue that informs the wearer that the action has taken place. This responsive interaction allows the performer to create subtle sounds that are programmed to each module thereby layering sounds that accompany a pre-composed piece of music for the stage. All of the sounds that have been used in each of the units have been pre-programmed using digitally composed sound samples that can be interchanged. The device works using Max/MSP to read the incoming Bluetooth data of the Arduino Nano and processes the data to create variations on the pre-programmed sounds. The sounds themselves are representative of Turkish instruments traditionally used in classical Turkish music as well as sound samples that have manipulated of Spanish guitar. The accompanying piece is a chord progression of ambient electronic soundscapes.

The final design was printed in clear resin with the intention of having the components visible as a hybrid physical and digital object. The *Sound Drop* in its final form with the circular LED ring lit in the translucent resin can be seen in Figure 4.



Figure 4: The *Sound Drop*

Conclusion

This research has observed the developments in wearable technology over the last few decades and how these advancements contribute to the possibilities for use of wearable technology devices to enhance or augment performance practices. The study has also adapted the historically rich traditions of Flamenco and the Whirling Dervishes of Turkey by intertwining them into a performance setting where a narrative can be used to bring the two practices together in an immersive audio-visual work that augments the traditions by using bespoke devices that track certain movements or gestures to which sound is attributed. These intersections of cultural performance practices can be further explored by investigating other body movement/dance traditions globally. This study can also lead to the preservation of intangible cultural heritage by digitizing and capturing movements. Future implications of the development of the Sound Drop can lead to producing devices that are smaller, streamlined and consumer accessible and marketable to be used as external musical composition tools or to be used to enhance performances in theatre, dance, opera, musicals and other forms of stage entertainment.

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Photography: A Potential Tool for Self-actualization of International Students during Pandemic

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Abstract

The outbreak of Covid-19 pandemic since 2020 has resulted in drastic changes on the campus life and limiting social activities. At Tokushima University, most of the regular exchange activities for international students have been abolished for the time being. As an alternative, a photography contest had been conducted during December 2020. This contest was open to all international students at Tokushima University as an opportunity to show moments of their life during the pandemic. An analysis was conducted on the photos, descriptive texts, and feedback forms after the contest. The photographic works were analyzed by photo element analysis. The description text was analyzed by a sentiment analysis tool. The photos, considered as artworks, conveyed motives and feelings reflecting internal selves which had been further clarified by descriptive text containing more informative details. Restrictions in work, travel, socializing caused some changes, but the negative impacts are going to be neutralized by internal self-adaptation. The results have shown that photography could be a potential tool for self-actualization of international students, and photo contest could be used as an effective approach to involve international students during the pandemic.

Keywords: Covid-19, International Student, Photography, Photo Contest, Sentiment Analysis

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Introduction

Covid-19 pandemic has made a serious impact on the higher education sector in Japan (Murata, 2021), especially on international students' academic life (Tanno, 2020). The education activities are forced to undergo changes such as switching to online mode, restricting communication, and limiting social activities. At the higher academic institutions, all kinds of interactions including extracurricular activities and international exchange activities were cancelled. In this paper, we talk about Tokushima University – a national university located in Shikoku of Japan. Like other higher education institutions during the pandemic, regular activities for international students, including Japanese culture fieldtrips, summer schools, multicultural exchange events, Japanese culture events have been abolished for almost two years. After almost a year into the pandemic, by the end of 2020, a photo contest has been introduced to push up exchange activities for international students.

Photo contest has been used as a relatively simple but effective tool for cultural exchange and promotion. Some institutions in Japan, such as Nippon Photography Institute or Tokyo International Exchange Center have been using photo contests regularly to attract involvement of students, including international students in some cases in the past (Nippon Photography Institute, 2020). Since the Covid-19 outbreak started in 2020, photo contest, because of its nature, becomes even more popular kind of activity among educational institutions (Kagawa University, 2020).

The photo contest was held with the aim to encourage international students and foreign researchers to use photography to show what they have been experiencing during the Covid-19 pandemic and how they have been coping with the restrictions of daily life and campus life. The photos successfully selected were being displayed at an exhibition in December 2020. We already reported results of qualitative analysis of the text data using QDA Miner Lite (Provalis Research). In our previous report, the data have been coded under four major categories including restriction, enjoyment, self-confidence, motivation, then being analyzed accordingly (Tran, 2021).

In this report, we show the results of data analysis using different sentiment analysis approaches. These results further aim to clarify the sentiment of underlying messages by the international students who participated in the photo contest. This could help to understand the needs and to design more suitable international exchange activities for the future.

Method

The data for analysis was collected from the following sources: (1) photographic works submitted by international student-participants; (2) accompanying title and descriptive text; (3) feedback forms of the participants. Figure 1 shows the sample of photo and accompanying text which has been given to the participants for preparation.

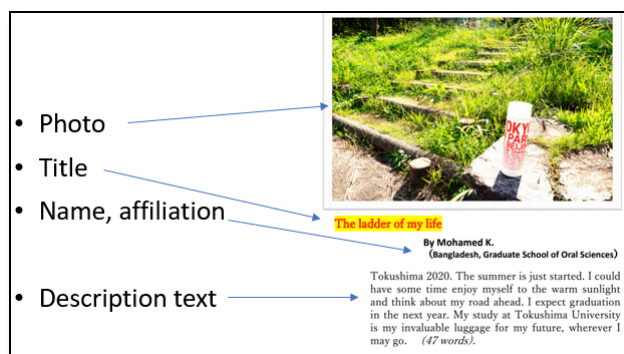


Figure 1: Sample of Data to Be Submitted

We conducted a visual photo element analysis of the photographic works according to common criteria as shown in Figure 2 (Dhan, n.d.; National Archives, n.d.).

<input type="checkbox"/> Portrait	<input type="checkbox"/> Panoramic	<input type="checkbox"/> Focus
<input type="checkbox"/> Landscape	<input type="checkbox"/> Posed	<input type="checkbox"/> People
<input type="checkbox"/> Aerial	<input type="checkbox"/> Candid	<input type="checkbox"/> Objects
<input type="checkbox"/> Action	<input type="checkbox"/> Documentary	<input type="checkbox"/> Activities
<input type="checkbox"/> Architectural	<input type="checkbox"/> Selfie	<input type="checkbox"/> B&W
<input type="checkbox"/> Event	<input type="checkbox"/> Other	<input type="checkbox"/> Color: warm/cool
<input type="checkbox"/> Family		<input type="checkbox"/> Day/ Night
		<input type="checkbox"/> Out/Indoor

Figure 2: Photo Element Analysis

Concurrently, we analyzed the text data collected from photo descriptions by using Sentiment Analyzer, a free web tool (Soper, n.d.-a). As the tool works only with English text, the Japanese text data were translated into English. After inputting the descriptive text, the tool automatically shows score which describes overall sentiment, tone, emotional feeling of input text. The score is displayed in a range from (-100) to (+100), whereas (-100) indicates very negative/serious sentiments, while (+100) shows very positive/enthusiastic sentiments. Word cloud was created using the combined English description text data of all photos (Soper, n.d.-b). Data from post-contest feedback forms from participants are being analyzed qualitatively.

Results

Characteristics of Participants

On November 2020, the total number of international students and researchers who are enrolled at TU was 192 persons from 23 countries and territories. However, there were only 11 participants, making a participation rate at 5.7% (11/192). The participants were from 9 countries (Bangladesh, Thai, Latvia, China, Vietnam, Korea, Mongolia, Philippines, India), which make the country participation rate of 47.8% (11/23). There were more female participants (8/11) than male (3/11).

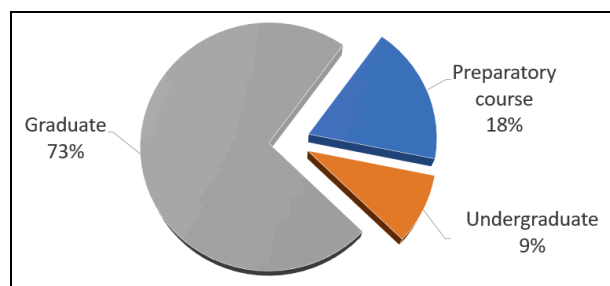


Figure 3: Enrollment Type of Participants

Figure 3 shows characteristics of participants by enrollment type, whereas 18% (2/11) were students in preparatory course, 9% (1/11) were undergraduate students, 72.7% (8/11) were graduate students. By the language of photo description submitted, 18% (2/11) of participants were submitted in Japanese by students from Korea and China, while 82% (9/11) were submitted in English.

Photo Element Analysis

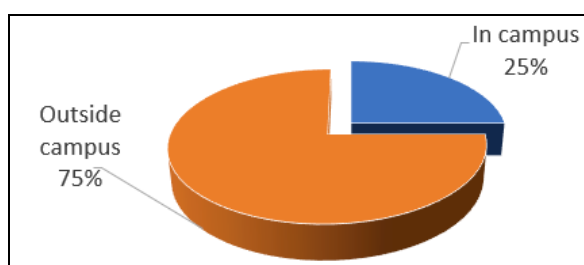


Figure 4: Place Where the Photo Is Taken

Figure 4 shows if the photos were taken inside the university campus. Unsurprisingly, only a fourth of photos were taken inside campus. This percentage may reflect that the participants may have been spending more time outside the campus during pandemic.

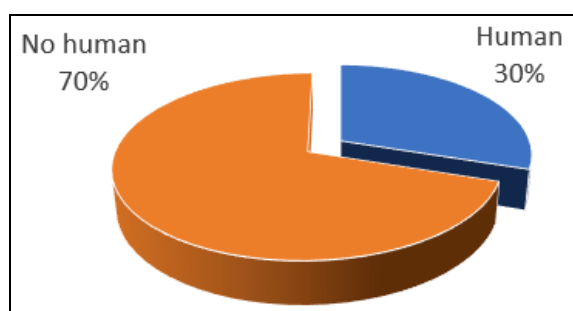


Figure 5: Human as a Subject of the Photo

Figure 5 shows percentage of the photos where human is at the focus. Less than a third of the photos were taken with human may reflect the sentiment that the participants may have been spending more time alone without human interaction and face-to-face contact with people. All the photos with human subjects were posed, including two portraits. No selfie was submitted.

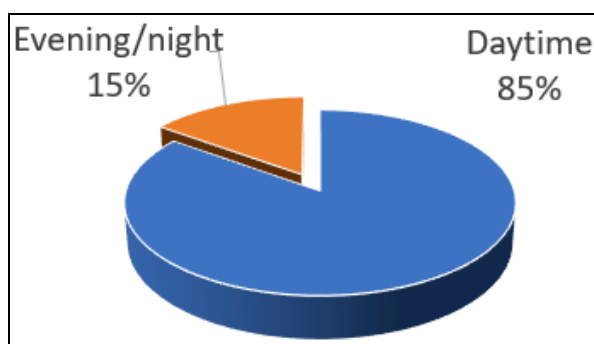


Figure 6: Time When the Photos Were Taken

Figure 6 shows the time when the photos were taken. Interestingly, 85% of photos were taken daytime. This percentage may reflect that the participants may have been spending more active time during the daytime.

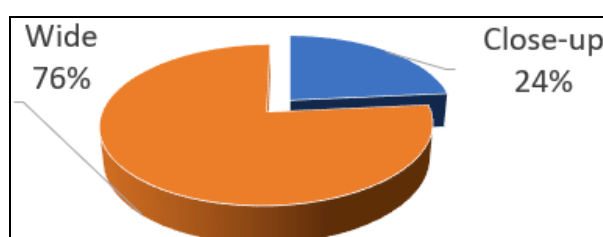


Figure 7: Angle of the Photos

Figure 7 describes the angle by which the photos were taken. Most of the photos were taken with wide angle while less than a fourth of the photos were taken close-up. This percentage may reflect that the participants may have been spending more active time outdoor or in wide spaces. Besides the characteristics described above, all the photos except one were submitted without any editing. Minimal montage was found in a photo without any sign of changing image quality. All participants reported beginners with no prior involvement with photography. Most of the photos were reported to be taken with smartphone.

Sentiment Analysis of the Description Text

Table 1: Sentiment Analysis Results

	Total (N=19)	Male (6)	Female (13)
Very positive	11	2	8
Very negative	5	2	4
Quite positive	2	2	0
Quite negative	1	0	1

We ran the auto-code sentiment analysis using the descriptive text submitted by participants for the input. The application automatically gave sentiment scores which reflects the overall sentiment, tone, or emotional feeling of input texts. The scores given range from -100 to +100, where -100 indicates a very negative or serious tone and +100 indicates a very positive or enthusiastic tone. In this study, for interpretation of the results, we assigned scores +/- 80~100 as “very” positive/ negative and +/-50~<80 as “quite” positive/ negative. Out results are shown as Table 1.

students come to Japan alone facing new things and learning new things from manga to traditional arts, from cooking to disaster prevention, from laboratory experiments to research methodology. Some text inferred fighting spirit as a tool to reflect their determination to solve the problem, while realizing difficulties and own weaknesses. During the pandemic, some realized about the need of knowledge and skill on disaster prevention, as finding oneself and relying on oneself is an important step to becoming independent, able to struggle alone is a part of self-development process. Motivation for studying a new thing without procrastination was well expressed in the text. Japanese language seems to be the biggest challenge as some text mentioned. It showed some awareness of keeping a high level of self-motivation for study. For the graduate students, spending long time doing experiment is a tedious work. Maintaining a high level of motivation is necessary for achieving research results. Some text specified how to see negative results as a future positive signal, and for keeping motivation for research, graduate students may look at the achievements of world leading scientists for inspiration.

Some similarity of the text was found among submitted texts of different participants, regardless of their background. In general, there is some life constraints during the pandemic, but international students could enjoy themselves, while building independence and self-confidence for new challenges, as well as keeping motivated for learning.

Regarding potential of photography as a tool for international students exchange during pandemic, reflection from the participants have shown that they have enjoyed the event and think that photography exercises, when conducted in the form of contest could work well during pandemic because of its simplicity. Busy with studies and experiments, some stated that they probably will not be able to participate in any time-taking event which needs long preparation. As hobbies and preferences varied widely by individual, all agreed that during pandemic, activities should be conducted online or with as less physical contact as possible. Participants agreed that via photography, they could be able to express themselves and to describe changes that the pandemic has resulted in. The photos conveyed motives and feelings reflecting internal selves which had been further clarified by descriptive text containing more informative details. Restrictions in work, travel, socializing caused some changes, but the impacts are going to be adapted afterwards.

Discussion

Regarding the methodology analysis, in this study, we intended to use the sentiment analysis approach for analysis of the image and text data. Our original purpose is to analyze the raw image data for sentiment analysis without the need to analyze the description text. The basic task of an Image Sentiment Analysis is to predict the sentiment polarity of an input image in terms of two polarity level of positive and negative (Ortiz et al., 2019). Development and application of systems for image sentiment analysis is promising (Gajarla & Gupta, 2020). However, due to difficulty to find available applications for this purpose, we used the text sentiment analysis instead. Nevertheless, text sentiment analysis is still a difficult task because it involves human emotions. It has been reported that even if the sentiment analyzer were a perfect tool, as a human being you would likely only agree with its conclusions about 80% of the time (Soper, n.d.-a). The tool we used was a general-purpose sentiment analysis tool for text written in the English language. The application uses algorithms of linguistics and text mining to automatically determine the sentiment or affective nature of the text being analyzed. The overall sentiment score produced by this tool is for general-purpose use, then it may have disadvantages regarding accuracy and bias.

Regarding the impact of pandemic on academic life of international students, we have found similar findings with our previous analysis by four categories including restriction, enjoyment, self-confidence, and motivation (Tran, 2021). There has been some evidence that a portion of international students have had to discontinue study plan, change the study pattern, change the lifestyle pattern, or even may not have been able to return or to find a job. While Covid-19 seems to be a macro factor that strongly affect the sentiment, within the framework of this study, the evidence is still insufficient, so we leave it to a future investigation.

Regarding potential of photo contest which uses photography to involve international students, there have been many previous examples of conducting successful events. Before the outbreak of Covid-19 pandemic, many institutions have used photography contests as a form of exchange activities. For example, Tokyo International Exchange Center has been holding photo contest on regular basis, with a goal to deepen exchanges between international students, Japanese students, and staff. These contests have attracted high number of participants and visitors to the Exhibition, as well as many Likes via Facebook (JASSO, 2019). Similarly, Nippon Photography Institute organizes regular photo contests to attract potential students, giving scholarship to the winners (Nippon Photography Institute, 2020). Iwate International Student Exchange Promotion Council also holds regular photo exhibitions for international students enrolled in Iwate prefecture. The contests in Iwate aim at promoting images of Iwate prefecture (Iwate International Student Exchange Promotion Council, 2020). Even during the pandemic, students are being able to enjoyed photo contest during the pandemic (Kagawa University, 2020). Often, these contests are being supported partly by local organizations and companies. The results of our analysis also have shown that photography could be a potential tool for engaging international students and increased their resilience during pandemic. The international students who arrived during 2020 are lacking opportunities to be in touch with Japanese culture, local culture, exchange events among many other things. Besides photo contest, the participants suggested and expected that more events could be provided to them.

Limitations of this study is laying on the low participation rate and difficulty to make students of more senior years to be engaged. At 5% participation rate among international students, the results of this photo contest could not be representative for the whole international contingent and biased generalization. From the technical viewpoint, using more sophisticated tools for image sentiment analysis along with text analysis might be expected to produce better sentiment analysis results. It could be also more meaningful if we could collect more characteristics such as duration of stay in Japan, Japanese proficiency, nationality, scholarship status, age, gender etc. for correlation analysis.

Conclusion

The outbreak of Covid-19 pandemic has made significant impacts to international students in Japan. Results of image elements analysis has indicated some signs of impacts such as social distance. Results of text sentiment analysis has shown very positive sentiment scores, which are consistent with our previous qualitative analysis conducted by four categories including restriction, enjoyment, self-confidence, and motivation. However, while Covid-19 seems to be a macro factor that strongly affect the sentiment, the evidence is still insufficient, so we leave it to a future investigation.

The results of this study have shown that photography and photo contest as a kind of activities could be an effective approach to involve international students during the pandemic situation when it is not possible to conduct the traditional face-to-face exchanges events. The outbreak of Covid-19 has resulted in drastic changes on the campus life. Students could express themselves via photograph. The photos conveyed motives and feelings reflecting internal selves which had been further clarified by descriptive text containing more informative details. Restrictions in work, travel, socializing caused some changes, but the negative impacts are going to be neutralized by internal self-adaptation. Photography could be a potential tool for self-actualization of international students. Photo contest could be used as an effective approach to involve international students during the pandemic.

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Droids and Peasants: Akira Kurosawa's Thematic Influence on the Star Wars Saga

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Abstract

Following the international success of *Rashomon* (1950) and *Seven Samurai* (1954), Akira Kurosawa's films came to exemplify Japanese cinema to western cinemagoers and had "a significant influence on many international auteurs and genres" (Russell 2011). Most famously, George Lucas admits to basing the storyline for the original *Star Wars* (1977) upon *The Hidden Fortress* (1958), with its swordfights, rescued princess, and warriors' code of honour. Lucas mimicked Kurosawa's visual style, too, in pointing the camera at the sun, employing 'wipes' between scenes, and even dressing Darth Vader in a *kabuto*-style helmet. While these superficial similarities have been well-documented, Kurosawa's enduring influence over the major themes in the entire 11-film *Star Wars* saga has been discussed far less. Donald Ritchie (1965/1998) wrote that, above all else, Kurosawa's films "are about character revelation," and this thematic core is prevalent throughout the series, from Darth Vader's famous declaration to Luke Skywalker in *The Empire Strikes Back* (1980) to Kylo Ren's emotional transition in *The Rise of Skywalker* (2019). Additionally, due to the contribution of screenwriter Lawrence Kasdan (who calls Kurosawa "the Shakespeare of movies"), the franchise echoes Kurosawa's predilection for showing flawed characters hiding secret pasts. This paper will discuss some of the ways that Akira Kurosawa's work has influenced *Star Wars* – in terms of narrative, themes, and visual style – and will argue that, through the enduring popularity of the saga, Kurosawa's work continues to impact upon popular cinema, a quarter of a century after his final film.

Keywords: Akira Kurosawa, George Lucas, Star Wars, Intertextuality, Homage

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Introduction: Kurosawa in Hollywood

Throughout the 1950s and 1960s, the films of Akira Kurosawa gained increasing recognition outside Japan. These works were venerated by international audiences, as well as by filmmakers, who were drawn particularly to his *jidaigeki* ('period plays') set in Japan's feudal era, such as *Rashomon* (1950), *Seven Samurai* (1954), and *Yojimbo* (1961)¹. Kurosawa's movies influenced Hollywood directly, inspiring some of the very earliest examples of what would later become common practice, as major American studios saw the value in remaking pictures from overseas: *Seven Samurai*, for example, was used as the template for *The Magnificent Seven* (1960), and *Rashomon* was adapted as *The Outrage* (1964). While these retellings provided evidence of his films' global popularity, Kurosawa's influence was perhaps felt more strongly in the ways that American filmmakers began to borrow visual techniques from his movies. Directors of action pictures were especially prone to copying Kurosawa's visual style, and both Arthur Penn (*Bonnie and Clyde* [1967]) and Sam Peckinpah (*The Wild Bunch* [1969]) admitted to following Kurosawa's predilection for slow motion and long lenses in their films' climactic shoot-outs (Prince, 1999, pp. 349-350). Similarly, Robert Altman (2002) said he began experimenting with pointing his camera towards the sun after seeing the early sequence in *Rashomon*, in which bright sunlight shimmers through a canopy of forest leaves.

It was in the late-1960s and 1970s, though, with the emergence of the 'Movie Brats', that Kurosawa's impact became more prominent. The cohort of young filmmakers, many of whom were early graduates of the new film schools, saw these pictures from overseas as representative of a different approach to making films, "a radical alternative to the mainstream" (Russell, 2011, p. xi). Martin Scorsese later said that Kurosawa was, through his films, "our master, our sensei", while Steven Spielberg called him "a maestro to my entire generation" (Anaheim University, 2013).

Japanese cinema was not easily accessible at this time, and its perceived rarity perhaps added to the allure of Kurosawa's work. According to Lee (2005), George Lucas describes being unable to see foreign films while growing up in the small California town of Modesto, but, while at USC's School of Cinematic Arts, he was repeatedly told by classmate John Milius that *Seven Samurai* was "the best film ever made." When it was screened at his university, Lucas finally watched it and said that "it basically changed my life." He explains that it "influenced me [...] in terms of understanding how cinema works and how to tell a very exciting story and still have it be very funny and very human" (Lee, 2005).

Early Influence

George Lucas's appreciation for the work of Akira Kurosawa would remain even as he began writing the synopsis for 'The Star Wars' in 1973. It was not *Seven Samurai*, though, but another of Kurosawa's films that was most influential. Lucas has since attempted to downplay the comparisons between the first *Star Wars* (1977) and Kurosawa's *The Hidden Fortress* (1958). However, Helander (1997/2010) demonstrates the obvious similarities between Lucas's initial story document and the outline of *The Hidden Fortress* as written by Donald Richie (1965/1998, p. 134) in his seminal book on Kurosawa's career. For example:

¹ For ease of reading, when referring to non-English-language films, this article will employ the titles used in their most recent releases by the BFI or Criterion Collection. For the original titles, please see the Filmography (in which films are listed alphabetically by the title used within the main text).

The Hidden Fortress Synopsis (Richie)

It is the sixteenth century, a period of civil wars. A princess, with her family, her retainers, and the clan treasure is being pursued. If they can cross enemy territory and reach a friendly province, they will be saved.

'The Star Wars' Synopsis (Lucas)

It is the thirty-third century, a period of civil wars in the galaxy. A rebel princess, with her family, her retainers, and the clan treasure is being pursued. If they can cross territory controlled by the Empire, and reach a friendly planet, they will be saved.

Such similarities are clearly not coincidental, and they suggest that *The Hidden Fortress* was – at the very least – a starting point in the creation of *Star Wars*, even if Lucas's synopsis would go through further drafts that gradually weakened the connection between the two films. What remains in the finished picture, though, is the epic scope of *The Hidden Fortress*, which, like many of Kurosawa's samurai pictures, occurs within the context of a much larger conflict (given even more grandeur by Kurosawa's use of the widescreen Cinemascope format for the first time). Lucas deliberately throws the audience into his story with little exposition, aside from the opening crawl that was inserted late in post-production. We must learn largely through context about societal structure, government, and even vital elements such as the mystical Force or the history of the Jedi – samurai-like warriors who follow a strict moral code (and whose name is derived from the 'jidai' of *jidaigeki*). This choice to make the audience work for the information echoed Lucas's perception of Kurosawa's oeuvre, which, according to one biographer, "was so alien it could well have been Mars" (Baxter, 1999, p. 72). With local viewers primarily in mind, Kurosawa's films do not overtly explain the inner workings of feudal Japanese society; instead, they presume prior knowledge, leaving the uninitiated to construct an understanding through dialogue and action. Lucas does the same in his imagined universe. Brooker (2009, p. 32) cites the example of 'Kessel' in *Star Wars*, mentioned first by C-3PO in a throwaway remark about the "spice mines of Kessel." Then, in another scene, Han Solo boasts of making "the Kessel run in less than twelve parsecs." No explanation of Kessel's significance is offered, and it does not appear in any episode until four decades later. Such offhand references, though, tease us with the prospect of other planets and other stories; and they contribute to the rich and specific story world, just as Kurosawa's more grounded films suggest wider machinations that we do not see directly onscreen.

In narrative terms, however, the strongest influence that *The Hidden Fortress* had upon *Star Wars* was in telling the story from the point of view of its "lowliest characters" (Lucas, 2001). In fact, the entire *Star Wars* saga would have at its centre the bickering droids R2-D2 and C-3PO, just as *Fortress* follows the peasants Tahei and Matashichi as they become embroiled in the wider story, as if by accident. While these pairs of characters provide comic relief in both films, the story device also contributes to a sense of verisimilitude. With such unremarkable characters as conduits, their respective worlds become more accessible to the audience and help the films avoid the trope of becoming a typical 'fairy tale' (as Lucas has called his series [Jones, 2016, p. 306]) told solely from the perspective of the most privileged central protagonists. Lucas said that this choice "set me off on a very interesting course because it really did frame the movie in a very interesting way and altered the point of view of all three movies" (Bouzereau, 1997, p. 10).

While *The Hidden Fortress* served as an early story template, George Lucas (2001) has said that it is Kurosawa's "visual style to me that is so strong and unique," and aspects of this are present in *Star Wars*. Famously, the transitional wipes between scenes echo those used by Kurosawa in many of his pictures.



Figure 1: A Transitional Wipe from *Star Wars*



Figure 2: A Transitional Wipe from *Ikiru* (1952)

However, it is subtler connections in scene structure – as physicalized through camerawork and editing – that suggest a deeper influence. For example, the lance duel between Rokurōta and his longstanding rival Tadokoro in *The Hidden Fortress* serves as a model for the lightsaber fight in *Star Wars* between Obi-Wan Kenobi and Darth Vader (in *kabuto*-style helmet). As illustrated in Figure 3, both fights are established with a wide shot employing a long lens, the participants in profile as they size up one another. Then comes a medium-length shot over the shoulder of the protagonist, mirrored by a reverse shot from the antagonist's perspective. Then, as the battle intensifies, the camera takes up a closer position for a frenetic two-shot.



Figure 3: Duels in *The Hidden Fortress* and *Star Wars* (Kaminski 2007)

Such similarities demonstrate the influence of Akira Kurosawa as George Lucas began making his saga, and Lucas has been candid in discussing his debt to *jidaigeki* in constructing the first film. However, even as Lucas employed other writers and directors for future episodes, the connections remained strong.

Continued Influence

While George Lucas was the director and only credited writer on *Star Wars*, he hired Irvin Kershner to direct the second film, *The Empire Strikes Back* (1980), with first Leigh Brackett and then Lawrence Kasdan writing screenplay drafts based upon Lucas's initial story.

The influence of Akira Kurosawa on *Empire* has been much less discussed than those in the first movie, yet – just as *Star Wars* was loosely modelled on *The Hidden Fortress* – the second episode bears a marked similarity to another, lesser-known, Kurosawa work: his lament on humankind's estrangement from nature, *Dersu Uzala* (1975).

The opening scenes of *Empire*, set on the ice planet Hoth, echo the visual design of *Dersu Uzala*, which Kurosawa shot on 70mm in order to capture the desolate majesty of the Siberian plains. In both films, the colour palette is subdued – khaki, beige, navy – accentuating the bleakness of the terrain. Both contain sequences in which, lost in the ice, one friend is saved by another; and these sequences are executed remarkably similarly, as Kaminski's (2007) side-by-side comparison demonstrates (Figure 4, below). First, the characters' stumble towards the camera; then one of the men collapses, prompting his companion to rush to his aid; the friend checks for signs of life, then keeps the prone man warm by improvising shelter (straw in *Dersu*

Uzala, the belly of a dead ‘tauntaun’ snow creature in *Empire*); finally, morning comes, and the sun reflects off the ice in an extreme wide shot, symbolizing salvation.



Figure 4: *Dersu Uzala* Versus *The Empire Strikes Back* (Kaminski, 2007)

The plot and central theme of *Empire* echo many aspects of Kurosawa’s film, too. The wizened Jedi Yoda, who mentors the protagonist Luke Skywalker, possesses many of the attributes of Dersu in his choice to live a solitary life in the wilderness. Richie (1965/1998, p. 199) calls Dersu an “elf of a man, almost like a forest fairy,” and this physical description could just as easily be applied to Yoda. Both characters are very much in tune with nature (or the Force), seeking to live as part of a greater whole rather than trying to overcome it through violence;

and both strive to educate others to do the same. Harrison (2020) credits *Empire*'s ecological concerns to its director, Irvin Kershner, "a staunch advocate of vegetarianism and spiritual harmony between living things and their habitats" (p. 32). Similarly, Kurosawa stated his intention for *Dersu Uzala*, that "people should be humbler toward nature because we are a part of it and we must become harmonized with it" (Richie, 1965/1998, p. 199). This is realized by contrasting Dersu's humility with the younger Arseniev's impulsiveness and naïveté, traits that almost kill them both as Arseniev insists on going to see a beautiful lake even as Dersu warns of inclement weather approaching. Similarly, in *Empire*, Yoda's advice is ignored by his headstrong pupil Luke, who rushes to confront Darth Vader before completing his training, a decision that leads to the film's downbeat finale.

In the last of the original *Star Wars* trilogy, *Return of the Jedi* (1983), there are echoes of *Seven Samurai* in its placement of the innocent, forest-dwelling Ewoks at the centre of the battle against the invading soldiers, just as Kurosawa set farmers against the militaristic and far better-equipped bandits who attacked their land. In formal terms, Kaminski (2007) demonstrates that the speeder-bike chase through the forest shares beats and camera angles with the horseback chase in *The Hidden Fortress*. Finally, Barber (2016) contends that Luke Skywalker's rescue "by a facially scarred villain who has a last-minute change of alliance" may be based upon Tadokoro's similar volte-face at the denouement of *The Hidden Fortress*. However, compared to its predecessors, *Jedi* appears less obviously indebted to Akira Kurosawa's filmography, as the *Star Wars* series becomes less a pastiche of existing films, and instead a complete saga of its own.

As with *The Empire Strikes Back*, George Lucas did not direct *Return of the Jedi* (Richard Marquand taking that role, with Lucas supervising), but this would change when he decided to return to the franchise after a 16-year hiatus in order to make the 'prequel' trilogy. Lucas took sole writing and directing duties for *The Phantom Menace* (1999), 'Episode I' of the entire saga. Rather than moving further away from his influences, he returned even more overtly to Kurosawa, *The Hidden Fortress* in particular – and perhaps that initial synopsis for 'The Star Wars'. This time, Queen Amidala must cross an enemy blockade in order to gain help for her people (like Princess Yuki in Kurosawa's film). She is helped by two Jedi, with Qui-Gon Jinn bearing a striking resemblance to Rokurōta in *The Hidden Fortress*:



Figure 5: Rokurōta (Toshiro Mifune) Versus Qui-Gon Jinn (Liam Neeson)

In order to evade detection, Amidala disguises herself as a servant, just like Princess Yuki. In this role she is exposed to the suffering of slaves first-hand, leading her to help free Anakin Skywalker from servitude, which echoes Yuki's actions as she liberates one of her compatriots who has been forced into prostitution. Finally, both films end with the celebration ceremony that was also present in the original *Star Wars* – the royal in full regalia, flanked by the warriors in ceremonial robes.

As the prequel trilogy progresses, the connections to Kurosawa's work diminish, with similarities mostly fleeting and superficial. Like the original trilogy, by the third episode the story becomes more self-contained, and less reliant on homage as it fulfils its narrative responsibility to complete the overarching Hero's (or anti-Hero's) Journey. *Revenge of the Sith* (2005) would be the final live-action *Star Wars* film before George Lucas's retirement and the sale of Lucasfilm to Disney in 2012; but it would not be the end of the saga's debt to Akira Kurosawa.

Kurosawa, Kasdan, and Beyond

While George Lucas's regard for Akira Kurosawa is well-documented, he is not the only *Star Wars* writer to be so heavily influenced. Lawrence Kasdan had just completed the first draft script for *Raiders of the Lost Ark* (1981) – also for Lucasfilm – when Lucas asked him to work on *The Empire Strikes Back* following the death of the original screenwriter, Leigh Brackett. Kasdan says that “George and I had an immediate connection” thanks to their shared admiration of Kurosawa's samurai films (Bouzereau, 1997, p. 180), and this perhaps contributed to the success of their working relationship through *Empire* and *Return of the Jedi* as well as *Raiders*. Kasdan calls Kurosawa “the greatest director that ever lived, [...] one of the greatest writers that ever lived” (August & Mazin, 2016), and is more open than Lucas in crediting his references. For example, Kasdan says he based the character of Yoda not upon the lead in *Dersu Uzala* but upon Kanbei Shimada, the senior warrior in *Seven Samurai*, who, Kasdan states, “always sees the big picture and is slower to react because he's figured it out” (August & Mazin, 2020). This contributed to Yoda's unusual back-to-front syntax and its “meditation teacher” quality, his utterances designed to make the student listen more attentively. Kasdan says: “It slows things down. You have to worry through the sentence to understand. And then that way you're paying more attention” (August & Mazin, 2020).

My previous research (Davies, 2019, pp. 219-220) has found that both Kurosawa and Kasdan favour the imperfect hero, drawn into action by necessity rather than valour, and constantly threatened with exposure or humiliation. In fact, Kasdan quotes Kurosawa on this subject: “heroes evolve – they're open to change and growth” (Dutka, 1991, p. 3). The character of Han Solo epitomizes this type, and Kasdan repeatedly places him at the centre of events, even though it is Luke Skywalker taking the Campbellian Hero's Journey in Lucas's overall saga. Han's actions dovetail with many of the roles played by Toshiro Mifune in Kurosawa's pictures, in particular the ronin samurai in *Yojimbo* and its sequel *Sanjuro* (1962). Han Solo is aloof and taciturn, and his motivations are less clear than the typical Hollywood hero's, his choices made primarily to serve his own needs and desires rather than any noble cause.

After writing screenplays for two films in the *Star Wars* original trilogy, Kasdan declined to participate in the prequels (Dyer, 2015). However, he returned for the first post-Lucas sequel, *The Force Awakens* (2015) and reincorporated many of the themes favoured by Kurosawa. Richie (1965/1998) writes that Kurosawa's films are “about character revelation” (230), and they often feature characters struggling with their own identity, whether hiding their past or

coming to terms with their changing self-perception. *The Force Awakens*, as well as bringing back Han Solo – who, once again, has left behind noble causes in order to return to smuggling – shows its new characters grappling with their sense of self. Finn is an escaped stormtrooper pretending to be a Resistance hero, and Rey is searching for her family and her heritage, unsure of where she has come from. Most prominently, the central antagonist is torn between the ‘Dark Side’ of the Force as Kylo Ren; and to the side of good as Ben Solo, the son of Han and Princess Leia; and this conflict leads to the emotional crux of the film, and ultimately the entire trilogy.

It is in *Solo: A Star Wars Story* (2018), though, that Kasdan, co-writing with his son Jonathan, most strongly emulates the themes of Akira Kurosawa. The entire plot is predicated on notions of identity, hidden agendas, and the search for belonging. Han, his girlfriend Qi’ra, and his surrogate father figure Beckett each hide their motivations from one another, reinventing themselves just as Toshiro Mifune’s characters do in *Seven Samurai*, *Yojimbo*, and even Kurosawa’s contemporary dramas such as *Drunken Angel* (1948) and *The Bad Sleep Well* (1960). The film also evokes Kurosawa’s work in its treatment of class inequality, with Han Solo escaping from indentured servitude, freeing Chewbacca from captivity, then assisting in the rescue of enslaved ‘wookiees’ and droids. This latter action – the droid uprising in a mine – is remarkably similar to the peasants’ revolt in *The Hidden Fortress* after Tahei and Matashichi are forced to dig underground for gold.

Solo was Lawrence Kasdan’s final screenplay for *Star Wars*, yet even without his and George Lucas’s influence, recent creators of *Star Wars* appear similarly indebted to the films of Akira Kurosawa. Rian Johnson, writer-director of *The Last Jedi* (2017), employs the same narrative device as that used by Kurosawa in *Rashomon* when describing the past battle between Luke Skywalker and Kylo Ren. He first shows the fateful incident from Luke’s perspective, then Kylo Ren’s, and finally Luke’s again under increased pressure from Rey. This use of the ‘unreliable narrator’ differentiates the film from its more linearly-plotted predecessors. Thus, references to Kurosawa’s work are not only allusive; they also help lead the saga in a new stylistic direction. Johnson’s film also shows the seven Knights of Ren (seen briefly in *The Force Awakens*), who – in their distinctive armour and pictured in the driving rain – are almost a negative image of Kurosawa’s *Seven Samurai*:

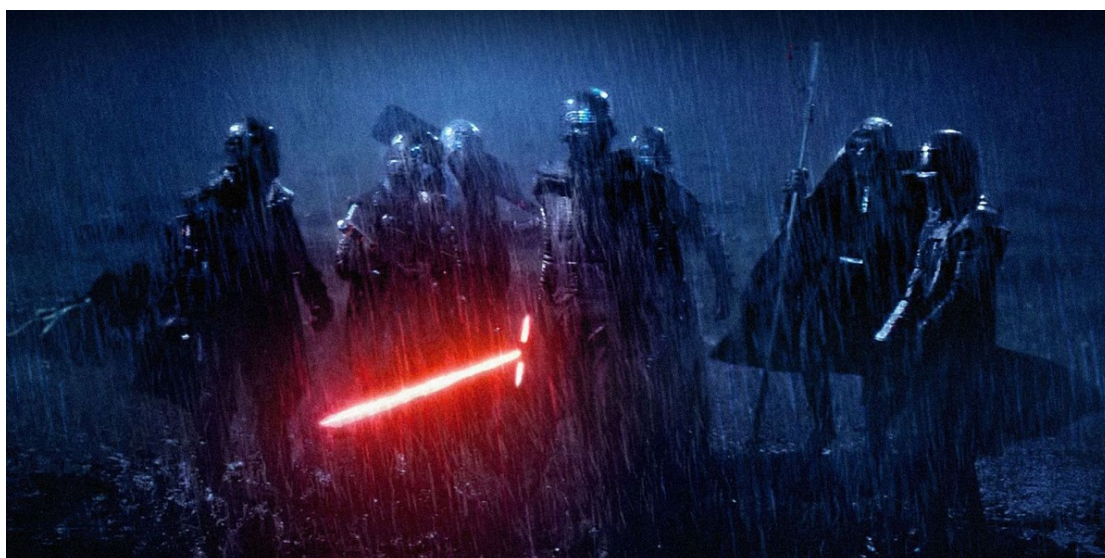


Figure 6: The seven Knights of Ren (*The Last Jedi*)

The film's palette, too, draws heavily from Kurosawa's later colour films, with the reds, whites and blacks of *Ran* (1985) prominent in the fight scenes in *The Last Jedi*. As well as its visual appeal, this shared style highlights the violence and desperation at the centre of each movie – where death comes to major characters and where morals are not always clear in the ferocity of battle:



Figure 7: Battle scenes in *Ran* (top) and *The Last Jedi* (bottom)

Such similarities demonstrate that allusions to Akira Kurosawa's canon remain central to *Star Wars* films, even as the series continues through its fifth decade, and nearly ten years after George Lucas's retirement from the saga.

Conclusion

These findings demonstrate that Akira Kurosawa's films helped to inspire George Lucas's initial plotting of the *Star Wars* series, with the synopsis of *The Hidden Fortress* acting as a template for his very first synopsis. Furthermore, George Lucas and his collaborators returned repeatedly to Kurosawa's work, both for narrative and visual inspiration through the original trilogy and the three prequels. In particular, the device of telling the story from the perspective of the "lowliest" set the tone for the entire series, in which apparently inconsequential characters become protagonists in a larger conflict. Additionally, the master-student relationship prevalent in many of Kurosawa's *jidaigeki* is a clear model for the Jedi hierarchy depicted throughout *Star Wars*. The visual style of the series has been affected by Kurosawa too, with scenes frequently adopting the camera angles and editing beats preferred by Kurosawa, as well as using long lenses, extreme weather, and a red and black colour palette, especially in the most intense battle scenes. Furthermore, many of Kurosawa's favoured themes are revisited throughout the franchise, such as the pull of duty versus self-preservation (particularly in Han Solo's story), inequalities between classes, and questions of identity and belonging. These similarities have remained strong even as the series has become part of a larger corporate entity following George Lucas's retirement and its resurrection by Disney.

Thanks in part to Lawrence Kasdan's participation, but since continued by other creators of the series, Kurosawa's films remain an important touchstone for many aspects of the expanding franchise.

While these findings are relevant to *Star Wars* as a discrete cultural entity, they also have wider implications. As many contemporary filmmakers cite *Star Wars* as an inspiration, then this increases the influence of Akira Kurosawa not only upon George Lucas's series, but also upon those directors and writers who have followed. For example, Christopher Nolan has cited *Star Wars* as an important picture in his film education, and he based Bane in *The Dark Knight Rises* (2012) upon Darth Vader (Maurer, 2015); and much of the Marvel Cinematic Universe pays homage to Lucas's saga, both in its universe-building and in its tone, balanced as it is between verisimilitude and humour. Thus, while the films of Akira Kurosawa are consistently venerated among film scholars and practitioners, they have increasing relevance even among those moviemakers who may be less familiar with his work, as Kurosawa's plots, themes and visual style – via the conduit of *Star Wars* – continue to influence the ways that modern motion pictures are produced.

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Concept of Satogaeri Shussan in Japanese Childbirth Rituals: From the Perspective of Contemporary Japanese Women

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Abstract

This paper will study the current trend of *Satogaeri Shussan*, a traditional Japanese childbirth custom when the pregnant woman customarily returns back to her paternal home for seeking physical and mental support as well as childcare assistance from her parents particularly during prenatal or postpartum period. There is no doubt that the custom of *Satogaeri Shussan* has always been given significant importance in Japanese culture since ancient times. However, with many changes over time, this age-old traditional ritual has witnessed some changes. The purpose of this paper is to explore what does *Satogaeri Shussan* mean? how does this traditional ritual play an important role in Japanese women's life? how do the Japanese women think about this ritual? why do the Japanese women still prefer to perform this ritual? what are the major changes observed in this ritual? These questions will be addressed based on the primary data collected from the field work from 2018 to 2020. In other words, for the first time perspective of Contemporary Japanese women will be emphasised in order to study the trend of *Satogaeri Shussan*. Finally, this paper will conclude that the custom of *Satogaeri Shussan* helps not only the Japanese women to overcome any kind of stress, anxiety for Childbirth or childcare related assistance but, it also helps them to make a strong bond with their parents. In addition, as like earlier days even today, most women still prefer to perform *Satogaeri Shussan* by returning back to their parental home, but interestingly there is also a new trend or change like to request their mother or mother-in-law to come and stay with them at their own residence so that they can get help and support from them without performing *Satogaeri Shussan*.

Keywords: Japanese Childbirth Rituals, *Satogaeri Shussan*, Nagoya City, Japan

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Introduction

Childbirth rituals, customs and its folk traditions have been given significant importance in Japanese culture since ancient times. Like other countries in the world, people in Japan also celebrate several traditional rituals and customs related to pregnancy and Childbirth. There are numerous traditional childbirth-related rituals and customs followed all over Japan even in the 21st century. Such as *Anzankigan* (a prayer for safe delivery), *Haraobi-Iwai* (a celebration for tying maternity belly band during pregnancy), *Satogaeri Shussan* (a custom of returning back to one's paternal house for delivery), *Omiya mairi* (one month after birth, parents and grandparents in Japan, usually bring the newborn child to a Shinto Shrine in order to receive blessings from the enshrined deities of that specific Shinto Shrine for ensuing future prosperity and healthy growth of a newborn child) and *Okuizome* (a celebration that takes place hundred days after birth in order to give a first meal to a newborn baby) etc. However, these traditional rituals have gone through many drastic changes with the passage of time. Especially, due to the rapid modernization, urbanization that took all over Japan and most importantly, the changes that occurred in the Childbirth delivery process like home to Hospital delivery, introduction of new medical procedure in Childbirth brought so many changes not only in the lifestyle of the Japanese people but also in the way of conducting these traditional rituals and its related folk beliefs.

Now, I would like to discuss about the concept of *Satogaeri Shussan*. What does *Satogaeri Shussan* mean? In Japanese the word "*Satogaeri*" itself means to return back to one's paternal house or village and the word "*Shussan*" means giving Childbirth. Therefore, for the Japanese women "*Satogaeri Shussan*" is always considered as one of the significant Childbirth rituals that they should perform during their pregnancy or postpartum period. By performing this traditional ritual, Japanese women are able to return back to their paternal house for delivery or for receiving Childcare support that is very much needed after delivery. According to age-old traditional ritual, earlier days Japanese women were bound to return to their parental house for labor and childbirth. If we look back in history then it can be found that earlier days when Japanese women entered into the phase of pregnancy, at that time, their parental family members used to pay a customary visit to their in laws house in order to bring back their daughters with them for *Satogaeri Shussan*. Here, I would like to add one more point that since ancient times, Japanese people are fond of following their traditional age-old customs that have been passed down by their previous generation. In addition, earlier days after giving childbirth, they had to stay at their paternal house for a long time because they were bound to receive childcare support and assistance from their own parents rather than depending on in laws family members. In short, to strengthen a relationship between the parents and daughter after marriage, the ritual of *Satogaeri Shussan* has been playing an eminent role in the life of Japanese people.

Similarly, even in contemporary Japan also, most Japanese women when they get pregnant, they usually prefer to give childbirth at the hospital, which is very close to their own paternal house and often prefer to visit the doctor, who is working at local hospital nearby their paternal house in order to perform this traditional *Satogaeri Shussan* ritual so that they can overcome any kind of difficulties that may occur during pregnancy or post delivery.

A Brief Survey of Literature & Research Problem

Numerous researches have already been done in order to study Japanese traditional childbirth rituals and customs. However, very small number of researches have been conducted to study the role, significance, function and the changes that took place in the ritual of *Satogaeri*

Shussan. In short, particularly from the perspective of contemporary Japanese women, how is the *Satogaeri Shussan* ritual observed in the present time, why do the Japanese women prefer to continue this age-old traditional ritual even in the present time, have not been discussed yet by any previous researcher. However, there are some research to study the role, function and significance of performing *Satogaeri Shussan* ritual during pregnancy or postpartum period. Such as Kobayashi (2010: 28-39) mentions that the age-old custom of *Satogaeri Shussan* has been continued not only for strengthening the relationship or bond between a mother and her daughter more in a deeper level after marriage but this ritual provides an opportunity to the Japanese women for getting childcare related support from their parents after post delivery. In addition, Kobayashi has also pointed out that with the passage of time various changes are prominently observed even in this traditional *Satogaeri Shussan* ritual. For an example, nowadays most women after marriage ended up living far away from their paternal or in laws family members due to their own carrier, work or their husband's work. As a result, they do not have time to return back to their paternal house for performing *Satogaeri Shussan*. Unlike returning back to their paternal house, there is a new trend in Japan among the women to stay at their own residence and to request their mothers, mother-in-laws, sisters to come and stay with them in order to look after them and their newborn babies.

However, Kobayashi research has focused only on the role and function of *Satogaeri Shussan* in the life of Japanese women. It has described in detail about how does this ritual help to reduce the anxiety of raising a newborn baby, how does this custom provide an opportunity to the Japanese women to overcome their physical weakness after delivery, how does it help them to learn and acquire new parenting skills and knowledge from their mother and most importantly it has described how to strengthen the bond between a mother and a daughter, a daughter and her child by performing this age-old ritual. Therefore, some important questions related to the trend of *Satogaeri Shussan* are not thoroughly discussed yet. Such questions include, what do the Japanese women in the present time think about *Satogaeri Shussan*? When do they perform this ritual? How many Japanese women are interested in performing this age-old traditional ritual? Why do they feel necessity to perform this ritual even in the 21st century? How much is it important to Japanese women to continue this ritual? What kind of thoughts do Japanese have by performing this age-old ritual? In order to address these research questions, for the first time, I am going to focus on the case study of Nagoya city, Aichi prefecture in central Japan. The reason for choosing Nagoya city for case study will be mentioned later in this research paper. Again, regarding the role of *Satogaeri Shussan* Takeda (1999: 90-93) has pointed the importance of performing the ritual of *Satogaeri Shussan* during pregnancy in Japan particularly based on life story of the women, who were born in Showa period (1926-1989). However, Takeda's research is solely based on the literary materials rather than conducting any field work for gathering information about the trend of *Satogaeri Shussan*. Moreover, her analysis on the role of *Satogaeri Shussan* is based on the information gathered from the five respondents. Therefore, in order to generalize the trend and role of *Satogaeri Shussan*, it is necessary to conduct a questionnaire survey as well as Face-to-Face interview survey with a large group of Japanese women. The main objective of this paper is to shed a light on the current trend of *Satogaeri Shussan* ritual from the perspective contemporary Japanese women in Nagoya city.

Background of Field Work Area

I have chosen Nagoya city for my field work area because according to previous literature review, I have noticed that until now there is no research to emphasize on the Nagoya city and to discuss about how the people living in Nagoya city celebrate the traditional childbirth rituals

like *Anzankigan*, *Haraobi-Iwai*, *Omiya mairi*, *Satogaeri Shussan* during pregnancy and after delivery. No case study has been done to indicate where do the people living in Nagoya city or its surrounding areas conduct their *Anzankigan* ritual and the purification of *Haraobi* belt and the time of conducting *Satogaeri Shussan* ritual for labor and childcare. Therefore, I have decided to emphasis on the case study of Nagoya city, Aichi prefecture. Nagoya is Japan's fourth largest incorporated city and also it is the third most populas urban area in Japan after Tokyo, Yokohana and Osaka. Nagoya city is very close to the Toyota city, which is known as the giant hub for Toyota automobile industry. As we know that every year Toyota automobile company manufactures a large number of Toyota car for its domestic use and export purpose. Area wise, Nagoya city is around 326.50km². According to 2021 population statistics, the population of Nagoya city is around 9,565,642. Historically, this city has a long history with Tokugawa Owari clan, one of three main branches of Tokugawa clan, who ruled all over Japan during Pre-modern time (1603-1867). At present this city is divided into sixteen wards such as Atsuta, Higashi, Nishi, Minami, Showa, Chikusa etc. For conducting the field work, I have decided to visit various local Childrearing Support centers for collecting primary data directly from the Japanese mothers, who have just experienced of giving Childbirth.

It is necessary to mention here why Japanese parents bring their newborn babies to these places? What kind of information they gather by visiting these places? It is to be noted that there are numerous Childrearing support centers all over Japan in order to provide various facilities, particularly to the newly become parents for raising their newborn babies so that they can overcome any kind of hurdles or obstacles that might occur during parenting. Actually, these places are primarily established by the regional authority of each city in Japan, in order to provide a safe and comfortable environment to the people who have just become parents. Therefore, they can receive and gather valuable information about parenting and childcare from the experienced staffs, who work at these places after receiving a proper training on childcare. As like other areas in Japan, similarly in the Nagoya city also, there are numerous childrearing support centers in various ward. Usually, at free of cost, Japanese parents who have newborn baby or the children under three years of age are allowed to visit and spend time at these place according to their convenient time. By visiting these childrearing Support centers, parents get an opportunity not only to interact with other people who have just become parents like them, but they can receive valuable advices from the specialized experties or staffs. Such information includes how to raise a child, how to play with a newborn baby, how to breasfeed a newborn baby, how to take care of a newborn baby etc. Moreover, those who want to discuss about their personal problem related to childrearing confidentially, then they can receive that facility by booking an appointment prior to visiting these places. The reason for choosing Nagoya city local Childrearing support center for conducting field work because I have relized that the life of numerous newly become mothers are very much dependent on these local childrearing support centers for gathering information about parenting and they come to these places along with their newborn babies to spend some quality time. By visiting several Childcare support centers, I have also noticed that not only they enjoy spending their time with their newborn babies by playing wih many toys but they really enjoy chatting with other mothers or the staffs.

I thought this place would be the perfect place for gathering lots of information about the trend of childbirth rituals in an informal manner by conducting a questionnaire survey and the Face-to-Face interviews with them. Regarding research methodology, I have actually applied both the quantitative and qualitative methods. For the questionnaire survey, around (N=747) participants and for the Face-to-Face interview survey around (N=61) participants have participated. I have collected the primary data by visiting these local childrearing support centers several times in between 2018 to 2020 during my doctoral course at Nagoya University.

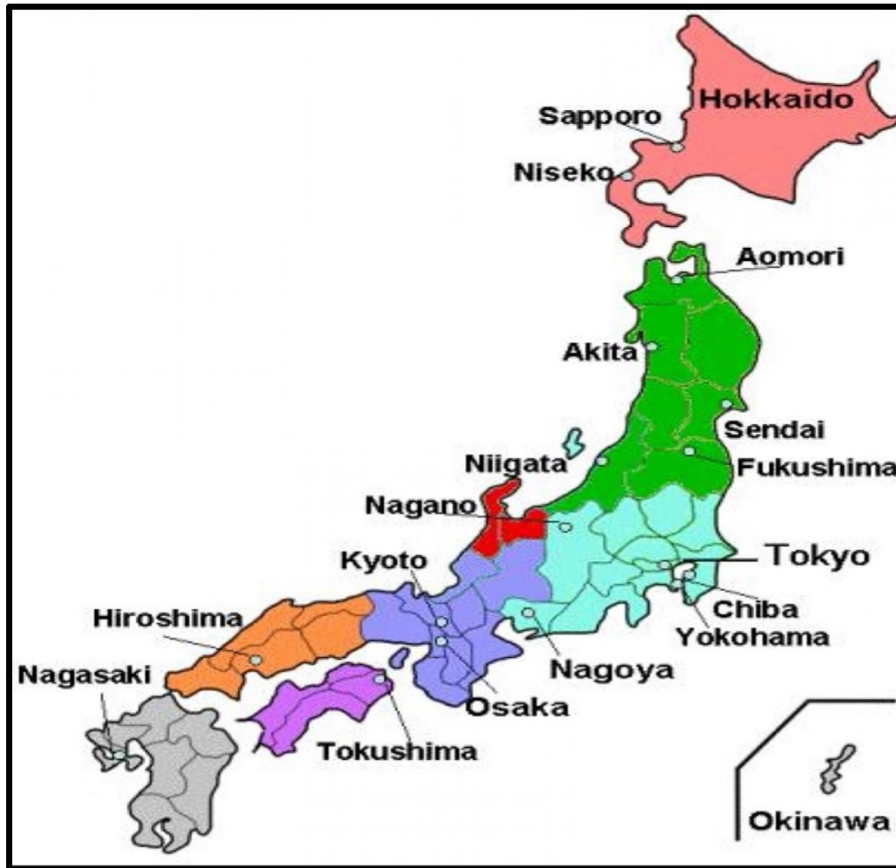


Figure 1: The Geographical Map of Japan, From Internet Source Date- 19.12.2021

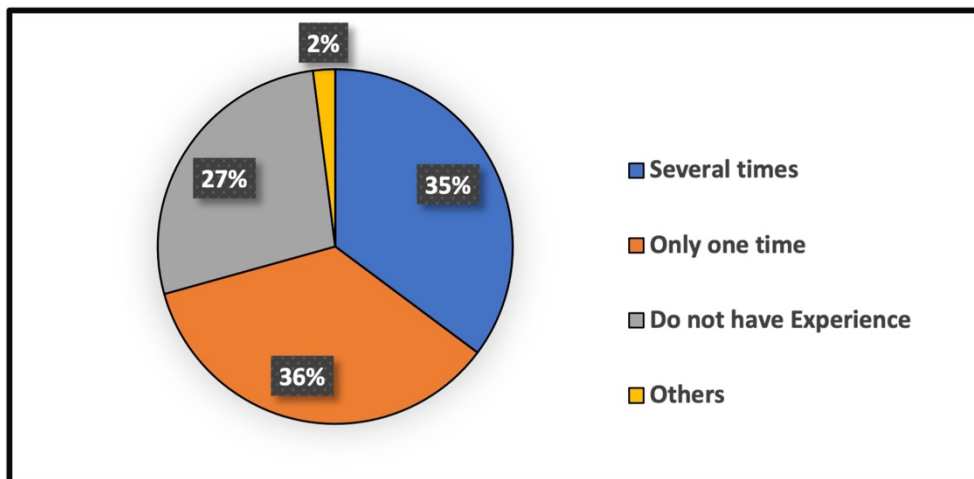


Figure 2: Experience of Returning to Paternal House for Satogaeri Shussan, N=747

According to (N=747) respondents, 35% have replied that several times in their life, they have actually experienced of returning back to their paternal house during pregnancy or postpartum period for performing this traditional age-old ritual *Satogaeri Shussan*. 36% have told that they have conducted *Satogaeri Shussan* ritual once in their life. 27% have replied that they have never experienced of performing *Satogaeri Shussan* ritual during their pregnancy or postpartum period. And the rest of 2% have chosen the option “others.” From this pie chart, it can be said that most Japanese women in the present time during their pregnancy or postpartum period preferred to return back to their paternal house in order to get support from their parents for childrearing. On the other hand, 27% who have not performed this ritual because probably

they wanted to take care of their newborn baby with the help of their husbands or they desired to give childbirth in the presence of their husbands during delivery or they wished to request their parents (mother or mother-in-law) to come and stay with them at their own residence for helping them with their household chores and to look after their newborn baby or their paternal house was not so far away from their residence.

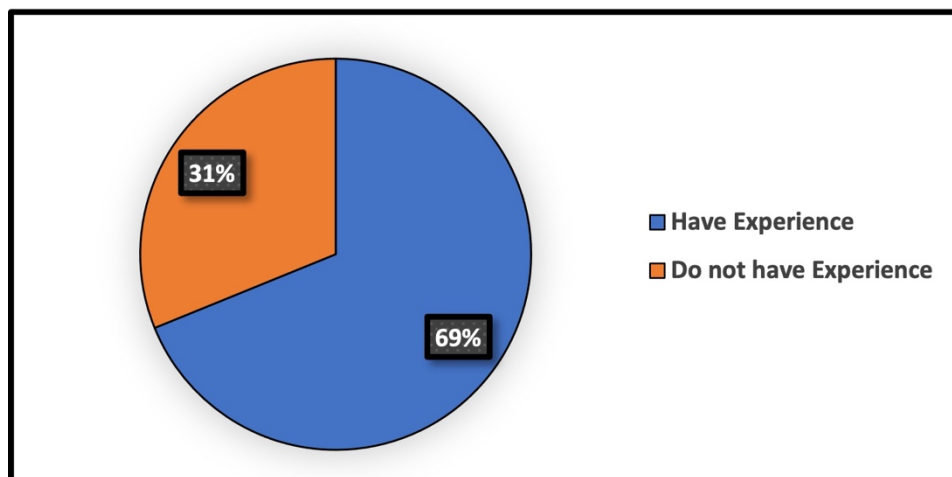


Figure 3: Experience of Returning to Paternal House for conducting Satogaeri Shussan, N=61

As I showed the result in the Figure 2 based on the information gathered from 747 participants, similarly I wanted to know whether the other 61 participants, who have participated in the Face-to-Face interview, performed the ritual of *Satogaeri Shussan* or not by asking them same question. According to figure 3, 69% have replied that they have performed *Satogaeri Shussan* ritual either during their pregnancy or postpartum period. However, remaining 31% have responded that they have never performed any kind of ritual like *Satogaeri Shussan* before and after Childbirth. From this pie chart, it can be interpreted that in the 21st century majority of Japanese women still prefer to return to their paternal house for seeking help from their parents in order to raise a newborn baby. 69% those who have returned to their paternal house, confirmed me during interview that they returned back to their paternal house according to their convenient time. Some of them preferred to return back to their paternal home during delivery in order to overcome their loneliness, stress and anxiety for first childbirth. In addition, some of them confirmed me that they preferred to return back to their paternal house after their childbirth because they wanted to receive childcare support from their parents. On the other hand, 31% respondents, who have not returned back to their paternal house for conducting this age-old ritual, they have shared with me an interesting fact for not opting *Satogaeri Shussan*. Such as they wanted to give birth to a child in the presence of their husband during delivery, they wanted to overcome obstacles related to parenting as a couple, they did not want to bother their parents for doing household tasks for them or to look after their newborn baby. they wanted to raise their baby at their own house so that the newborn baby can adapt to that environment from the very beginning etc.

The Reason for Performing the Ritual of *Satogaeri Shussan* in Contemporary Japan

Among the 61 participants, around 42 participants who have already experienced of returning to their paternal house for *Satogaeri-shussan* ritual, I have asked them the main reason for performing this age-old ritual even in the present time. Here, I would like to mention some of the very interesting responses that I received from them during Face-to-Face interview. Such as “I have performed it because to get help and support from my parents;” “I totally wanted

to dependent on my mother during my pregnancy because it was my first pregnancy;” “ I returned to my paternal house because as it was my first Childbirth, I was feeling nervous;” “ I returned to my paternal house because I wanted to regain my physical strength after delivery;” “ I decided to return to my paternal house because it was my first Childbirth and I wanted to get advice from my mother;” “ I decided to return to my paternal house because my husband was so busy with his work. He did not get time to look after me during my pregnancy;” I returned to my paternal house because for me my mother is my teacher who can teach and guide me what should be done or what should not be done during pregnancy.”

The Reason for not Performing the Ritual of *Satogaeri Shussan* in Contemporary Japan

Among the 61 participants, around 19 participants have confirmed me during Face-to-Face interview that they did not perform this ritual for specific causes. Such as “ Even if I could return back to my paternal house, probably I could not get proper help from my parents because they were very busy with their work, they did not have enough time to look after me during my pregnancy;” “ I could not return to my paternal house *for Satogaeri Shussan* because my mother was very sick at that time;” “ I did not want to return to my paternal house because my husband would probably feel lonely if I stay away from hime for a long time;” “I did not need to return to my paternal house *for Satogaeri Shussan* because my mother used to come to my house almost every day in order to look after me and my newborn baby and to help me with my household tasks after childbirth;” “ I did not need to return back to my paternal house or mother-in-laws house for conducting *Satogaeri Shussan* because my mother-in-law used to live in the same city, therefore everyday she used to come to my house in order to look after me and my baby;” “ I did not want to perform *Satogaeri Shussan* because I wanted to take care of my pet dog at my own house;” “ I wanted to overcome the challenges for raising a newborn baby with the help of my husband;” “ My husband wanted to see that our baby is growing up little by little”

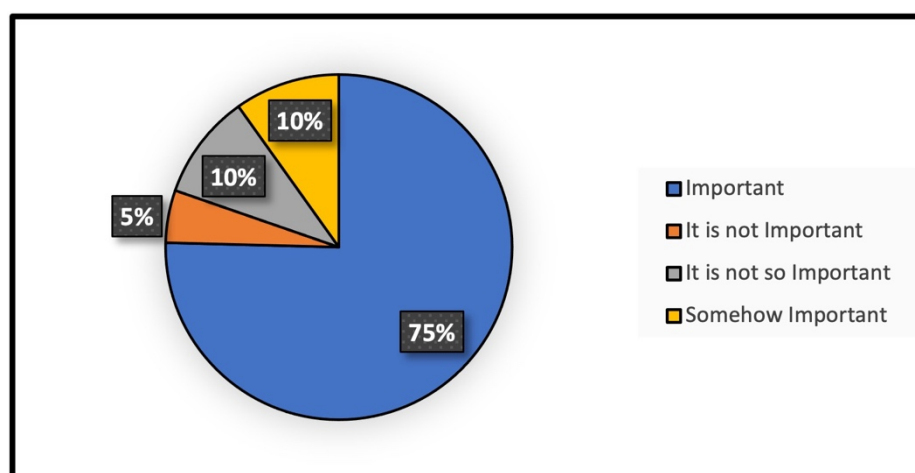


Figure 4: Importance of performing *Satogaeri Shussan* Ritual, N=61

According to figure 4, based on the information gathered from the 61 participants, around 75% have replied that it is important to perform and continue this age-old traditional ritual even in the present time. On the other hand, 5% have replied that it is not important to perform and 10% have confirmed that it is not so important to conduct this ritual during pregnancy or postpartum period. And finally, the remaining 10% have replied that somehow it is important to continue this age-old ritual. From this pie chart, it can be concluded that majority of Japanese women have positively confirmed the importance of performing this traditional ritual even in

the 21st century. When I asked them why it is important for them to follow this custom. They have shared very interesting facts with me. Such as, “By following this ritual, it is possible for them to give birth to a healthy baby without any worries;” “ It is important because you can give childbirth more in a relaxed way when you know that you are surrounded by the elder members of your family who have already experienced of giving childbirth;” “ It is important to follow this age-old traditional ritual because if you are surrounded by your own mother then probably there is a chance to give childbirth in a peaceful state of mind;” “ It is important to follow because after giving Childbirth it is quite natural for a woman to feel very exhausted physically and mentally, therefore at that time if she is given proper care by her mother then she will be able to overcome her stress and depression after delivery.”

Conclusion

In this paper, I have tried to shed a light on the concept and current trend of *Satogaeri Shussan* ritual followed in Japan based on the case study of Nagoya city, Aichi Prefecture. Particularly, unlike the previous researches, through this research I have tried to focus on the trend of *Satogaeri Shussan* ritual from the perspective of contemporary Japanese Women, who have just become mother in Nagoya city. If I make a comparison with the previous study that has been done by Kobayashi, then we can find similar kind of trend like after childbirth some Japanese women prefer to request their mother or mother-in-law to come and stay with them at their own house in order to look after them and their newborn baby. However, Kobayashi has tried to focus mainly on the role, function and significance *Satogaeri Shussan* in the life of Japanese women from the relationship between a mother and a daughter. But unlike Kobayashi's research, I have tried to discuss about how do the Japanese women think about the *Satogaeri Shussan* ritual in the present time, why do they conduct this ritual even in the 21st century, why do they feel necessity to perform this age-old ritual, how many Japanese women are interested in following this custom. All these questions are addressed from the perspective of Japanese women who have participated in the questionnaire and Face-to-Face interview surveys conducted from 2018 to 2020. Based on the primary data, I have showed that even if modernization and urbanization that took all over Japan, still when Japanese women get pregnant they are very much dependent on their parents by following the ritual of *Satogaeri Shussan* or not. It is because even if they do not wish to return back to their paternal house for performing *Satogaeri Shussan*, they love to request their parents to come and stay with them at their residence in order to look after them and provide them help in doing their household chores. Here, I would like to mention one more point that the opposite trend of *Satogaeri Shussan* is often known as *Yobiyose Shussan* in Japan. It means to call your close relatives or family members to stay with you for overcoming stress related to post delivery and managing day-to-day household tasks like cooking, doing laundry, washing and putting away dishes, sweeping, cleaning the bathroom and living room etc. Finally, it can be concluded that as long as the child is born in Japanese society, *Satogaeri Shussan* or the new emerging trend “*Yobiyose Shussan*” will always play an important role in the life of Japanese women during their pregnancy or post delivery.

Acknowledgement

Although I am not able to name everyone. This research paper is the part of my doctoral dissertation. I firmly believe that this paper would not have been possible without the exceptional support of my supervisor, Professor Shigehiro SASAKI. I would like to express my sincere thanks to him. In addition, I would like to thank all the Japanese women who have

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Kissing Scenes in the Representation of Family in Post-war Japanese Films

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Abstract

Yasujiro Ozu and Mikio Naruse are well-known Japanese filmmakers who depict the “everyday life” (nichijo in Japanese) of families in the post-war period. Their ways of presenting “everyday life” are characterized by the exclusion of violent and sexual expressions. However, exceptionally, emotions are expressed through kissing scenes in their films. Focusing on kissing scenes in Ozu’s *The Munekata Sisters* (1950), *Early Spring* (1956), Naruse’s *Floating Clouds* (1955), and *Scattered Clouds* (1967), this paper examines how “everyday life” is depicted through these scenes. By analyzing the kissing scenes in relation to plots and visual shots, I attempt to show that these scenes function as disruptions of the stability of “everyday life,” that is to say, as the representation of “the extraordinary” (hinichijo). Here “the extraordinary” involves disquieting events that disturb the continuous rhythm of “everyday life” and has negative images associated with adultery, prostitution, or sexual violence. Many previous studies on kissing scenes in post-war Japanese films have examined their reception by contemporaries from a sociohistorical perspective. For example, Kyoko Hirano’s *Kiss and the Emperor* (1998) observes that the kissing scenes introduced into Japanese films by GHQ and their reception reflect the idea of romantic love and sexual freedom in the context of post-war democracy. But this paper will explore the meaning of kissing scenes by looking at the relation between “everyday life” (“the ordinary”) and “the extraordinary” on which the films of Ozu and Naruse are based.

Keywords: Japanese Film, Family, Yasujiro Ozu, Mikio Naruse, Kissing, Everyday Life, The Extraordinary

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Introduction

This study aims to examine the role of kissing scenes in the depiction of “everyday life” (*nichijo* in Japanese) of Japanese families in the post-war period. In this paper, we consider the post-war period to be from the 1950s until the 1960s. By analyzing films directed by Yasujiro Ozu and Mikio Naruse, this study explores how kissing scenes in these films function as “extraordinary” (*hi-nichijo* in Japanese), in contrast to “ordinary” family life. Ozu and Naruse’s ways of presenting “everyday life” are characterized by the exclusion of violent and sexual expressions. However, exceptionally, there are kissing scenes in their films, and they form unusual expressions.

Here, I would like to summarize what the kissing scene was like for the Japanese. In his book, *The Culture of Gesture*, Michitaro Tada describes how Westerners are averse to shoulder-to-shoulder contact due to the need to maintain personal space and the fact that touching is associated with special proximity reminiscent of sex (Tada, 1972, pp.62-63). Meanwhile, the Japanese are not as sensitive to this contact (pp.62-63). As Tada points out, this is not so much a factor of love or coincidence, but rather a result of the fact that he Japanese people usually do not acknowledge sexuality itself. Therefore, it was not prevalent enough to forbid making shoulder-to-shoulder contact. Although the culture of kissing was not completely absent in Japan, it was not recognized as an act to be performed in public. Thus, kissing scenes in Japanese movies were not considered “every day,” instead fell into the category of “the extraordinary.”

Previous studies that discuss kissing scenes in post-war Japanese films examine the reception of the scenes by contemporaries from a sociohistorical perspective. In *Kiss and the Emperor*, Kyoko Hirano noted that, “The reason why the U.S. requested the inclusion of kissing scenes in Japanese films, even though it was not a common practice among Japanese people” was because “the occupation prosecutor believed that it was essential for the Japanese people to express their desires and emotions in the presence of others without being coy about their love and affection” (Hirano, 1998, p.252). She observed that kissing scenes had both pros and cons, as the act of kissing on screen was unusual and therefore most likely uncomfortable for some viewers (p.248). On the other hand, Hirano described it as a welcome sign of sexual freedom (p.253). She found that there was a conflict regarding the acceptance of kissing scenes in movies in post-war Japanese films, because while kissing was an “extraordinary,” unusual act for the contemporaries, these scenes aided in reflecting the sexual freedom and free love of post-war democracy.

As mentioned above, previous studies, including those of Hirano, have examined the relationship of kissing scenes in post-war Japanese films in the context of history and contemporary acceptance. However, how kissing scenes affected post-war Japanese films is still being debated. This paper discusses kissing scenes of these films as unusual expressions that disturb the continuous rhythm of the “everyday life.” The continuous rhythm of “everyday life” consisted of monotonous plots and repeated shots. Yoko Ima-Izumi’s *Kiss Scenes in Japanese Film* (2003) analyzed women’s kissing scenes in the post-war Japanese films. Ima-Izumi acknowledges that people during the wartime considered these kissing scenes to be a symbol of separation. Contrarily, this paper aims to explore how kissing scenes represented “the extraordinary” in post-war Japanese films. “The extraordinary” refers to the symbol of unpeaceful affairs, especially ones that disturb the continuous rhythm of every day family life, and include negative images, such as adultery, prostitution, and sexual violence.

Although kissing is indeed an act of intimacy in the real world, the kissing scenes of post-war Japanese films, by directors such as Ozu and Naruse, whose subject is typically everyday life, represent the extraordinary. The extraordinary differs from intimacy. In these post-war Japanese films, “intimacy” is expressed by indirect contact. In these films, intimate activities include eating together and walking together, rather than maintaining intimate physical contact, such as kissing. There are some scenes in contemporary films wherein two people walk side by side or are in the same space together, intimately positioned. Therefore, physical or sexual contact such as kissing is regarded as an extraordinary affair in these films. To reveal the effect of kissing scenes as the symbol of the extraordinary which disturb the rhythm of everyday life, this study analyzes post-war Japanese films whose kissing scenes effectively represent “the extraordinary,” such as those in Yasujiro Ozu’s *The Munekata Sisters* (1950) and *Early Spring* (1956), Mikio Naruse’s *Floating Clouds* (1955) and *Scattered Clouds* (1967).

1. Kissing scenes in Ozu’s films

As already mentioned, the intimacy depicted in Yasujiro Ozu's representations of daily life was mainly through indirect contact. Particularly, films such as *Early Summer* (1951) and *The Flavor of Green Tea over Rice* (1952), the act of eating together represents the intimacy of everyday family life (Figure 1, 2). Therefore, it is only natural that the kissing scene gives an extraordinary impression within Ozu's films. In contrast to other Japanese films of the same period, such as *Hatachi no Seishun* (1946) which is regarded as Japan's first kissing film, Ozu's films continued to depict arranged marriages even when the GHQ's film democratization policy required "free love" to be depicted in films (Hase, 2017, pp.127-128). Hase argued that Ozu's films, especially *Late Spring* (1949), which depicted arranged marriages and restricted sexual depictions, were positioned as “anti-kissing films,” in contrast to films that tended to insert kissing scenes to enlighten people about “romantic love” as a post-war democracy (Hase, 2017, pp.128-130). It is not clear to what extent Ozu was skeptical of this policy, but kissing itself was something extraordinary in Ozu's films, which depicted the everyday lives of families in his time. In this section, I will discuss the role of the kissing scene, a symbol of the unusual in Ozu's films, as it affects the family and the representation of the family.



Figure 1: Yasujiro Ozu’s *The Flavor of Green Tea Over Rice* (1952)



Figure 2

In *The Munakata Sisters*, there is a scene in which Setsuko Munakata attempts to kiss Hiroshi Tashiro, her former love. This occurs after her relationship with her husband, Ryosuke, has gone cold. Subsequently, the two notice Ryosuke's appearance and hurriedly pull apart from each other. The marital problems of Setsuko and Ryosuke are depicted in this film. When Tashiro, her former lover, appears on the screen, his relationship with Setsuko is in contrast to her relationship with her husband, and the lack of intimacy in her marriage to Ryosuke is emphasized. Setsuko tries to behave as a virtuous wife, but after an incident wherein she is slapped by Ryosuke and then receives advice from her sister, she finally leaves Ryosuke and tries to be with Tashiro. The scene where Setsuko and Tashiro are about to kiss is when they call Ryosuke to discuss it. Ryosuke's catching his wife red-handed with Tashiro makes him realize that Setsuko is about to leave him and marry Tashiro. As fate would have it, Ryosuke dies suddenly, before they can officially divorce. Setsuko is overcome by guilt and never marries Tashiro. In this film, Tashiro and Setsuko attempt to kiss (Figure 3) and get close to each other (Figure 4). However, this kiss is prevented when they realize that Setsuko's husband Ryosuke has arrived (Figure 5) and leaves (Figure 6). Ozu's films have demonstrated "the fact that sexuality can be perceived as unclean for human beings" (Hase, 2017, p.129). As Hase points out, a married woman attempting to kiss a man other than her husband is never depicted in a positive light, even when she loves him more than she loves her husband. When Ryosuke suddenly dies, Setsuko immediately snaps out of her relationship with Tashiro and acts as a virtuous wife-turned-widow. In other words, in this film, kissing depicted immorality, as the only witnessed kiss was an adulterous one. Not only did the kissing scene express the extraordinary nature of the family, but it depicted a disturbance in the rhythm of daily life in post-war Ozu's films.

Figure 3: Yasujiro Ozu's *The Munakata Sisters* (1950)



Figure 4



Figure 5



Figure 6

In *Early Spring*, there is a kissing scene between Syoji Sugiyama, who has a wife, and his co-worker, Chiyo Kaneko, in the Okonomiyaki restaurant (Figure 7). After this scene, they spend the night together. Their kissing scene is perceived by the audience as the symbol of their disquieting adultery. Adultery is an unpeaceful and extraordinary occurrence in Ozu's films, which typically describe the peaceful everyday life of a family. Furthermore, after Syoji spent the night with Chiyo he attempted to kiss his wife, Masako. Masako, however, refused his kiss (Figure 8). This scene reveals that kissing scenes were not a symbol of affirmative intimacy.

Figure 7: Yasujiro Ozu's *Early Spring* (1956)

Figure 8

The contrasts between Chiyo willingly kissing Syoji and Masako refusing to kiss Syoji is stark and meaningful. Shoji and Chiyo's affair is later discovered by other colleagues and is severely criticized. Not only is his strict and fastidious wife, Masako, upset but his friends also severely criticize his relationship with Chiyo. This shows that the characters in Ozu's films were naturally moral, and that kissing people, especially people that one was not married to was not in the scope of morality. It is also important to note why Masako refused to kiss Shoji. This was partly because she sensed Shoji's guilt, but mostly because the act of kissing between a husband and wife is an unusual act in Ozu's films. As mentioned previously, the everyday intimacy of family in Ozu's films is represented by the act of eating the same food and being in the same space. A kissing scene between Shoji and Masako here is not a guarantee of intimacy. Thus, these kissing scenes represented extraordinary affairs and disturb the peaceful relationship of a family rather than symbolize affirmative intimacy. In Ozu's films, kissing scenes disturb visual and continuous rhythms by consisting of a shot-reverse-shot of bust shot.

Therefore, in Ozu's films, the kissing scene is a symbol of the extraordinary, and what the kissing scene suggests is a family crisis. In these two works, the object of the kiss is someone other than the spouse, which falls under the category of cheating or adultery. In *The Munakata Sisters*, the husband dies suddenly and in *Early Spring*, the couple's relationship deteriorates decisively. In Ozu's films, everyday family intimacy is expressed through indirect contact, such as the act of sharing the same foods. The kissing scene is a symbol of unwelcome intimacy, or more specifically, a sense of guilt. This guilt is not simply based on the social context of losing the war, but it is a guilt that disrupts the family routine in Ozu's film and is connected to the extraordinary nature of the kissing scene.

2. Kissing scenes in Naruse's Films

Mikio Naruse's post-war films have the same tendency. Many of Mikio Naruse's post-war works focus on women's lives during the post-war period. Catherine Russell noted that, "Naruse's marriage films dramatize the emotional and economic difficulties of couples attempting to make it on their own in the harsh conditions of the post-war era" (Russell, 2011, p.104). As Russell pointed out, "[Naruse's] female characters" tend to work as *geishas* or bar hostesses (pp.103-104). However, "they are neither eroticized or exoticized, which was a new way of depicting the *mizu shobai* or 'water trade' in Japanese culture" (pp.105). Thus, Naruse's films tended to depict everyday life with a greater focus on the hardships of life, than Ozu's. However, this was mainly due to the difference in the social classes of characters in the films. Also, Naruse did not emphasize sexuality when depicting the "water trade." In addition, the symbol of everyday intimacy in Naruse's films was walking together, which is an act of indirect contact (Figure 9, 10). This is similar to Ozu's representations of intimacy, as physical contact was not regarded as a symbol of intimacy in Ozu's movies either. Therefore, the kissing scenes in Naruse's films, similar to those in Ozu's films, were depicted as something extraordinary, as well as an act that threatened the family.



Figure 9: Mikio Naruse's *Repast* (1951)



Figure 10: Mikio Naruse's *Yearning* (1964)

This is exemplified in Naruse's *Floating Clouds* (1955), where two kissing scenes, one of the past in the form of a flashback, and one of the present, are shown. This film depicted the relationship between Yukiko and Tomioka which became adulterous when Yukiko went to Vietnam and met with Tomioka clandestinely. The flashback of their kiss exchange there was shown in connection to the current kissing scene when they meet again in Japan (Figure 11), charting the path of their love affair. Although they kissed when they were reunited in Japan, Tomioka reneged on his promise to Yukiko and finally chose to remain with his wife. The kissing scene here suggests an empty relationship between Tomioka and Yukiko in an adulterous relationship, which is the opposite of positive intimacy. This does, however, differ

from the way in which Imaizumi uses kissing scenes, which, for him, symbolizes eternal separation. It is also important to note that Imaizumi used a flashback to inform the audience of a past kissing scene. Another flashback that appears in the film is the scene where Yukiko was raped by her brother-in-law, Iba (Figure 12). After returning to Japan and working as a prostitute, Yukiko recalls the assault as a piece of her past that is irreversible when she sees Iba again.



Figure 11: Mikio Naruse's *Floating Clouds* (1955)



Figure 12

This pattern suggests that the depiction of physical contact through flashbacks is associated with negative imagery, such as adultery and rape. In addition, Tomioka's wife has noticed that his feelings for her lack warmth since his return to Japan, and their relationship has deteriorated. However, Tomioka does choose to stay with his wife while continuing his relationship with Yukiko. Yukiko continues to pursue him, while Tomioka also becomes involved with other women. In the film, he is asked by another woman, "Why did you kiss me while you were drinking?" This suggests that kissing is not an act of devotion for him. These scenes make the audience notice that his action has disturbed the everyday lives of women. The act of kissing, which is insignificant for Tomioka, threatens his relationship with his wife and the families of each of the women involved. By the time he finally began to consider a serious relationship with Yukiko after his wife's death, Yukiko was already ill, and it was too late to forge a permanent relationship with her.

Russell (2011) noted that *Floating Clouds*, "lacks stability, but an unusual sense of instability is created" (p.118). This characters in this film consisted of Tomioka, a "womanizer", and the women who fell prey to Tomioka, and had their stable, everyday lives disturbed by him. The "instability" that Russell referred to was caused by Tomioka. Therefore, these kissing scenes

are also a symbol of the immoral act of adultery rather than as symbols of intimacy and devotion. Since Tomioka had the potential ability to ruin the everyday life of these women and their families, including his wife, we can say that his promiscuous behavior was an act that endangered Yukiko's everyday life and that of his wife and family.

There is another example of kissing scenes that represents the extraordinary in Naruse's post-war films. In *Scattered Clouds* (1967), there are kissing scenes between Yumiko, a widow, and Shiro, who had run over Yumiko's husband with his car. At the beginning of this film, their relationship was that of victim and perpetrator. This caused Shiro to be an object of hatred for Yumiko. However, as they kept encountering each other, Shiro falls in love with Yumiko and begins to pursue her. At first, Yumiko strongly rejects him, but eventually she is attracted to him. Then the kissing scene between the two takes place as Shiro asks Yumiko to go to Lahore with him. It is during this kissing scene, that the flashback appears in which her husband, who died in an accident caused by Shiro, flood Yumiko's mind as cuts of the car and ambulance are contained in it. This flashback evokes guilt in her kiss exchange with Shiro makes her feel like a traitor. It also suggests a threat to Yumiko's living of a chaste life. At the same time, Yumiko bears a grudge against Shiro for her husband's death. This means that Shiro is Yumiko's metaphorical assailant, so their kissing is a symbol of an unwelcome and immoral affair. Furthering the immorality, their affair did not culminate in marriage. Additionally, in Naruse's films, shots of close-ups are used to evoke a sense of touch. Both these shots and previous flashbacks disturbed the visual rhythm of everyday life.

Conclusion

Both *Floating Clouds* and *Scattered Clouds* use flashbacks, which are not common in Naruse's films. They both contain kissing scenes that are connected to images of adultery, infidelity, sexual violence, and feelings of guilt. Since one of the men or women has a family, this type of kissing is an act that could destroy the family. In *Floating Clouds*, the relationship between the man and his wife deteriorates and, in the end, the wife dies. In *Scattered Clouds*, the kissing was an act that had the ability to destroy the everyday life of the widow by evoking feelings of guilt in her. Furthermore, the effects of these kissing scenes are common in Ozu's films, as mentioned earlier. In Ozu's films, the couples depicted in the kissing scenes do not end up getting married. Rather, in those films, the kissing scene is a symbol of an unwelcome and unusual relationship, regardless of the guilt the couple feels.

As mentioned previously, these post-war films of Ozu and Naruse describe ordinary, everyday family life. However, kissing scenes represent the extraordinary rather than the ordinary. They contain moments that disrupt the rhythm of peaceful, everyday life, such as adultery, sexual violence, and prostitution, scenes which are intended to disquiet the audience. Thus, kissing scenes symbolized the extraordinary rather than idyllic, romantic love, in the context of post-war democracy. In post-war Japanese films directed by Ozu and Naruse, the audience can see this as an original approach to kissing scenes. Ozu and Naruse typically described everyday family life, and they were able to effectively use kissing scenes to represent disturbing paradoxes within everyday life. The idea that kissing scenes in post-war Japanese films could represent the "extraordinary" in everyday family life is new and exciting.

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Sexual Communication in Heterosexual and Non-Heterosexual Young Adults: Seeking the Importance of Perceived Social Support

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Abstract

Many people still feel uneasy to talk about sex and sexuality, yet non-heterosexual individuals are more prone than heterosexual people to feel challenged to disclose their sexual concerns because of sexual stigma. However, studies show that there is a positive correlation between sexual communication and perceived social support. With that said, perceived social support could be a key factor that helps people feel more comfortable to talk about sensitive topics. Besides, the topic of sexual communication and perceived social support between heterosexual and non-heterosexual individuals has been understudied. It is important to examine whether the frequency of sexual communication and level of perceived social support differ among the two groups. Additionally, studies have investigated only a limited number of sexual communication topics, hence a wider range of sexual topics need to be studied. Participants (Heterosexual $N=135$, Non-Heterosexual $N= 60$) completed an online survey via social media. The results revealed statistically significant positive correlations between sexual communication and perceived social support both in heterosexual and non-heterosexual participants. However, the study did not find differences in the sexual communication frequency and level of perceived social support between the two groups. The results offer valuable insights for sex educators, psychologists, and other specialists into the significance of social support for people to become sexually autonomous and efficacious. Further research needs to examine whether formal sexuality education could help people talk more about the least discussed sexual topics of the current study.

Keywords: Sexual Communication, Perceived Social Support, Heterosexuality, Homosexuality, Sexual Minority

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Introduction

There are still many people who feel uncomfortable talking about sex and sexuality or tend to stigmatize others' sexuality (Bry et al., 2017; Fuller et al., 2019; McKenna, & Bargh, 1998; Sedlovskaya et al., 2013). Sexual minorities are especially vulnerable because their sexuality is often quite different from the majority's heteronormative perspective (Martin-Storey & August, 2016). Hence, many people stigmatize sex and sexuality under such circumstances (Bry et al., 2017; Fuller et al., 2019). Concealing one's vulnerable aspects of self helps them avoid being hurt, or maintain their daily lives without unnecessary psychological and social challenges such as harassment (Bry et al., 2017; Gorden, 2018; Martin-Storey, & August, 2016; Rostosky et al., 2010). On the other hand, achieving one's authentic self could help stigmatized people deal with daily interpersonal struggles and psychological wounds, become more confident, present their true self, and gain more familial and social support than those who conceal their sexuality (Bry et al., 2017; Fuller et al., 2019). Interestingly, when sexually marginalized populations have more social support, it is related to more positive sexual identity development (Sheets & Mohr, 2009), more open sexual communication (Goldfried & Goldfried, 2001; Kirkman et al., 2005), and better subjective well-being (Toplu-Demirtaş et al., 2018). Therefore, it is important to identify links between sexual communication and perceived social support among sexual minorities.

Sexual communication is when people share information and knowledge of sex and sexuality with each other and learn more about such sensitive topics. It is a means to convey sexual values, beliefs, expectations, and knowledge to help others to become sexually healthy (de Looze et al., 2015). However, sexual communication is often stifled by sexual stigma (Kirkman et al., 2005). Sexual stigma is an irrational judgment of others' sexual expressions and preferences based on one's own sexuality norms and beliefs (Bry et al., 2017; Fuller et al., 2019). Sexual stigma can lead to poor mental health, lower self-esteem, self-loathing, self-isolation, and alienation from social groups (Meyer, 2003). It may also elicit shame, guilt, depression, anger, and embarrassment (Bry et al., 2017; Bybee et al., 2009; Wagner et al., 2013). In addition, stigmatized sexuality is inhibited, and therefore, the topics discussed are limited (Trinh & Choukas-Bradley, 2018).

Despite the challenges of sexual communication, perceived social support can be helpful in dealing with inhibited sexual communication. Family is one of the most important groups who provides social support. Familial social support plays a vital role in sexual minority's well-being as it helps reduce sexual stigma, develop self-esteem and mental health among sexual minority individuals (Goldfried & Goldfried, 2001; Toplu-Demirtaş et al., 2018). In addition, it can serve as a basis for positive non-heterosexual identity development (Sheets & Mohr, 2009). Zhang et al. (2015) found that people who perceived having familial social support had lower levels of stress and as a result, better well-being. Sexual minorities who have family support are able to communicate with others and express their sexual identity more freely (Goldfried & Goldfried, 2001). Interestingly, family support also serves as a motivation to engage in sexual communication (Albritton et al., 2014). When the family environment is perceived as supportive, it positively reinforces parent-child sexual communication regardless of sexual identity (Booth-Butterfield & Sidelinger, 1998). Hence, perceived social support can positively influence people's mental state, identity and communication.

Perceived social support from friends also has positive impact on people's psychological state. According to Sheets and Mohr (2009), people can improve well-being and develop

positive sexual identity when they have high levels of support from friends. Friends' support is closely aligned with exploring one's sexual identity and reducing negative impact of stress (Lee et al., 2020). Chow and Cheng (2010) identified that perceived social support from friends was positively associated with positive sexual minority identity as well. Rios and Eaton (2016) claim that it is crucial for individuals to know more about sexuality because it gradually leads them to be able to offer social support for people in need of acceptance such as sexual minorities. People can engage in more sexual communication with friends because they tend to empathize with each other more easily and can talk about relevant sexual topics more comfortably (Lefkowitz & Espinosa-Hernandez, 2007). Hence, it is important for both givers and receivers of social support to share about their sexuality concerns to build supportive relationships and achieve well-being.

Another type of social support comes from significant others. According to Lee et al. (2020), perceived social support from friends and significant others contributes to the development of better coping skills in stressful situations, thus, helps reduce levels of stress. Toplu-Demirtaş et al. (2018) note that perceived social support improves self-compassion and well-being. Notably, people are more prone to talk about sexuality concerns in their romantic relationships when there is trust and safety (Marcantonio et al., 2018). In addition, comfort in an intimate relationship can help people have better sexual communication (Trinh & Choukas-Bradley, 2018). Physical and psychological safety and comfort in the romantic relationship could improve a person's psychological state and help him/her/them combat the discomfort to talk about sexuality (Rubinsky & Hosek, 2020). All in all, perceived social support is important for people of different sexual orientations to become more mindful, accepting, and open to their sexuality concerns.

When it comes to the frequency of communication about sexuality, topics about relationships, anatomy, contraception, and reproductive health (e.g., STIs and HIV/AIDS) were most commonly discussed (de Looze et al., 2015; Grossman et al., 2018; Widman et al., 2014). However, topics that are rarely discussed have not been previously identified. According to Lee (2009), people are not willing to talk about topics that elicit embarrassment, shame, or guilt and are negatively associated with sexual assertiveness and comfort (Grossman et al., 2018; Kirkman et al., 2005; Meschke & Dettmer, 2012). Such topics are perceived as more personal, intimate, directive, sensitive, thus, provocative (de Looze et al., 2015).

The current study examines relationships between sexual communication and perceived social support among heterosexual and non-heterosexual participants. It was hypothesized that the higher participants' perceived social support, the higher frequency of sexual communication. Subsequently, it was expected that heterosexuals will report more frequent sexual communication and perceived social support than non-heterosexuals. Finally, the most to least frequently discussed sexuality topics that may or may not be specific to sexual orientation (heterosexuality and non-heterosexuality) were identified.

Methods

Participants

In the current study, 195 participants from 41 different countries (*Mean age* = 22.2, *SD* = 2.89) participated by filling out questionnaires online. Gender included 21% of male (*n* = 41), 76% of female (*n* = 149), 2% of non-binary (*n* = 4), and 1% preferred not to say (*n* = 1). 69%

identified themselves as heterosexual ($n = 135$), 3% as gay ($n = 5$), 3% as lesbian ($n = 6$), 19% as bisexual ($n = 38$), or 6% as others ($n = 11$).

Measures

Sexual Communication. To measure the frequency of sexual communication with family, friends, and significant others on 20 different sexual topics (for example, contraception, dating relationship, homosexuality, rape, etc.) on a 5-point Likert scale, Sexual Communication Scale (SCS, Somers & Canivez, 2003) was used. The higher the scores, the higher the frequency of sexual communication. The results of the current study showed excellent internal consistencies for the family ($\alpha = .918$), friends ($\alpha = .933$), significant other ($\alpha = .928$), and overall sexual communication ($\alpha = .943$).

Perceived Social Support. Multidimensional Scale of Perceived Social Support was used (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) to measure subjective social support. The scale includes 12 items on a seven-point Likert scale, from 1 = very strongly disagree to 7 = very strongly agree. The higher the scores, the higher the level of perceived social support. MSPSS has three subscales: (a) family, (b) friends, and (c) significant other. The results of the current study showed that reliability ranged from good to excellent: family ($\alpha = .907$), friends ($\alpha = .921$), significant other ($\alpha = .946$), and overall ($\alpha = .886$).

Data Gathering Procedure and Statistical Analyses

The data was gathered using social media. Informed consent was obtained before the participants proceeded to the study. First, participants indicated their nationality, ethnicity, gender, age and sexual orientation. Then the participants filled out two questionnaires and were debriefed about the study. The data was analyzed by using Microsoft Excel and IBM SPSS 28.0 application. To test the hypotheses, Pearson's product moment correlations and independent-samples t-tests were used.

Results

Correlations between Sexual Communication and Perceived Social Support

Heterosexual Participants. As seen in Figures 1-3, there were significant weak to moderate positive correlations between perceived social support and sexual communication with family ($r = .300, p < .001$), with friends ($r = .324, p < .001$), and with significant others ($r = .286, p < .001$).

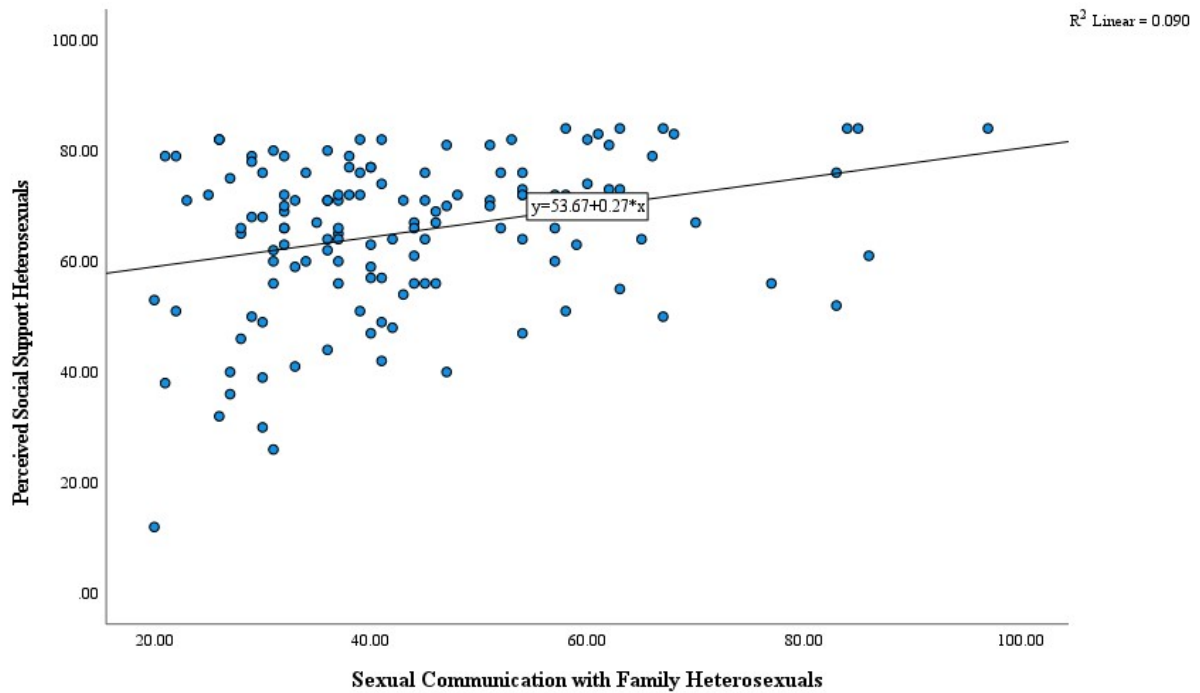


Figure 1: Error bar graph showing the linear relationship between sexual communication with family and perceived social support in heterosexuals.

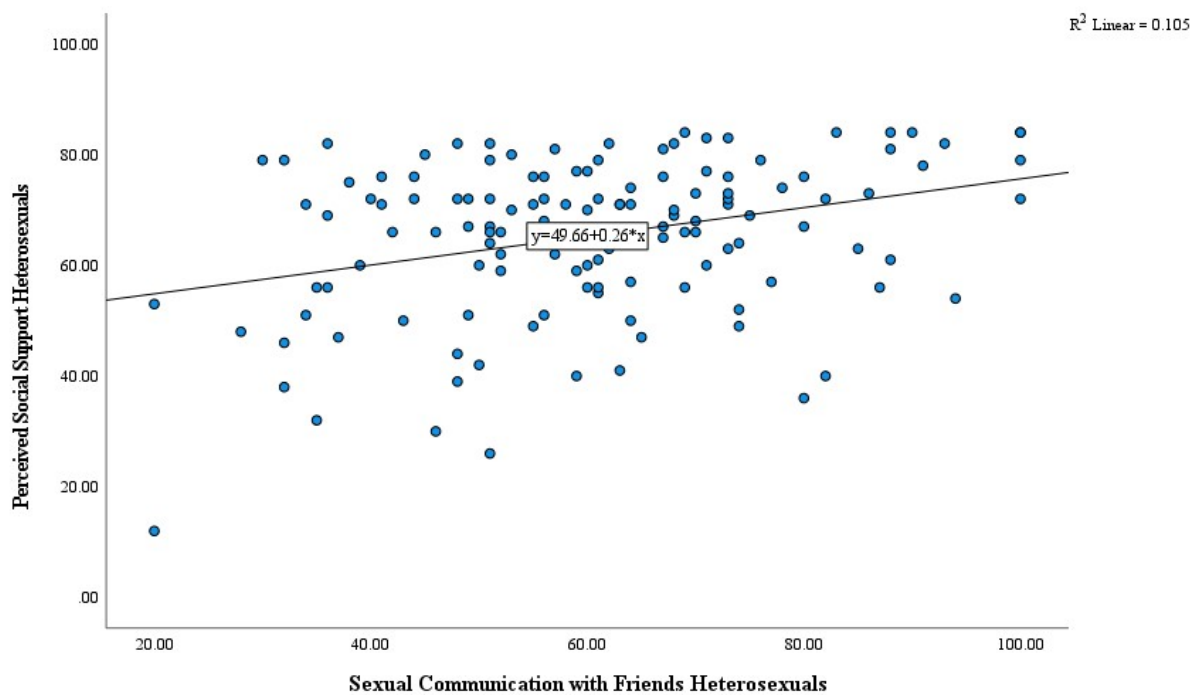


Figure 2: Error bar graph showing the linear relationship between sexual communication with friends and perceived social support in heterosexuals.

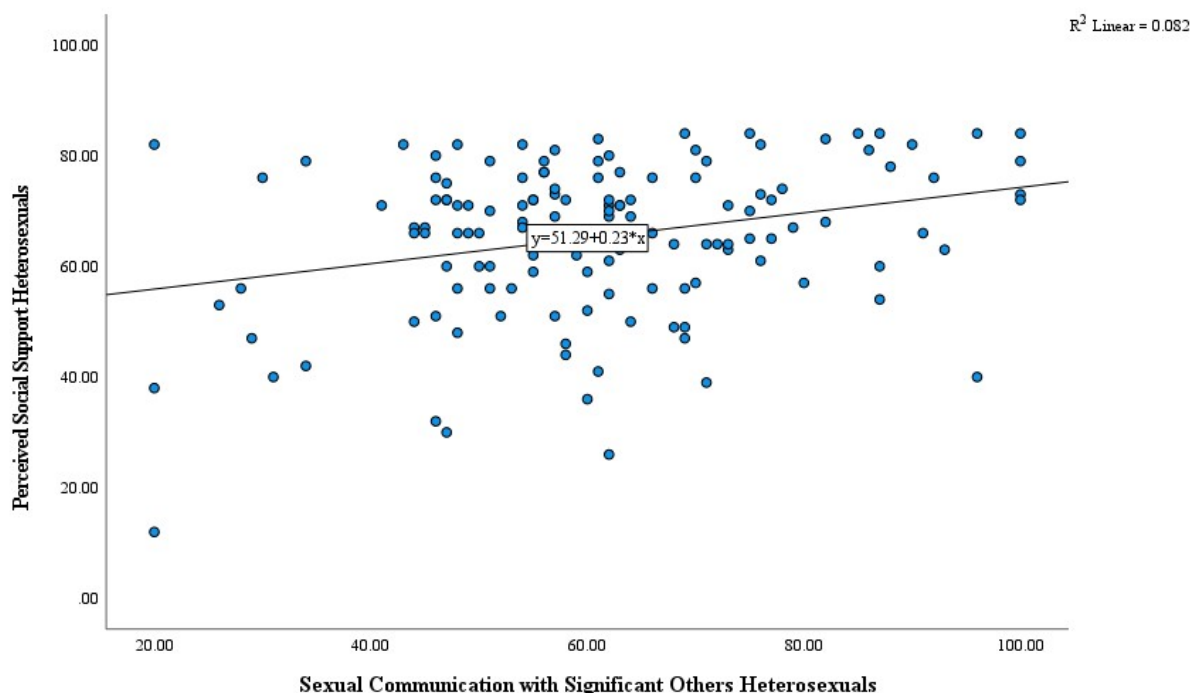


Figure 3: Error bar graph showing the linearity between sexual communication with significant others and perceived social support in heterosexuals.

Non-Heterosexual Participants. There were significant weak to moderate positive correlations between perceived social support and sexual communication with family ($r = .357, p = .005$), with friends ($r = .349, p = .006$), and with significant others ($r = .264, p = .042$) (See Figure 4-6 below).

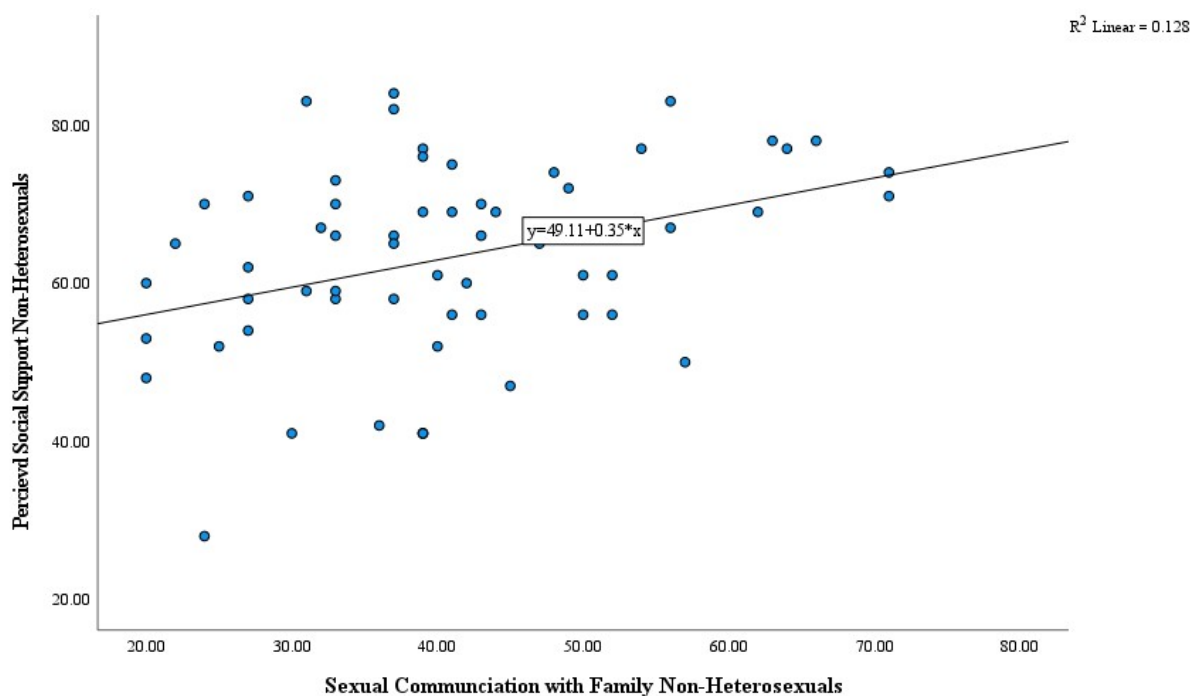


Figure 4: Error bar graph showing the linearity between sexual communication with family and perceived social support in non-heterosexuals.

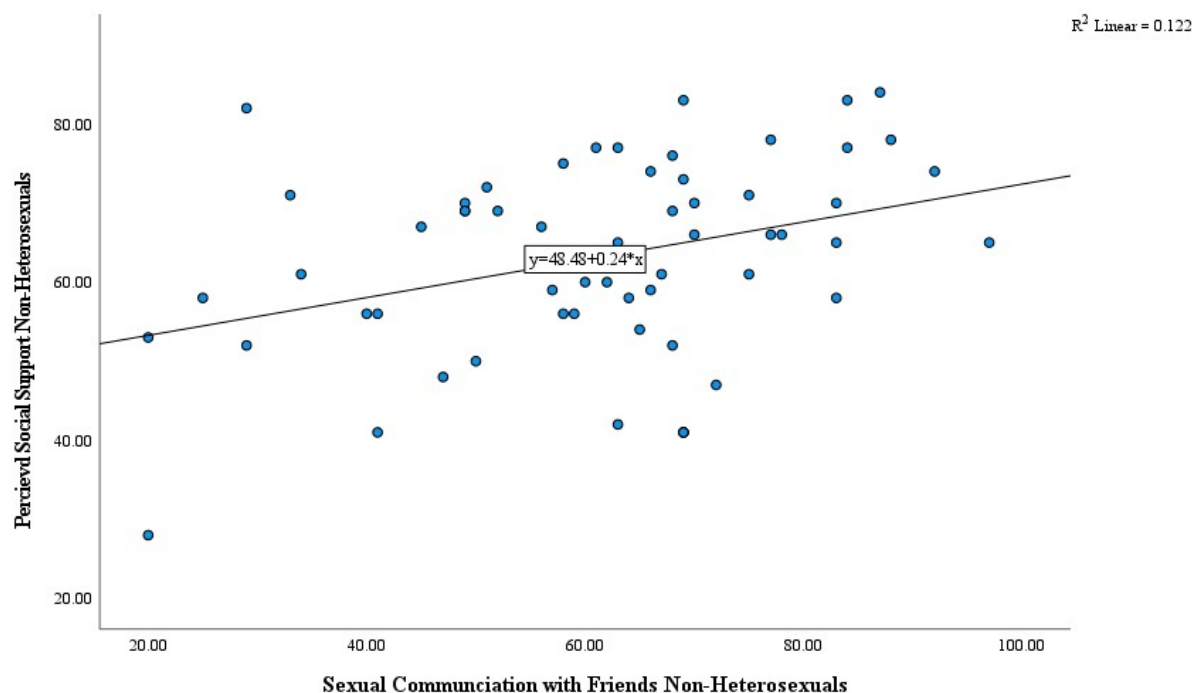


Figure 5: Error bar graph showing the linearity between sexual communication with friends and perceived social support in non-heterosexuals.

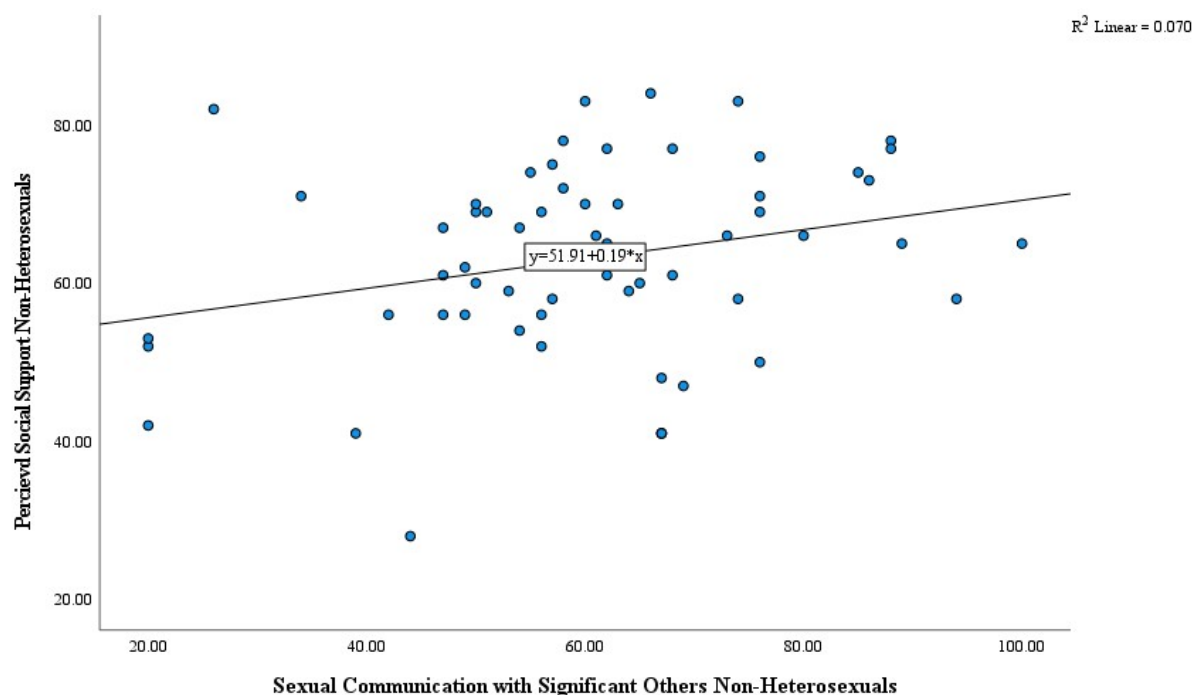


Figure 6: Error bar graph showing the linearity between sexual communication with significant others and perceived social support in non-heterosexuals.

Differences of Sexual Communication and Perceived Social Support between Heterosexual and Non-Heterosexual Participants

Sexual Communication. There was no significant difference in sexual communication with family between the 135 heterosexual participants ($M = 43.67, SD = 15.54$) and the 65 non-heterosexual participants ($M = 40.63, SD = 12.68$), $t(193) = 1.33, p = .185$, with friends

between heterosexuals ($M = 60.47$, $SD = 17.28$) and non-heterosexuals ($M = 61.35$, $SD = 17.23$), $t(193) = -.326$, $p = .745$, and with significant others between heterosexuals ($M = 61.23$, $SD = 17.24$) and non-heterosexuals ($M = 60.53$, $SD = 17.44$), $t(193) = .259$, $p = .796$.

Perceived Social Support. There was no significant difference between the 135 heterosexual participants ($M = 65.36$, $SD = 13.85$) and the 60 non-heterosexual counterparts in perceived social support ($M = 63.15$, $SD = 12.26$), $t(193) = 1.062$, $p = .289$.

Differences in Sexual Topics between Heterosexual and Non-Heterosexual Participants.

Sexual Topics with Family. As seen in Table 1, the five most discussed topics among heterosexual participants with their family were Love and/or Marriage, Dating Relationships, Menstruation, Birth Control in General, and Sexual Reproductive Health, whereas the five least discussed topics were Prostitution, HIV/HIDS, Petting, Masturbation, and Nocturnal Emissions. Among non-heterosexual participants, the five most discussed topics were Menstruation, Love and/or Marriage, Dating Relationships, Homosexuality, and Sexual Reproductive Health, while the five least discussed topics were HIV/HIDS, Prostitution, Masturbation, Petting, and Nocturnal Emissions. Uniquely to the non-heterosexual respondents, they were more likely than heterosexual respondents to talk more frequently about homosexuality.

Sexual Topics with Friends. Among heterosexual participants, the five most discussed topics with their family were Dating Relationships, Love and/or Marriage, and Menstruation, whereas the five least discussed topics were Pre-Marital Sex, HIV/AIDS, and Nocturnal Emissions. On the other hand, among non-heterosexual participants, the five most discussed topics were Dating Relationships, Love and/or Marriage, and Menstruation, whilst the five least discussed topics were HIV/AIDS, Pre-Marital Sex, and Nocturnal Emissions. Heterosexual individuals were more likely than non-heterosexual participants to talk about birth control with friends. On the other hand, subsequently to family communication, non-heterosexual participants were more likely than heterosexual individuals to talk about homosexuality.

Sexual Topics with Significant Others. Among heterosexual participants, the five most discussed topics with their family were Love and/or Marriage, Dating Relationships, Sexual Intercourse, Personal Use of Birth Control, and Birth Control in General, whereas the five least discussed topics were Pre-Marital Sex, Rape, Sexual Abuse, HIV/AIDS, and Prostitution. On the other hand, among non-heterosexual participants, the five most discussed topics were Dating Relationships, Love and/or Marriage, Sexual Intercourse, Menstruation, and Personal Use of Birth Control, whilst the five least discussed topics were Sexual Abuse, Consequences of Teen Pregnancy, Prostitution, Pre-Marital Sex, and HIV/AIDS. For both of heterosexual and non-heterosexual respondents, they talk more about sexual intercourse with significant others than family and friends. Among heterosexual participants, they were less likely than non-heterosexual participants to talk about rape.

Sexual Communication with Family		
Rankings for Sexual Topics	Heterosexuals	Non-Heterosexuals
1	Love and Marriage	Menstruation
2	Dating Relationships	Love and Marriage
3	Menstruation	Dating Relationships
4	Birth Control in General	Homosexuality
5	Sexual Reproductive Health	Sexual Reproductive Health
16	Prostitution	HIV/AIDS
17	HIV/AIDS	Prostitution
18	Petting	Masturbation
19	Masturbation	Petting
20	Nocturnal Emissions	Nocturnal Emissions
Sexual Communication with Friends		
Rankings for Sexual Topics	Heterosexuals	Non-Heterosexuals
1	Dating Relationships	Dating Relationships
2	Love and Marriage	Love and Marriage
3	Menstruation	Menstruation
4	Birth Control in General	Homosexuality
5	Sexual Intercourse	Sexual Intercourse
16	Sexual Abuse	Petting
17	Pre-Marital Sex	Consequences of Teen Pregnancy
18	Prostitution	HIV/AIDS
19	HIV/AIDS	Pre-Marital Sex
20	Nocturnal Emissions	Nocturnal Emissions
Sexual Communication with Significant Others		
Rankings for Sexual Topics	Heterosexuals	Non-Heterosexuals
1	Love and Marriage	Dating Relationships
2	Dating Relationships	Love and Marriage
3	Sexual Intercourse	Sexual Intercourse
4	Personal Use of Birth Control	Menstruation
5	Birth Control in General	Personal use of Birth Control
16	Pre-Marital Sex	Sexual Abuse
17	Rape	Consequences of Teen Pregnancy
18	Sexual Abuse	Prostitution
19	HIV/AIDS	Pre-Marital Sex
20	Prostitution	HIV/AIDS

Table 1: Rankings for the frequency of sexual communication with family, friends, and significant others between heterosexual and non-heterosexual respondents showing the 5 most and 5 least frequently discussed sexual topics.

Discussion

The Relationship between Sexual Communication and Perceived Social Support

The results of this study revealed that the higher the perceived social support, the more frequent sexual communication with family, friends, and significant others for both heterosexual and non-heterosexual participants. In terms of support from family, Albritton et

al. (2014) argue that familial support helps one to better understand how to avoid risky sexual behavior. When the family is supportive and open, they tend to talk more about attitudes toward sexuality. (Booth-Butterfield & Sidelinger, 1998). This is also true for non-heterosexual counterparts. According to Goldfried and Goldfried (2001), when the family of sexual minorities provide them with an openly accepting climate, it increases exposure to sexuality-related topics. In addition, familial social support becomes the basis for social support for other people later (Goldfried & Goldfried, 2001).

In the current study, perceived social support from friends played a significant role in communication about sexual topics. In previous studies, researchers found that when sexual minority individuals perceived they had support from friends, they were more likely to talk about sexuality (Chow & Cheng, 2010). Similar findings were reported for heterosexual individuals. People can communicate more about sexuality among friends because they can understand each other's situations more easily, and they can feel more comfortable talking about such topics (Lefkowitz & Espinosa-Hernandez, 2007). In the current study, the positive association between sexual communication with friends and perceived social support from friends was stronger than those from family and significant others. Hence, support from friends can be especially helpful when talking about sexuality.

The more perceived social support participants receive from the significant other, the more sexual communication there is among both heterosexual and non-heterosexual participants. People tend to talk about sexuality concerns more openly in a romantic relationship when there is trust and safety (Marcantonio, Jozkowski, & Wiersma-Mosley, 2018). Rubinsky and Hosek (2020) state that the romantic relationship among the sexual minorities is especially important because it entails identification of gender and sexuality, sexual communication satisfaction, and relational satisfaction.

Trinh and Choukas-Bradley (2018) reported the participants were more comfortable to talk about their romantic relationship with friends (see also Lefkowitz et al., 2007). However, the same tendency was not identified in previous research regarding sexual communication with family and perceived social support from significant others. Thus, social support from and sexual communication with family can play a pivotal role in heightening sexual communication efficacy with significant others later in life (Albritton et al., 2014). However, once individuals are away from home and build new relationships outside the family of origin, their core support system tends to shift to friends and/or one's partner rather than family (Lee et al., 2020). Hence communication with family on sexual topics could gradually decrease throughout young adulthood.

Differences of Sexual Communication and Perceived Social Support

The current study did not find any difference in either sexual communication or perceived social support among heterosexual and non-heterosexual individuals. The results oppose the idea that sexual stigma is considered to get in the way of non-heterosexual individuals to perceive social support as well as communicate with others on sexual topics (Chow & Cheng, 2010; Goldfried & Goldfried, 2001; Hu et al., 2020; Sheets & Mohr, 2009).

It is possible that the participants were more prone to perceive their social circles and environments as open, accepting, and supportive (Goldfried & Goldfried, 2001; Toplu-Demirtaş et al., 2018) rather than intra- and interpersonally stressful (Puckett et al., 2018), sexually non-conforming (Grossman et al., 2018; Mastro & Zimmer-Gembeck, 2015; Parker

& Ivanov, 2012), and prejudiced or discriminatory (Meyer, 2003). Additionally, they may have been able to positively cope with sexual stigma, thus, could engage in sexual communication and have relatively high social support. Rostosky et al. (2010) assert that positive coping with stigma may allow sexually vulnerable people to find meaning in painful experiences and seek for more social support within the community supportive of their identity. Therefore, the frequency of sexual communication and perceived social support may not depend solely on sexual orientations. Individual social circles and how they view sexuality as well as individual coping skills enabling one to deal with sexual stigma may play a bigger role.

Differences in Sexual Topics

Consistent with past research (de Looze et al., 2015), love, marriage, and dating/romantic relationships were discussed frequently with family, friends, and significant others in the current study. In the past research, overall sexual and reproductive health-related topics were also frequently talked about with family (see also Widman et al., 2014). Current participants also talked more about menstruation. Schooler et al. (2005) argue that menstrual shame is negatively associated with sexual assertiveness and comfort. Thus, many female participants of the current study might have a low level of menstrual shame; therefore, more communication with family took place (see also Lee, 2009).

In contrast to often discussed topics, HIV/AIDS was not discussed frequently with families, friends, and significant others. This is surprising because HIV/AIDS can be a part of sexual health discussions, particularly with family, especially because this was shown in previous research (Widman et al., 2014). Perhaps, it is due in part to HIV-related stigma because stigma increases sexual silence (Bird & Voisin, 2013). The explanation could be that in the current study more intimate sexuality topics such as HIV/AIDS, nocturnal emission, masturbation, petting, and prostitution may be viewed as more sexually directive and provocative (de Looze et al., 2015). Thus, emotions such as shame and embarrassment could prevent people from talking about those intimate topics.

In contrast to sexual communication with family, there are unique sexuality topics that the participants discussed with their friends and significant others. Both types of communication included a high communication level about sexual intercourse, which is in line with previous findings that more practical aspects of sexual communication are shared among friends over family (Lefkowitz & Espinosa-Hernandez, 2007). More sexual communication with family and friends means more communication with significant others that boosts sexual health and well-being (Widman et al., 2014). Increased levels of sexual communication could also lead to a better understanding of sexual satisfaction (Rubinsky & Hosek, 2020).

When analyzing communication with significant others, sexual abuse and rape were the least frequently discussed topics. Dorahy and Clearwater (2012) describe vulnerability related to sexual assault (i.e., sexual abuse and rape) and its aftermath. When people have a history of sexual assault, it is more challenging for them to disclose to others because they expect to be judged. Social stigma against sexual assault victims is internalized and becomes embedded in their belief system, hence concealment and lack of communication increases because of the fear of rejection or termination of the relationship (Dorahy & Clearwater, 2012; Rubinsky & Hosek, 2020).

Among non-heterosexual respondents, the topic of homosexuality was discussed more with family, friends, and significant others than among heterosexual respondents. This, in part, is due to a stronger self-acceptance of sexuality (Goldfried & Goldfried, 2001) and relatively more open, accepting, comfortable and friendly sexual minority environment (Goldfried & Goldfried, 2001; Rios & Eaton, 2016).

Conclusion

The current study analyzed the links between perceived social support and sexual communication. Some significant elements of perceived social support such as open-mindedness and acceptance can bring comfort in interpersonal relationships and improve sexual communication (Kirkman et al., 2005) and perceived social support (Goldfried & Goldfried, 2001). However, many people are fearful, uncertain, and feel disgust with something they do not know, which may turn into stigma (Bry et al., 2017). To combat stigma, improving knowledge of sex and sexuality and teaching more assertive sexual communication skills may be relevant, at the same time reducing psychologically aversive emotions due to sexual stigma. This could be done by addressing sexual topics identified in this study and enabling both heterosexual and non-heterosexual individuals to discuss them more freely. Furthermore, it may be essential for sex educators and psychologists to provide sexual minorities with accessible, reliable and comprehensive sex education. Such education can be modeled after the dialectical intervention of Harman, Kaufman, and Shrestha (2014) that includes scientifically accurate information about sex and sexuality, open discussions on sexuality topics, and role-plays to gain hands-on experience in how to assertively communicate with others in sexually sensitive situations. All in all, the relevance of sexual communication and perceived social support remains pertinent among both heterosexual and non-heterosexual individuals and their immediate and extended environments.

Limitations of the Study

First, the participants came from 41 different countries across all the continents, and sexual communication and perceived social support differ from culture to culture (e.g., Africa, Asampong et al., 2013; Eastern Asia, Hu et al., 2020; Central/South America, Lee et al., 2020). Thus, the role of culture in sexual communication and perception of social support in non-heterosexual individuals needs to be examined deeper. Second, sexual communication scale (Somers & Canivez, 2003) needs to be updated. For example, homosexuality refers only to gay and lesbian, but does not encompass more inclusive and expansive sense of sexual orientations such as bisexual, asexual, pansexual, demisexual, etc. It is also important to add more socially relevant sexual topics such as polyamory (Balzarini et al., 2019) and kinks (i.e., BDSM, Lehmiller, 2014).

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Intermedia Motion Tracking in AR/VR – On Immersive Storytelling and Choreographic Patterns

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Abstract

This paper presents narrative concepts developed in the Immersive Media Lab projects use case Intermediate Motion Tracking in AR/VR. Its narration is set in an artistic virtual environment built upon the interaction of body, space, and music. A dancer performs inside a virtual space and uses her avatar to interact with space in order to perform the story in an experimental media installation. The relationship between body and space in general as well as body position, elasticity, speed, and rhythm in relation to the whole body in space is archived as a choreographic substrate in the form of a digital action track and transferred into artistic-experimental, immersive storytelling scenarios. We present an overview of the delimitation from traditional storytelling methods and the development of new narrative concepts.

Keywords: VR, Motion Tracking, Performance, Choreography, Art-Based Research, Webern, Storytelling

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Introduction

Intermedia Motion Tracking in AR/VR (IMTA) is one of five use cases of the research project Immersive Media Lab (IML) conducted at the St. Pölten University of Applied Sciences (FHSTP) from 2019 to 2022. IML combines current technological expertise on Augmented and Virtual Reality with interdisciplinary research on immersive storytelling. The use case IMTA explores the storytelling potentials of VR spaces in conjunction with choreography and employs an art-based research approach. The FHSTP scientists were joined by dancer and choreographer Andrea Nagl and supported by composer Karl Heinz Essl during the use case.

IMTA relied on methods derived from artistic production processes. Idea generation, form generation, and form giving in terms of rhythm, movement, time, space, aesthetics, dramaturgy, and choreography. Those aspects were constantly in dialogue with current media technologies such as motion tracking & capture and real-time programming in the UNITY Game Engine (motion tracking & capture, real-time programming - UNITY Game Engine), and analysis evaluation.

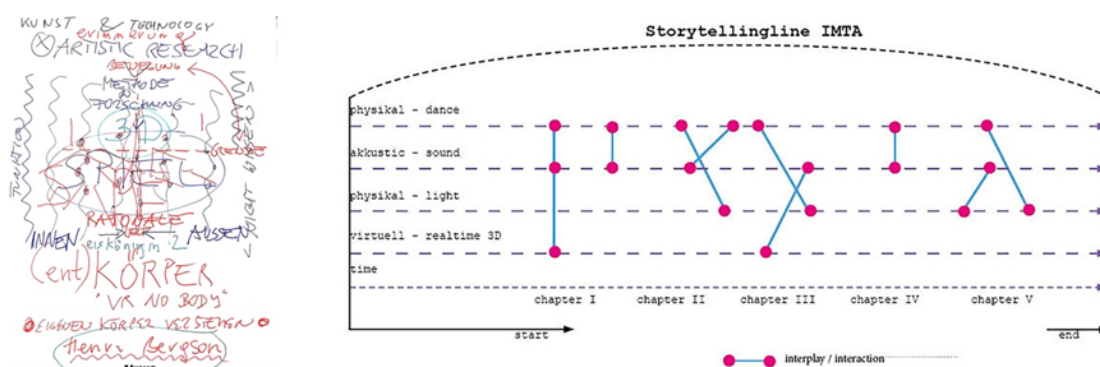


Figure 1: IMTA Start Research Matrix. Markus Wintersberger, Marlen Jachek and Christian Munk

The research design featured clearly defined experiments combining art & technology with a strict set of rules (Fig 1.) over a period of 10 months. Each experimental component was precisely "observed" (digitally recorded) and analysed and formed an independent prototypical unit. In this transdisciplinary "laboratory", the complexity of the research could be narrowed down and the objective specified. The artistic-technological outline of the research project relied on an experimental-practical methodological approach. This also had an impact on the scientific investigation of new forms of representation. The discovery of aesthetic-visual artifacts inevitably led to new research perspectives providing a shift in the project's epistemological outline. The created materials, emerging from the classical-theoretical processing of the experiment's results, transcended to an independent, visual form of data processing. Those visual elements and their potentials for rearrangements are the visible outcome of the narrative potentials.

Narration and Story in IMTA

In IMTA, the story serves as a content-related technological matrix, fed by set pieces of current digital motion capture tools in interaction with artistic specifications such as body, movement, time, space, and identity.

From the analysis of the tools - Rokoko Motion Suite (hardware and software) and UNITY (real-time visualisation) - prototypical movement analyses and technologically determined performance structures are derived in direct dialogue with the dancer Andrea Nagl. The motion tracking suit becomes a "costume", as it were, with a meaning beyond its purely technological use. The suit thus exerts a symbolic effect on the dancer herself, "colouring" the impression and perception of visitors viewing a physical performance, while at the same time communicating with the wirelessly connected hardware and software. From this real-time communication, the dancer's movement data is saved as XYZ coordinates in space, resulting in a time-space track. This track can be manipulated with real-time effects available in UNITY such as Pointcloud, Meshlayer, and Tim-Space-Effects. The temporal course, the choreography/story is available digitally as a time-space sculpture and can be visually designed as such or reassembled as a time-space information package and thus be interpreted as a composition that is independent of the real event. This provides at least 4 distinct dimensions of storytelling:

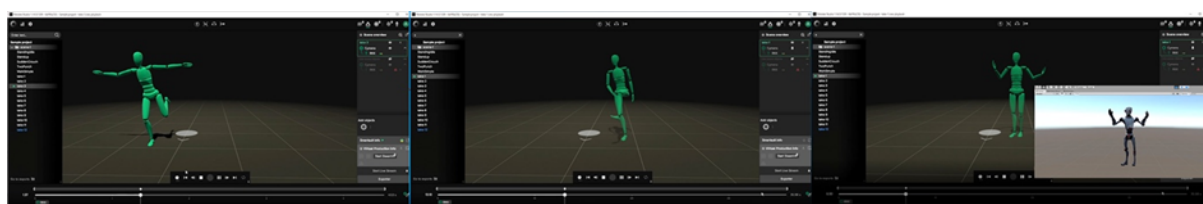


Figure 2: IMTA Rokoko Suite - Unity Experiment I

"Story" = real-time space movement & real-time manipulation

"Story" = body performance track & space line drawing

"Story" = XYZ volume & time-space sculpture

"Story" = non-linear structure & variable composition

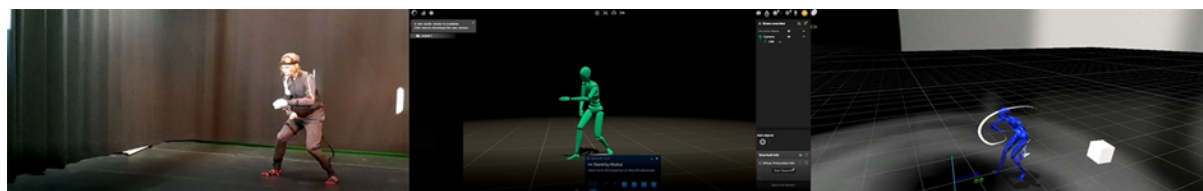


Figure 3: IMTA Rokoko Suite - Unity Experiment II

Contextual Narration and Time/Space Sculpturing

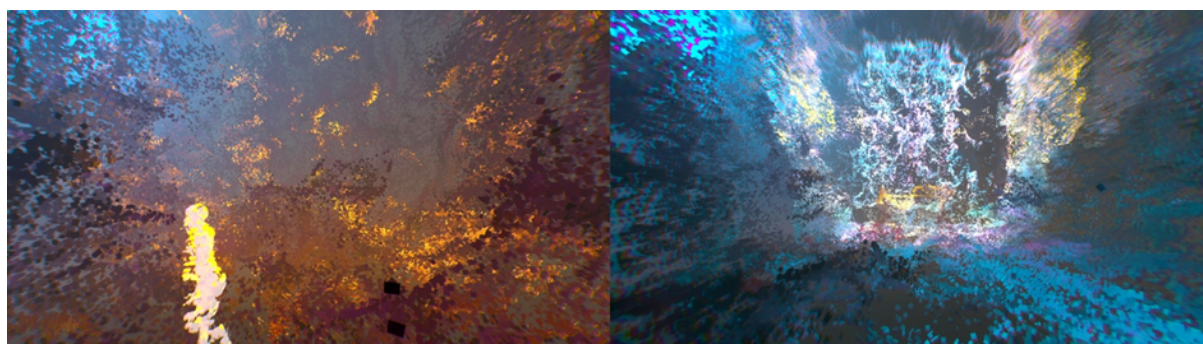


Figure 4: IMTA Webern Rastern

Those four dimensions can be further employed in prototypical art productions for the purpose of a general discovery of knowledge and an aesthetic art & technology transfer, as can be seen in the concept and realization of *Webern Raster*.

The research narrative already begins with the initial conception of the project vision that is made publicly visible via various social media channels such as Instagram and YouTube. The steps in the experimental research process lead to a concrete performance streamed live on the occasion of the 75th anniversary of Anton Webern's death - *Webern.Gedenken.Raster*. A recording of the stream can be found on the fhSPACEtv YouTube Channel. (fhSPACEtv 2020)

In this concrete performance, the insights gained in the course of the project flow together, visualise themselves in the form of an artistic dance performance and thus make the intensive research process conducted over 9 months publicly visible. Technology and science are not only treated as a theoretical matrix but are given a formal-linguistic extension through the interrelation with art, which serves a general comprehensibility in the sense of a transfer of knowledge = target group. The livestream performance via YouTube, designed as a "visual research insight", represents the "IMTA Use Case Research Report" as a public performance. The support of and cooperation with the university professor for electronic music and electroacoustics at the MDW Vienna and contemporary composer Karlheinz Essl, whose composition "*WebernUhrWerk. Algorithmic Music for Computer-Controlled Carillon 2005 - 2020*. Contemplating the anniversary of Anton Webern's death" formed the essential acoustic research contribution to this.

Choreographic Concept

The choreographic art-based research *Webern.Rauschen* brings a crucial question into the IMTA research project as it generates an artistic necessity from the stringency of the content. This stringency makes it possible to research beyond mere technological experimentation. The IMTA research team, which is versed in and oriented towards media technology, can build on a choreographic substance elaborated by Andrea Nagl: the temporal/spatial movement choreography results from an intensive and well-founded preoccupation with Anton Webern's *String Quartet Op 28* (Essl 1991): intensive listening to the work, conversations with Karlheinz Essl, as well as the approach to music-compositional principles cultivated in many of Andrea Nagl's previous projects, among them *Sequitur_caleidoscopia*, *Sequitur_caleidoscopia ext.*, and *LamenToys*.

This advances the research perspective beyond common clichés of spontaneous dance improvisation as well as its technological processing with regard to a mostly rather superficial and purely aesthetic-temporal interpretation. Only in the face of a complex, clearly defined common theoretical and artistic basis of the experiment can one of the guiding initial questions be answered: To what extent can specific movement quality and patterns as well as the liveliness and sensitivity of the choreographic expression of a dancer acting live in space and time be captured, transferred and transformed by means of current motion capture technologies? And further: How can they be expressed in a new but equivalent way, or with added value?

In a first step, the previous cornerstones of the choreographic research and discussion were brought into the research team - especially Anton Webern as a composer, the work *String Quartet Op 28*, principles such as series, primordial plant, and the B-A-C-H motif. Andrea

Nagl added graphic translations, transfers, associations, and interpretations of the material with regard to dance composition. This subsequently served as a common matrix for the technological and artistic research, analogous to the series from which everything emerges in Webern's work ("The series secures the context for me." (Essl p.107); "So this is the 'primordial plant' discussed the other day! - Always different and yet always the same! Wherever we cut the piece, the sequence of the series must always be ascertained. This is how the coherence is guaranteed." (Essl, p.108); "But this means that the whole quartet is based on nothing other than this particular sequence of four notes!" (Essl, p.112)

The associations with nature mentioned by Webern as an underlying code were inspiring for the further work, even though they were not immediately visible or even obvious on the surface. Yet they can offer a further common basis in the sense of an associative fog of thought. The essential narrative elements in the use case IMTA are listed again: rhythm, movement, space-time track, 2D - 3D form, architecture, and identity. With narrative forms and structures from experimental film, expanded cinema, and experimental-performative dramaturgies, a different narrative form is explored in combination with technologies that elude conventional narrative strands, such as motion tracking & capture, real-time visualisation and game engine programming, and elaborated by means of individual prototypical experiments. This possible other narrative form is incorporated in the video "Intermedia Motion Tracking in AR/VR". (fhSPACEtv 2020)

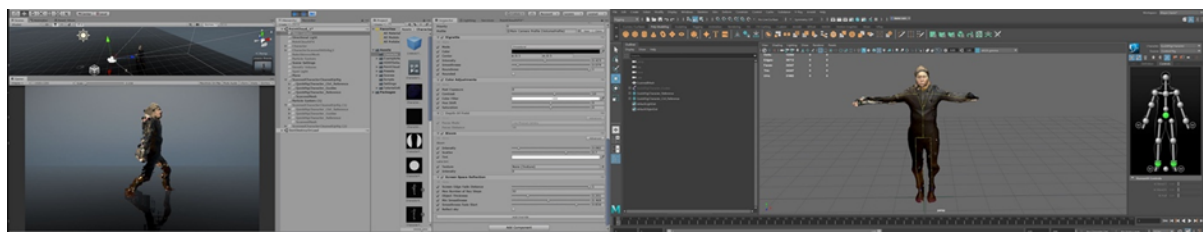


Figure 5: IMTA Rokoko Suite - Unity Experiment III

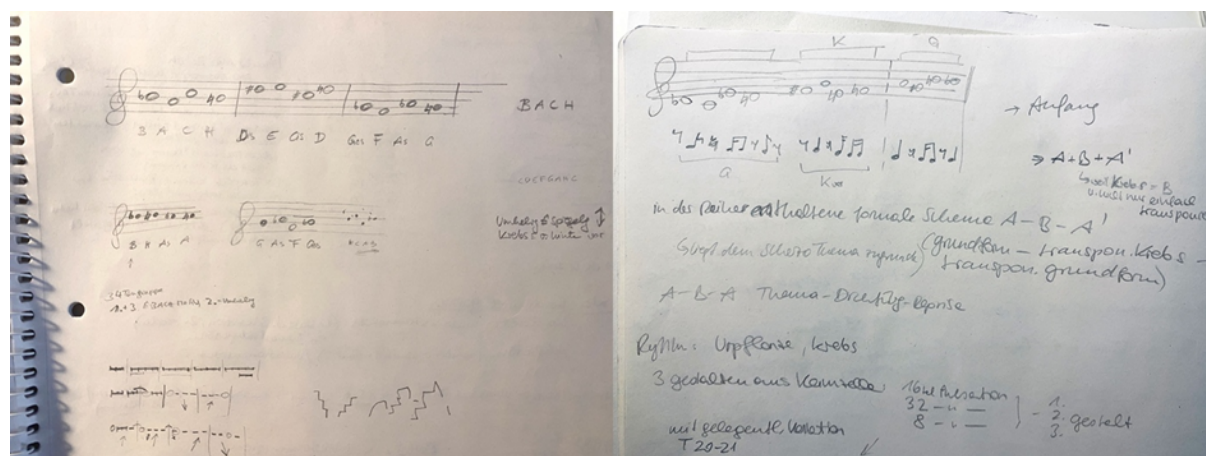


Figure 6: IMTA Webern.Gedenken.Raster. Composition notes. Andrea Nagl

Excursus "Webern.Gedenken.Raster". Andrea Nagl

Narrative WITHOUT Purpose?

Narrative = Purpose

Narrative & Purpose = Target Group

On 15 September 2020 from 17.00 to 18.30, the YouTube livestream performance (fhSPACEtv 2020) on the occasion of the 75th anniversary of Anton Webern's death took place. Live performative elements by Andrea Nagl were presented as a collage-like mix with digital virtual artefacts, structured by the grid of Karlheinz Essl's composition software *WebernUhrWerk*, which in turn pays homage to the work of Webern. Performance art, electronic music, digital media technologies, and research enter into a communicative field that attempts to decipher itself in this Webern grid on the occasion of the anniversary of Anton Webern's death.

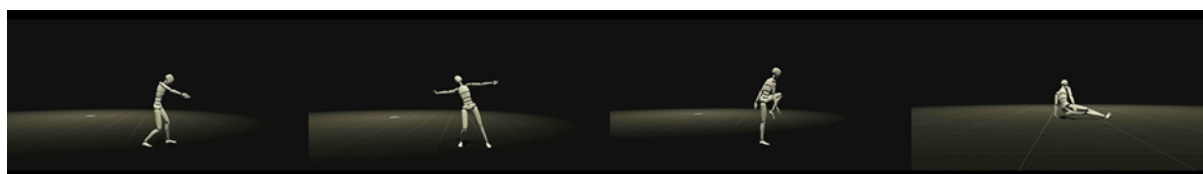


Figure 7: IMTA Unity Real-Time Experiment II - Webern.Gedenken.Raster

Webern.Gedenken.Raster - Sequence of Events

Time	Content
17.00	WebernUhrWerk 1 (approx. 60 sec)
17.01	Webern.Noise live choreography based on the composition Op. 28 by Anton Webern without music - the dance is the music
17.15	WebernUhrWerk 2 (approx. 20 sec)
17.16	IMTA.Avatar.Webern I (Particles) + music Anton Webern (op. 28) Juilliard String Quartet, Pierre Boulez
17.30	WebernUhrWerk 3 (approx. 40 sec)
17.31	IMTA.Avatar.Webern II (green / memory traces) + sound Christian Munk
17.45	WebernUhrWerk 4 (approx. 20 sec)
17.46	Webern.Memory.Noise Glockner Noise Life Water (BACH) + sound Andrea Nagl
18.00	WebernUhrWerk 5 (approx. 60 sec)
18.01	IMTA.Avatar.Webern III (stick figure and room mix) + sound Christian Munk

18.15	WebernUhrWerk 6 (approx. 20 sec)
18.16	Webern.noise live choreography based on the composition Op. 28 by Anton Webern with music Anton Webern op. 28
18.30	WebernUhrWerk 7 (approx. 40 sec)
END	

Table 1: Time Schedule of Webern.Raster



Figure 8: IMTA Unity Real-Time Experiment III - Webern.Gedenken.Raster

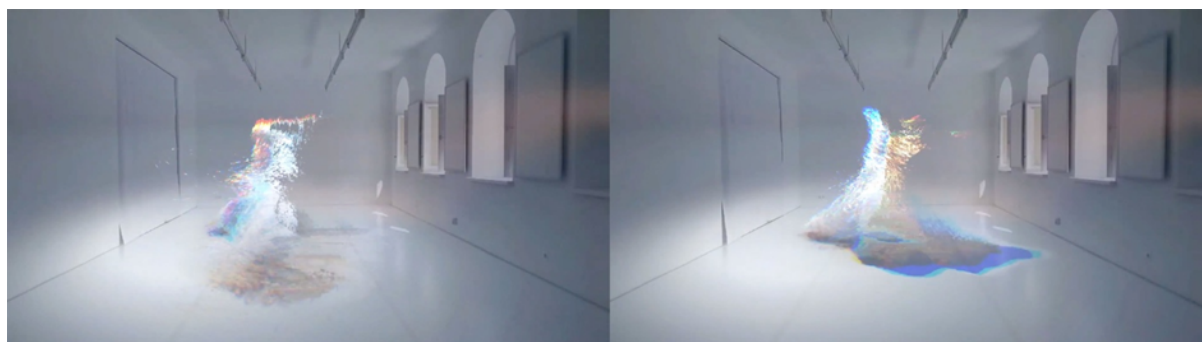


Figure 9: IMTA Unity Real-Time Experiment IV - Webern.Gedenken.Raster

Conclusion

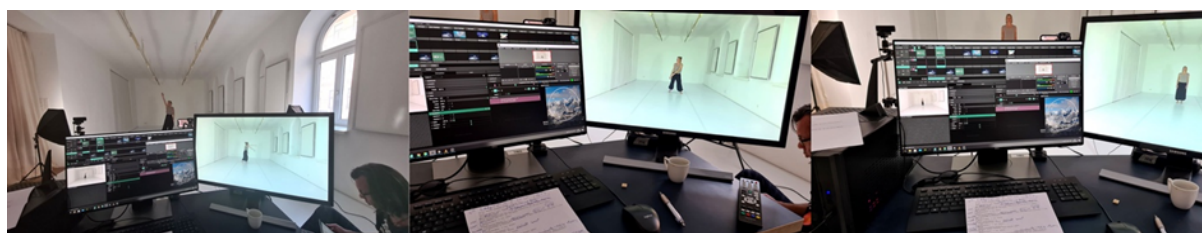


Figure 10: IMTA Rokoko Unity Real-Time LAB. The research team at work

The essential narrative elements in the use case IMTA finally reemerged in new arrangements along the research matrix. Rhythm, movement, space-time Track, 2D - 3D form, architecture, and identity were able to unfold new relations and manifested themselves in new narrative forms that elude conventional narrative strands and can be further explored in the combination IMTA established with technologies such as motion tracking & capture, real-time visualisation, and game engine programming. IMTA elaborated on that by means of individual prototypical experiments. Those possible other narrative forms are incorporated into the video *Intermedia Motion Tracking in AR/VR (IMTA) - FIRST-PERSON*

WALKTHROUGH (fhSPACEv 2020) and stored as a final dynamic research report on YouTube. They form the narrative pattern of the "plot".

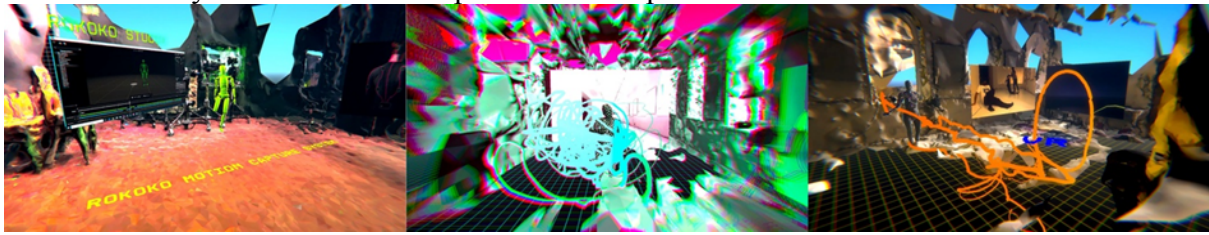


Figure 11: IMTA Rokoko Unity Real-Time LAB. FIRST-PERSON WALKTHROUGH 2020

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Reflux and Rejuvenation – Exploration and Practice of Yim Tin Tsai in Hong Kong under the Background of Rural Revitalization

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Abstract

It is a hot topic on the rural areas that are at a disadvantage due to the rural depopulation and the lost civilization. This paper is based on the theory of ecological museum and public art involvement in community building, adopts the methods of qualitative research, experience summary and literature research, refers to the paper A Brief Introduction to the International Eco-Museum Movement and Practice in China and relevant interviews by Mr. Su Donghai, the father of Chinese ecological museum, and meanwhile, cites the specific practice and theoretical results of public art involvement in community construction by Japanese curator Kitagawa Fram. In this paper, four parts are involved to interpret the development of Yim Tin Tsai in Hong Kong, development background, development status, development prospects and development proposals. In the development proposals, four measures are presented to the practice of optimization and perfection, including management mechanism, talent system, infrastructure construction and building ecological museum, and finally the thesis of building Yantian Cultural tourism IP is proposed to enrich the future construction. Therefore, comprehensive strategic suggestions are provided in this paper for the development of Yim Tin Tsai.

Keywords: Hong Kong Village, Rural Revitalization, Eco-Museum, Culture and Tourism IP

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Introduction

In the process of urbanization, villages and rural civilizations are gradually facing aphasia, but the countryside is the important source of the Chinese nation and the important birthplace of Chinese culture. Therefore, the rural revitalization strategy is an important research topic nowadays.

Yim Tin Tsai in Hong Kong is just such an aphasiac village. Under the trend of emigration and moving home, this small Hakka island that once converged excellent Chinese and western cultures has turned into an abandoned village. Fortunately, the revitalization of the countryside and the rise of cultural tourism have restored some vitality to this village. However, there are still some problems that have not been resolved so that its development is not perfect. Therefore, this paper regards Hong Kong Yim Tin Tsai as the research object and starts with the revitalization of the village. Reference eco-museum, cultural tourism IP and other concepts. Moreover, the paper puts forward more scientific and completes development suggestions for Yim Tin Tsai



Figure 1: Characters of Yanzai



Figure 2: Clothing Design of Yanzai



Figure 3: Laugh, Cry, Tease

Conclusion

In summary, Yim Tin Tsai is an island with high-quality natural and human resources. It was once reduced to an abandoned island. Fortunately, the restoration of the original villagers has gradually been developed. After more than ten years of development, certain achievements have been made but there are still some shortcomings. At present, the development of Yim Tin Tsai has both internal advantages and external opportunities. It is necessary to grasp the opportunities to build a better cultural tourism destination and achieve the purpose of rural revitalization.

The author made specific suggestions and detailed plans for the future development of Yim Tin Tsai from the five aspects of management mechanism, talent system, infrastructure, implementation of eco-museum, and creation of cultural tourism IP. However, the restoration project of Yim Tin Tsai is still an arduous issue. In order to finally achieve the revival of Yim Tin Tsai, more talents' participation, capital investment, systematic development plan, and timely adjustment of strategies are needed for the revival of Yim Tin Tsai.

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Effective Strategies to Motivate Musical Students to Practice

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Abstract

Practice is an important element in music studying as it contributes to the development of basic music skills and music expertise (Barry, 1992). However, it is difficult for students to sustain the hours of practice required to develop performance ability, especially in the current learning-teaching environment where school teaching is with a demanding, directive and controlling nature (Creech and Gaunt, 2013). Existing literatures have offered explanations for students learning behaviors and have suggested many approaches teachers can use to motivate students to practice effectively; students' belief, task value, the level of challenges and practice strategies are found to be closely related to practice motivations, results, or both. This research, therefore, aims to provide a continuous study on motivations in music learning, with a particular emphasis on how to motivate students to practice effectively. To achieve this aim, this portfolio adopts the method of case study to examine these approaches. This study intends to contribute to the literature in music education by confirming the effectiveness of various strategies proposed in previous research in motivating students to practice, and by suggesting alternative strategies that may be helpful to teachers. Results show that students' belief, task value, level of challenges and practice strategies can affect students' motivation, while practice strategies are more related to the learning results. Although both intrinsic and extrinsic motivations are important in practice, intrinsic motivations are more likely to result in higher frequencies and longer hours of practicing.

Keywords: Motivation Theories, Music Learning, Music Teaching

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Introduction

Practice is an important element in music studying as it contributes to the development of basic music skills and music expertise (Barry, 1992). However, it is at the same time difficult for students to maintain constant hours of practicing required for such development, especially within the current learning-teaching environment where school education is with a demanding, directive and controlling nature (Creech and Gaunt, 2013). It's been suggested that such form of school settings have limited students' autonomy in music learning to a great extent, leading to a lower level of students' engagement, in-depth learning, and creativity (Niemiec and Ryan, 2009; Su and Reeve, 2010). Also, Evans et al. (2013) argue that only very few students claim they have received a satisfying music learning experience. Therefore, it is essentially important for teachers to effectively motivate students both in terms of learning and practice, which might encourage more people to take further studies in music. According to McPherson and Zimmerman (2002), students are usually left alone to decide on the duration, frequency and intensity of practice, and the way as well as the extent to which they can motivate themselves have significant impacts on learning effectiveness. Besides the importance of motivation to practice, Evans and Bonneville-Roussy (2016) also suggest its importance in forming key characters of musicians such as psychological wellbeing, personal identity, and sense of self, among others. Thus, this research is a continuous study on motivations in music learning, emphasising on how to motivate music students to practice.

Motivation has been researched and explained from various roots including behavioral, cognitive, and humanist aspects in different domains (Madariaga, 1988). A recent review by Sanz and Orbea (2014) summarizes five motivational models used in music education: 1) intrinsic/extrinsic motivation, 2) achievement motivation, 3) goals, attributions, and cognitive self-regulation, 4) learning with sense, and 5) situated motivation, where the first model concerns behavioral aspects, the following two are cognitive oriented and the last two focus on the influences of social environment. Based on these models, this portfolio focuses on two theories: self-determination theory and interest theory, since they provide theoretical foundations for these models and are widely used in music educational literatures to explain young students' motivation to practice.

Self-determination theory (SDT) explains motivation with consideration to the social circumstances and further elaborates the intrinsic/extrinsic motivation model. According to Evans and Bonneville-Roussy (2016), intrinsic motivation is doing an activity for its own sake and because it is enjoyable, while extrinsic motivation is doing an activity for any reason other than the activity itself. Rather than simply define motivation as intrinsic or extrinsic, SDT elaborated the intrinsic/extrinsic motivation model with four regulatory types, from relatively external to the self to relatively internal with the self (Ryan and Deci, 2000). External regulations are characterized by external rewards and punishments, while some regulations involve conscious valuing of an activity or an object which, are not intrinsically motivating, are accepted as personally important (Renwick and McPherson, 2002). This is more appropriate to be applied in the domain of music, since students' behaviors are not always motivated intrinsically or extrinsically, for instance, the teenage guitarist's determination to pick up a favorite pop song by ear (Mackworth-Young, 1990).

To develop an expertise in playing a musical instrument, both intrinsic and extrinsic motivations are important in long and repeated practices (Ericsson et al., 1993). SDT argues the existence of extrinsic motivations is dependent on the level of autonomy. For example, in the context of motivation to practice, relatively external regulations could be teachers'

requirements of hours to be practiced and the possibility to achieve good scores in an examine, etc., which are less autonomous forms of motivations. While relatively internal regulations could be the understanding of how important the practice is and hoping to achieve other goals through practice. Effective practice that leads to good learning results is motivated by relatively intrinsic regulations (Benware and Deci, 1984) or extrinsic regulations in more autonomous forms (Grolnick and Ryan, 1987).

Interest theory reveals the relationship between a person and an object. Interests may arise due to internal and situational reasons. According to Renwick and McPherson (2002), individual interest is an orientation toward an activity such as learning an instrument, which is more stable and enduring. According to McPherson (2001), children with a long-term commitment tend to practice more and achieve more positive learning results. While situational interest arises because of environmental reasons, such as surprise, complexity, and ambiguity (Renwick and McPherson, 2002). Studies exploring the influences of environments on students' musical learning have got similar results: students perform better when they are from a supportive home environment and study with teachers they like (Davidson and Burland, 2006). Both types of interests can co-exist, and higher level of interests usually leads to students' focused attention, increased persistence, and higher level of involvement in learning activities including practice (Hidi, 2000). Also, interests have been found to have impacts on the learning results. McPherson and McCormick (1999) find that higher level of interest results in more effective learning strategies and controlling of knowledges.

Students' choices can help teachers to identify their interests, as Greco (1997) argues that students tend to choose learning materials that they have more interests. As a result, offering students choices enables students to learn their interested materials (although choices are limited in the learning scope) and thus enhance their motivations in learning and practice. A rich documentation of empirical research has confirmed the important role of interests and choices in instrumental music learning, including practices and learning results. For instance, Renwick and McPherson (2002) have found providing students choices on learning materials lead to increased intrinsic motivations. Similarly, Reynolds and Symons (2001) also confirm that choices are strongly related to improved learning results.

Both theories have indicated the importance of students' autonomy that is more inspired by intrinsic motivations. Meanwhile, they also have highlighted the importance of teachers' interruptions (teaching strategies) in motivating students to practice. However, it is important to note the differences among students of different expertise. Hallam et al. (2012) indicate that enjoyment of practice decreases when students become more skilled. Also, students have displayed differences in their strategies deployed in practice. More skilled students are more able to identify their errors and correct them through repeating sections, while less skilled students tend to return to the beginning section (Hallam et al., 2012; Renwick and McPherson, 2002; Williamon and Valentine, 2000). As a result, less skilled students tend to deploy less effective practice strategies, which requires more teachers' instructions in this area.

Conclusion

This research generally confirms previous research findings that both external and internal motivations are important in practice, and practice strategies are important in determining students' learning results. Therefore, it is important for teachers to find proper ways to motivate their students to practice. Effective strategies that can be used to increase students' external motivations include exams, performance shows and other tasks that are viewed valuable by

students. However, individual difference needs to be noted, since it suggests that one strategy does not fit all students, like the case in this research where the performance show meant different for different participants. Unlike other disciplines, music's contents are more procedural, and closely related to individual preferences and expressions of emotions and experiences, which makes it more complex to study (Sanz and Orbea, 2014). Thus, teaching methods and strategies need to be orientated to reflect students' different preferences, experiences, and abilities, using different class organization, and allowing for different forms of participation, based on these differences.

Moreover, the research supports findings of previous literatures that effective practice is motivated by relatively intrinsic regulations (Benware and Deci, 1984) or extrinsic regulations in more autonomous forms (Grolnick and Ryan, 1987), and highlight the key role of intrinsic motivations and students' autonomy in music education. As intrinsic motivations can lead to more frequent practice and longer practice hours, finding ways to increase students' intrinsic motivations becomes important for teachers. Unfortunately, it can be quite difficult. This research has suggested two effective way that may be helpful in enhancing students' intrinsic motivations to practice.

The first to offer students' choices on musical instruments and repertoires and allow them to choose their preferred ones. It can, on one hand, allow students to choose their interests, and on the other hand, decrease the negative influences of negative feeling toward practice along with the increase in expertise. Both can motivate students intrinsically through inducing positive feelings toward the music subject and the practice. Its effectiveness in motivating students to practice has been supported by findings of Hidi (2000). The other way is to help students develop confidence towards their musical careers, closely tie their abilities to challenges and make them believe they can achieve positive results with efforts. In this way, students may be able to develop strong belief towards musical career and their ability to success, both of which, as suggested by McPherson (2001) and McPherson and McCormick (1999), can contribute to students' instinct motivation to practice.

Additionally, practice strategies are found to have great impacts on students' perception of practice and their learning results. Ineffective strategies to deal with errors in practice can lead to duplicate work, which further leads to students' resistance to practice (as the case of b) and ultimately results in poor learning results. However, this can be improved with teachers' interruptions, and teachers need to pay attention to their students' way of practice and help them to develop good practicing habits. Also, the use of technology such as smartphones in recording practice can help students to review their playing and identify mistakes, especially during practice times without teachers' tutoring. As indicated by Sanz and Orbea (2014), music, images, audio-visual production are increasingly common in modern lives, but the perception of using them in practice is rarely developed among students. Even the expert students only use basic technologies (i.e., recording). This has suggested the absence of involving new technologies resources in class in the domain of music education, which needs to be aware of and improved by teachers.

This case study is based on interviews of two participants, which may limit its ability to be generalized to other students due to small sample size. However, this may be common problems in the domain of music, as this subject is closely related to individual preferences and expressions of emotions and experience (Sanz and Orbea, 2014). Therefore, the findings are still valuable when considering this.

The influences of students' belief on their motivations have been studied in this research as well as in another previous research in this domain (i.e., Evans et al., 2013; McPherson, 2001; McPherson and McCormick, 1999). However, they all involve either child participants or adolescent participants, and very few of them have tried to study the changes in motivations and belief occurred during the transition period from child to adolescent, with consideration to the social and home environment. This may help to explain why both participants in this research had strong interests in piano and started to learn it early, but one dropped out later and picked up again.

Also, this research suggests that individual differences and personalities matter in music learning activities including motivation to practice. More research is needed to explore how and why these, especially students' personalities, can affect students' motivations, which can further help teachers to develop effective teaching strategies and improve students' learning results.

To conclude, this portfolio aims to study motivations in music learning, with a particular focus on how to motivate students to practice. Based on the self-determination theory and the interest theory, literatures have offered explanations for students learning behaviors and have suggested many approaches teachers can use to motivate students to practice effectively: students' belief, task value, the level of challenges and practice strategies are found to be closely related to practice motivations, results, or both. This portfolio uses the method of case study to examine these approaches and contributes to the literatures in music education by confirming effectiveness of some strategies indicated by previous research in motivating students to practice and by suggesting more strategies that may be helpful to teachers. Results show that students' belief, task value, level of challenges and practice strategies can affect students' motivation, while practice strategies are more related to the learning results. Although both intrinsic and extrinsic motivations are important in practice, intrinsic motivations are more likely to result in higher practice frequencies and longer frequencies hours. Therefore, teachers need to develop appropriate teaching methods and strategies to improve students' internal motivations, which can be achieved through the following two ways. The first is to offer students' choices on musical instruments and repertoires and allow them to choose their preferred ones. And the second is to help students develop confidence towards their musical careers, closely tie their abilities to challenges and make them believe they can achieve positive results with efforts. However, this research is based on a small sample size and both participants are adults. More research is still needed in exploring changes in motivations and belief occurred during the transition period from child to adolescent and adult. Additionally, whether how and why individual differences, especially students' different personalities, affect students' motivations in music learning activities are worthy of research since this can further help teachers to develop effective teaching strategies and improve students' learning results.

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