A Virtual Funeral in the Hands of the Family

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"Face-to-Face" with Grandma

Opening Zoom on her iPad, she began the remote call with her little sister in Tokyo. Right away she pointed the camera at the face of the deceased, allowing a "face-to-face meeting." The two sisters conversed while looking at the expression of their grandmother, who had died of old age peacefully in her sleep.

Younger sister: Grandma looks pretty, doesn't she? So smooth! Her skin. . . . Her skin is so pretty!!
Older sister: It really is smooth!
YS: I hope I turn out like that too. . . . It really is incredible. Did Grandma not have wrinkles?
OS: It looks that way, doesn't it? Really, she's super pretty!

This scene is from the "virtual (remote) funeral" conducted by the grandchildren of a woman who passed away near the end of 2023, at the age of ninety-six. The eldest of the four daughters of the deceased's son (the chief mourner) attended the funeral in person, which took place in Sendai. She personally made all the preparations for the call, with the cooperation of her mother and the third sister. Access was provided to the youngest sister, who was unable to participate as she lived in Tokyo. The family of the second sister and her children (i.e., the great-grandchildren of the deceased), and her husband, who were living in the United States at the time of the funeral, was also added to the connection.

All the preparations for the virtual funeral were undertaken by the family, with no funeral home or third-party live streamer acting as intermediary.[1] The key to its success was the strength of the family bonds between the first and third sisters, who attended in person, and second and fourth sisters, who attended remotely. Had there had been an outsider "cameraman," it would

not have been possible to produce such a handmade, memorable remote-attendance experience tailored to the family.

In this article, I give a detailed explanation of their experience carrying out the funeral based on a screen recording of the Zoom call supplied by the family, and an interview with the eldest sister. While referencing previous case studies and research, I investigate how one might reproduce this experience for other funerals or acts of mourning.

The writer provided technical support for another family's remote funeral attendees in June 2020. The opportunity appeared suddenly from a connection at the laboratory I was working for at the time, and I played the part of "third-party intermediary at a family funeral." At this funeral, I too approached the face of the deceased with my smartphone at the scene of final parting, before the carrying out of the casket to the crematorium, thus enabling a final "face-to-face" meeting for the siblings of the deceased participating remotely. I had communicated with the bereaved family as much as was possible within the short preparation period and endeavored to win their trust. However, ultimately I was an outsider who hesitated to approach the face of the deceased with my smartphone. To me it felt disrespectful to shove my camera into the face of a "corpse," but to the bereaved family it was a precious relative. I recall thinking that if I did not do it, there would have been no point in taking the trouble to participate remotely, and suddenly I was moved to action. In this article, the 2020 example is referred to as "K family," and the 2023 example as "S family."

Having received the video file from the eldest daughter of S family, when the above scene of "coming face-to-face with Grandma" appeared I was surprised at the disconnect with what I had experienced myself at the site of the K family funeral. The sense of crisis during the COVID lockdown of early 2020, the early passing from illness of someone who was only seventy-four, the sadness of the family, who were still processing what had happened. The experience born from my third-party interference, and that born from a family-only environment with no outsiders present, differed greatly. There is little point comparing these two remote funeral attendance experiences, in which in the preliminary conditions were very different.

The purpose of this article is to interpret the example of S family from the perspective of a writer who has experienced the example of K family. In this day and age, in which countries throughout the world experience the problem of declining birthrates and aging population, and the number of

people unable to attend a funeral in person is likely to increase more and more, and the example of S family's handmade virtual connection may well become the model of an ideal funeral in future. Analyzing the details of the S family case, and contrasting it with my experience with K family, allows me to obtain promising leads for technological advances and optimal design for remote funeral services in the near future.

ABOUT THE AUTHOR

I research the design of funerary services facilitated by information technology and have conducted various studies within the specialized field of human–computer interaction (HCI) design research.[2] For example, Fenestra[3] (Figure 1), which was the subject of my 2013 PhD research, is a tool for domestic memorialization using digital images.[4] Through ceremonial actions, such as "lighting candles" or "staying still and staring into the mirror," one is able to come "face-to-face" with "a likeness of the deceased." For my PhD research, three research subjects who had lost a loved one within recent years used Fenestra, in which various images of the deceased and old family photos were installed, and demonstrated the domestic memorialization service that had taken place in each home.

Figure 1. Fenestra.

It was for the purpose of inspecting a prototype under development (Figure 2) that I first provided technical support for K family's remote funeral attendance as well. At the time, the laboratory I worked for was developing an interactive relay webcasting system, which was thought optimal for funeral attendance from a remote location. Using the system, it would be possible not only to view the footage of 360-degree cameras set up at various locations at the funeral from one's web browser, but also to speak directly to people standing in the vicinity of the cameras.

But the system malfunctioned at the K family's virtual funeral, and so our attempt to test out the new technology was a failure. However, at a one-time event such as a funeral, failure is unacceptable. I had a duty to make this virtual funeral happen one way or another. As a result, I booted up the Zoom program that had been installed on smartphones and tablets as a reserve and was somehow able to facilitate the remote attendance. As a technician, I acknowledge that the K family's remote funeral support ended in failure, but as a design researcher, I am now able to analyze and convey my own experiences at the time and connect them to a better design for (virtual) funeral services in the future.
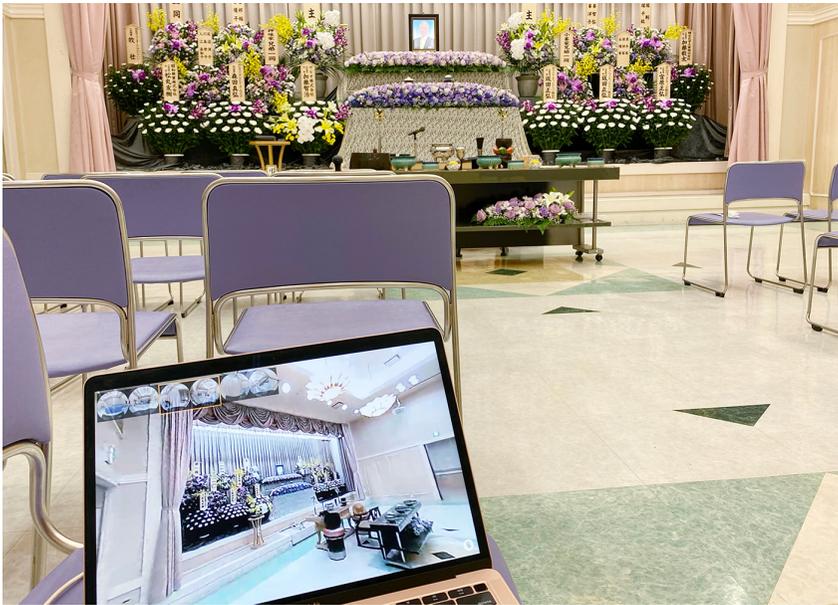

Figure 2. Logged in at K family's funeral service.

Accordingly, as a researcher of funerary services and as an HCI design researcher, I wrote this article to with the aim of addressing the question of how to make virtual funerals in the near future more meaningful and what the design of such a funeral should be.

What Is a Virtual Funeral Service?

In both examples presented in this article, those of K family and S family, the virtual funeral service included the wake (*tsuya*) and the funeral services (*sōgi* and *kokubetsushiki*). It was not our intention to omit the full sequence of memorial practices after the funeral. Rather, looking ahead to funeral and memorialization rituals in the future, it appears that the line between extended funeral rites, such as the celebration of life or *owakarekai* ceremony held after the funeral and the forty-nine-day death anniversary, acts of mourning on social media, and short-term events such as the wake and funeral happening immediately after the death, is growing ambiguous.[5]

I believe that the possibilities for (near-future) virtual funerals include the following: 1) use of webcasting systems for communication and interaction, 2) use of mechanical reproduction or digital media for recordings, playback, and similar vicarious experiences, and 3) use of virtual reality (VR) and related technologies to artificially create a feeling of realism.

I define VR according to the definition given by Susumu Tachi, the founder and chairman of the Virtual Reality Society of Japan, who says that the essential meaning of *virtual* is not imaginary, fictional, or fake, but something that "is not the original in terms of appearance and form, but is the real thing in terms of essence or effect."[6] For example, virtual money (cryptocurrency) does not have physical form as cash does, but it is not counterfeit money; it has the same function as cash. Likewise, virtual meetings that occur through the medium of webcasting systems are not counterfeit; they are real meetings in the same way that in-person meetings are.[7]

Consequently, the concept of the virtual funeral as used in this article is not limited to webcasting, but rather describes all manner of funeral services that will be possible in the near future. I ask that the reader keep this in mind, even if in both the example of S family that occupies most of this article and the example of K family, it was mainly webcasting technology that was used.

Before the spread of COVID-19 in 2020, virtual funerals such as those treated in this article, and indeed even the concept of remote attendance at a funeral service, were largely unknown. Globally, funeral webcasting services existed before COVID to meet the needs of family members living overseas. In Japan, as in the example discussed in this article, there were cases of family members who attended in person independently setting up a call for the sake of family members living abroad. And then, in the context of COVID lockdown and social distancing, numerous businesses came to offer services for remote attendance and webcasting of funerals. It was not until after the outbreak of the global pandemic that the phenomenon drew academic interest, leading to the reporting of examples and active discussion by researchers.

Facilitating K Family's Remote Funeral Attendance

I became interested in the topic of webcasting and virtualization of funerals around the time that cities worldwide were going into emergency lockdown during the first half of 2020. And then, in June 2020, I happened across the case of K family. The deceased, who died at age seventy-four, was the second of eight siblings. Most of the elderly siblings were physically unwell or at high risk of infection and so chose not to attend in person. I made my way to the funeral site and, together with colleagues from my office, took on the responsibility of webcasting.[8]

I have given presentations to the information technology and design research community about my experiences at that time, for example at the 2020 Conference of the Virtual Reality Society of Japan[9] and the ACM CHI Conference regarding HCI research.[10] As previously stated, initially the primary objective of facilitating K family's webcasting was to test the remote communication system using 360-degree (unidirectional) cameras under development at our laboratory. However, at the actual funeral the system did not function well, and we used Zoom, which we had installed as a backup on phones and tablets, instead. In those conference papers, the research question was about what kind of design was needed to provide the consumer with a sense of realism and make them feel like they were on-site, despite being at a remote location.

In addition to presenting on the topic of new technological development, I also talked about the need to train personnel in the role of remote funeral

conductor (RFC). RFCs should be familiar with the process of a funeral ceremony, have technological literacy relating to webcasting, and be able to manage both in-person and remote attendees. Presenting on the knowledge and abilities required of remote funeral conductors at the 2021 Japanese Association for Religious Studies Conference, I defined the skills required of an RFC as follows:

1. Understanding of funeral protocol
2. Grasp of which are the key scenes at a funeral
3. Technological capability for setting up the webcasting
4. Ability to coordinate between remote and in-person attendees
5. Ability to perform as a funeral attendee[11]

In this case study, the eldest sister of S family fulfilled all five points and conducted the remote funeral with the cooperation of the other attendees.

At a panel session at the Japanese Association for Religious Studies Conference in 2023, entitled "The Virtualization of Funeral Services: Challenges and Prospects," a discussion broke out between the various guest panelists and the audience members that covered not only the methods for funeral attendance via webcasting (which had gained attention due to the COVID crisis), but also the significance and direction of virtual attendance.[12] One of the panelists, cultural anthropologist Kim Satbyul, pointed out that while it is true that with remote communication technology "anyone is capable of participating from anywhere," in Japan, where nowadays small private funerals or family-only funerals are the norm, its use is limited. Pointing out that in her home country of South Korea funerals with hundreds of attendees are typical, she alluded to the possibility of reform in the use of technologies for virtual funerals in Japan as well.

For quite some time, there have been efforts to enable the reexperiencing of funerals by preserving them on-screen. Today, it is even possible to semipermanently preserve or operate a funeral hall through the use of online (metaverse) platforms. This panel session summarized that virtual funerals are expected to expand, as a variety of information technologies—including but not limited to webcasting—are being utilized in the context of religious services for the deceased. This trend extends not only to the traditional definition of funeral rites (such as tsuya, sōgi, and kokubetsushiki), but also to a broader range of funerary practices, including celebration-of-life ceremonies, memorial services on death anniversaries, and domestic memorialization practices.

Assessing Virtual Funerals During the COVID Crisis

Not much has been written in Japan about virtual funerals. Overseas, however, a number of researchers have presented papers and articles on the topic. Andie MacNeil et al., at the University of Toronto's Institute of Life Course and Aging, analyze literature from between December 2019 and February 2021 relating to virtual funerals during COVID lockdown and summarize its impact.[13] In that paper, they discuss various issues raised during the COVID lockdown, such as how bereaved families dealt with grief, the increased burden on funeral homes, the restrictions on assembly, the closure of religious institutions, and the future of virtual funerals after the COVID crisis.

It is worth mentioning that they reported on cases where, by means of a virtual funeral service, more people were able to attend than could have attended an in-person funeral. There is no limit to the number of attendees on a virtual platform, and participation was not hindered by the obstacles of physical distance, cost, or illness. Furthermore, there were more opportunities for participation by Muslim women and other women for whom traditionally attendance at funerals is limited for religious or cultural reasons.[14] MacNeil et al. concluded that there were benefits to conducting virtual funeral services, initially popularized to prevent the spread of infection, even after the end of COVID lockdown.

However, it is not uncommon for the discourse about COVID-period virtual funeral services to be tragic and negative in tone. Given such traumatic experiences as being unable to enter the hospital because of the risk of infection and therefore having to watch a loved one die on-screen, or the grim news reportage on virtual funerals, it is little wonder that large numbers of people have a negative impression.

It was reported that having "the opportunity to say goodbye in person" stolen by COVID upon the death of a loved one was a particularly traumatic experience. Cliff Yung-Chi Chen, a social psychologist at City University of New York, conducted a survey of the grief and distress caused by being "unable to say goodbye in person."[15] He collected information from 519 adult Americans whose family members or close friends had passed away between January 2020 and June 2021. According to the paper, people who had been unable to say goodbye in person and had to use virtual communication, such as video streaming, or a phone call experienced a greater degree of grief and distress. However, regarding virtual attendance of a funeral service,

it was reported that even though in-person attendance was preferred, the alleviation of grief and distress was greater than if they had not been able to attend at all.

Religious studies scholar Jennifer Riley, at the University of Aberdeen in Scotland, conducted a survey on "hybrid funerals," that is, funerals attended by both online and in-person guests, between 2020 and 2022. Through interviews with remote attendees, clergy, funeral directors, and others, she revealed what misgivings they had about the experience and why.[16] Some clergy members drew the attention of in-person attendees to those who were attending remotely, giving them an opportunity to pay their respects and attempting to facilitate a sense of unity among both groups. However, the remote attendees themselves expressed discontent, saying, "We were allowed to watch, but it's hard to say we participated." The main reason cited was that they did not have the sensation of really participating in a funeral or of really being together with the other attendees. Furthermore, because "we probably would have done if we had actually been there," they expressed regret over the missed opportunity.

Through interviews with bereaved family members and people involved in the care of the bereaved, Riley et al. reported that most people had a negative impression of the policy of "limited participation at funerals" under COVID.[17] Particularly in England, there is a common perception that a large number of attendees equals a good funeral. There were many responses saying that due to attendance being limited, "We were robbed of the right to a good funeral." However, one funeral director voiced the opinion that, now that one can leave messages of condolence on Facebook, a small-scale funeral where "there are no mourners without a personal connection" is preferable for the bereaved family. Additionally, the point was raised that the experience of limited funerals under COVID was an impetus to reconsider what makes a good funeral, beyond just the number of attendees.

Considered from the point of view of alleviating the grief of bereaved family members and loved ones, studies have shown that virtual funerals can be effective, depending on the method and execution. Alexander Burrell and Lucy E. Selman suggest that the type of funeral need not necessarily affect the bereaved family's experience of grief or their mental health. What matters is that the funeral is conducted in a way that is meaningful to the family and whether or not they feel supported.[18] Julia L. Frydman et al. suggest a structured sequence for memorial services using an online meeting system such as Zoom: 1) preparation, 2) stage setting, 3) farewell address, 4) closing.[19] They

assert that when planning virtual funerals and memorial services, one must follow the proper procedures in order to heighten the sense of immersion as far as possible, and adopt important components of the traditional funeral service of relevant cultures.

Examples of Successful Virtual Funerals

In the *Toronto Star,* Peggie Mackenzie reported on the "completely homemade virtual funeral" conducted with another family over Zoom by her good friend, whose mother had died during the COVID pandemic in November 2020.[20] Many factors at that funeral would have made an in-person funeral difficult. The siblings of the deceased were between the ages of eighty-five and one hundred and would likely not have been able to come even if in-person attendance had been an option. Furthermore, every one of the deceased's grandchildren, more than ten of whom lived abroad, was able to attend. One of the sisters of Mackenzie's friend was a clergywoman. She was able to create a program for the funeral that was at least as thorough as that of a normal funeral, which was shared with those attending beforehand. A speech (memorial address), hymns including the deceased's favorites, and family pictures with sentimental value for the participants were shared during the ceremony. There was time for casual conversation after the ceremony, and those who had not been able to attend could experience the funeral after the fact by watching the recording.

In some points, like the virtual funeral being organized by the daughter and her siblings, it resembles the example of S family. Furthermore, the sister who was a clergywoman understood the procedure of a funeral well. Despite it being her first virtual funeral, she made meticulous preparations. During a period during which all major cities in Canada were under the strictest lockdown, and despite being in a completely online format with no in-person component, the participants felt unified. Moreover, even the siblings of the deceased living in a retirement home were able to participate without a problem with the help of the staff of the establishment, so technological support was also sufficiently provided.

Another report emphasizes the benefits of COVID-period virtual funerals in instances where, for religious reasons, there are restriction on conventional in-person funeral participation. Anthropologist Alexandra Bitusikova, at the University Matej Bel in Slovakia, describes a Jewish virtual funeral that took place in London in 2020 and reports on its results and significance.[21] In principle,

in the Jewish faith (and in Islam), a burial must take place within twenty-four hours of the deceased's passing. But in today's globalizing world, it is not always easy for the entire family to gather together in such a short time. Another particular characteristic of Judaism is the ritual observance of shiva, the seven-day mourning period after a funeral. Observing shiva according to established custom is difficult in today's society. According to Bitusikova, in this case the virtual environment allowed both burial and shiva to be implemented in a form that was more intimate and emotional than the rituals required at an in-person funeral. Moreover, as noted in other examples, friends and family from all over the world who, for various reasons (illness, distance, finances), could otherwise not have participated were able to attend, and they even had a front-row seat.

CONDITIONS IN JAPAN

Thus far we have considered scholarship from abroad; we now turn our eyes to the situation in Japan, where this article is set. Now that COVID lockdown has ended, one can observe that there are fewer funeral homes offering webcasting services for funerals. In the Tokyo metropolitan area, any mention of a remote-attendance service was removed from businesses' websites without warning to the customer. The owner of one such business, who answered a phone interview conducted by the author, said, "As sales of the service were bad, there weren't really any results. I have nothing else to say on the matter," and refused to answer any more questions.

Something that caught my eye over the course of my investigation was a small hall, located in Utsunomiya City, called Towa no Ie (The House of Forever), which started operation in 2020. In the hall, a webcasting system was set up with a 360-degree camera. However, by May 2024 it had been used no more than twice. Anticipating news of the COVID lockdown, the company had launched the service in order to stand out from their competitors but is now debating what use to put it to in future. While private family funerals are the norm in Japan, Utsunomiya is a region known to hold funerals with a comparatively high number of attendees. According to the company, the hall has a capacity of ten people. The small scale of the funeral hall is regarded as one of the reasons that it failed. While their funeral webcasting system did not receive negative reviews, the relocation and repurposing of that system is already under consideration.

Another relevant case is that of the Ōno Sōsai funeral parlor in Ōita City, where more than fifty remote funerals via Zoom were conducted during the COVID lockdown. The company considers that the infrastructure for remote

participation in the funeral hall is essential, to be provided for free. Furthermore, they have begun developing a service for the use of virtual avatars with the aim of increasing the feeling of realism for remote attendees.

One reason that remote-attendance services have gained a foothold in Ōita Prefecture is believed to be the relatively short time between death and the funeral services in that region. A common pattern is that, if a request for a funeral service arrives at the funeral parlor in the morning, the wake is expected by the afternoon of that same day and the funeral rites the day after. The staff of Ōno Sōsai say that they themselves do not know the reason for this regional custom, but one can imagine that, as with the example of Jewish funerals given earlier, it is not unusual for family members to be unable to make it to the funeral in time after the death of a relative.

However, even at Ōno Sōsai, which has probably put more effort into virtual funerals than any other funeral parlor in Japan, requests for funeral webcasting services stopped coming around mid-2023. While we are unable to obtain empirical data, we surmise that the situation is the same for funeral service providers all across Japan.

VIRTUAL FUNERALS AFTER THE COVID LOCKDOWN

While the global pandemic greatly influenced how funeral services were conducted, it produced many viewpoints on the present state of funeral services as well. There are many tragic interpretations of virtual funerals, which are tied to memories of traumatic separation by death during the COVID crisis, in reports by researchers from abroad. I can surmise that the situation is roughly the same within Japan as well from the fact that many businesses stopped their funeral webcasting services.

However, I also detected benefits of a virtual funeral that do not extend to an in-person funeral. Virtual funerals are rated highly if sufficient preparations are made, and if they include people for whom in-person attendance would be difficult, or those who for religious or cultural reasons would not otherwise be able to attend.

While no more than a "plan of last resort" during the exceptional conditions of COVID lockdown, the model for virtual funerals presented in this article assumes their necessity going forward. It is a fact that the need for virtual funerals will increase in our modern society, which is characterized by the ever-increasing trends of declining birthrates, aging population, and progressive globalization.

There are still flaws in the technology and design used for funeral webcasting during COVID lockdown, particularly given that those whose need for a virtual funeral is greatest—that is, people with physical disabilities and the very elderly—were not given due consideration. In the second half of this article we determine the benefits and value of virtual funerals and consider a vision for the near future, including questions of what kind of technological development and design will be required from here on out.

Background Information on S Family's Funeral Service

Many interpersonal relationships were at play in the virtual (hybrid) funeral of S family, and there were many individual players as well. In this article, I give an account of the family relationships from the point of view of the eldest sister, who had the main role in preparing and facilitating the virtual funeral attendance.

ABOUT THE DECEASED

The deceased (grandmother) passed away on November 30, 2023, at the age of ninety-six. She had caught a cold a week before, and her condition gradually declined until she died. The grandmother had been healthy her whole life, and her mind and body were in good condition until the end. Considering her old age, her relatives had agreed beforehand that they would not give life support. Consequently, her death was quick. It seemed that the grandmother did not anticipate dying, as there were many books she had been planning to read piled up at home. The wake was held on December 2, and the funeral took place the day after. The funeral service was held promptly, and after the cremation her ashes were interred right away.

ABOUT THE ATTENDEES (DRAMATIS PERSONAE)

Among S family's close relations, the people who attended the funeral in person were the eldest sister, the third sister with her husband and daughter, their father (the chief mourner), their mother, their aunt (the deceased's daughter), and two female cousins. In total there were sixteen in-person attendees at the funeral. The people who attended remotely were the fourth sister in Tokyo, and the second sister with her husband, son, and daughters (the great-grandchildren of the deceased) in the United States.

THE FAMILY'S COORDINATION AND APPLICATION
OF DIGITAL TECHNOLOGY

S family uses a group chat on Line, a messaging service, to stay in touch.[22] After the death of the grandmother, they were able to quickly share information about the funeral. Even on the day of the wake, which was not webcast, the eldest sister shared pictures and videos as needed. In S family, the eldest sister has taken the role of reinforcing the family's cohesion. Moreover, within the family she was the most knowledgeable about the use of digital technologies, having helped set up the Wi-Fi router and similar devices in her younger sister's house. Due to these particulars, the eldest sister came to be responsible for the Zoom call during the funeral service as a matter of course.

THE ELDEST SISTER'S PREPARATION
AND IMPLEMENTATION OF THE WEBCASTING

The eldest sister, who works in education and research, had past experience participating in a funeral service that took place at the same funeral hall, and was able to confirm that the venue was equipped with electrical power and Wi-Fi. Since she had frequently used Zoom during the COVID lockdown while doing fieldwork as a researcher, she was not overly concerned about using it during the funeral service.

The eldest sister, after receiving her father's approval as chief mourner, quickly went ahead with preparations for the webcasting. She had always been careful to maintain family harmony and regularly acted on the family's behalf. She considered webcasting the funeral service within the scope of her regular role in the family.

The equipment used by the eldest sister was an iPad Mini connected to Wi-Fi, and Zoom was used for the webcasting. It was a familiar setup for the eldest sister, and for the fourth and second sisters attending remotely as well.

S Family's Virtual Funeral Service

The analysis in this section is based on the Zoom recording provided by the eldest sister, as well as information received through a Zoom interview with her. Parts were cut from the original footage (two hours and thirty-eight minutes) after consultation with the eldest sister, including private conversations that deviate from research content and standby time before the start of the service, in which there is no conversation or movement. The remaining video

is around two hours and sixteen minutes long. The interview with the eldest sister took one and a half hours. Analysis of the funeral video and interview were conducted in collaboration with the research partner of the author, Satbyul Kim.

BEFORE THE FUNERAL

In this case, one of the most memorable scenes is an exchange among the family that took place before the funeral rites (sōgi and kokubetsushiki). The conversation reproduced at the start of this article, which occurred when the sisters surrounded the deceased before the beginning of the funeral service, does not match the image of a formal ceremony or rite. Rather than calling it the scene of a funeral, it seems more accurate to characterize it as a "chat between sisters." However, is it not precisely this kind of conversation that captures the essence of funeral attendance in today's society?

As previously stated, the funeral webcasting was prepared and implemented by the eldest sister for the sake of the fourth sister, who declined to attend in person due to concern over her physical health. Naturally, many actions that would have been simple in person were restricted. To make up for it, the eldest sister ensured that the fourth sister had a chance to see the deceased while there was time before the ceremony.

First, the eldest sister rang the bell in place of the fourth sister (Figure 3), and lit a stick of incense and placed it in the incense burner. Then she stood

Figure 3. Ringing the bell in place of the fourth sister.

at a place from which the entire altar was visible and showed their grand-mother's portrait. After that, she moved to the front of the casket and showed the face of the deceased. That is when the conversation quoted at the start of this article took place. From there, the eldest sister showed a close-up of the flowers around the altar (Figure 4) and the fabric lining the casket, and told the fourth sister that both were pink, the deceased's favorite color.

After showing the close-up of the deceased, she left the funeral hall and moved to the waiting room. Next was the long-awaited reunion with the cous-ins. The two cousins and their husbands each said their greetings via Zoom, and the fourth sister herself told them, "I'm participating remotely this time." It was the foresight of the eldest sister to make time like this before the cere-mony for her sister to converse with the in-person attendees. Then, consult-ing the schedule, she told the fourth sister the planned time for the start of the funeral services and the departure to the crematorium.

Afterward, she set the iPad showing the fourth sister's face on a chair in the waiting room for a while. The fourth sister chatted with her mother and sisters, with whom she was in touch often, and she also exchanged words with her aunt (the older sister of her father). The fourth sister said that the deceased (her grandmother) and her aunt (the deceased's daughter) looked just like each other. The eldest sister, overhearing the exchange, joined in, saying, "But the person who looks the most like Dad [the son of the deceased] is you [the fourth sister]," to which the fourth sister replied, "Well, in that case, as I get older I'll start to resemble Grandma more and more!"

Figure 4. Showing the altar flowers.

Such a conversation about who resembles whom is common among relatives, even if it takes place at a funeral. However, one wonders if such a conversation would have occurred if the person filming had been an outsider who was not close with the family. In the author's experience of the K family funeral, the first time the camera was turned toward the deceased's face was during the memorial before the departure to the crematorium, when time was provided for the siblings to say goodbye. There was barely any time between establishing the Zoom connection and turning the camera toward the deceased; furthermore, intimate communication between relatives about the expression on the deceased's face would surely have been difficult with a third party present.

The sequence of events staged by the eldest sister for the fourth sister before the service substituted for events that would have occurred had she been able to attend in person. That includes ritual actions such as the burning of the incense, but there were also opportunities for the reunions, greetings, and catching up that occur as a matter of course at big family events.

The Reason They Decided on a Webcasting

The details as to why they decided to webcast the ceremony were explained by the eldest sister. "It's not that we did it because we really wanted to let them know how the [in-person] attendees were doing. As far as I was concerned, the number-one mission was to give my sisters who couldn't attend a chance to say goodbye to Grandma."

At first, the author had assumed that surely the webcasting had been for the sake of the second sister, who was in the United States. However, the focus of S family's virtual funeral participation was the fourth sister. To this point, the eldest sister made the following comment: "My little sister who lives in the US wound up entering the Zoom call as well in the end. By the way, at first, she had had no intention of coming at all. If it had been only the people in America who were unable to come, I wouldn't have had the remote connection in the first place. It's too far. It wasn't a question of whether or not they could make it, they clearly would not have been able to make it."

The funeral had initially been an in-person funeral in principle, but under the eldest sister's leadership it was held in a hybrid format. What had moved the eldest sister to make the change was the fourth sister, who wanted to rush on-site to say her goodbyes to their grandmother but was concerned over traveling such a distance due to health reasons. This is not

a special circumstance limited to S family; it is probably an incentive for many to participate in a funeral virtually. Of course, there are also cases of people who attend a funeral virtually because they want to travel on-site from abroad but are unable to do so. There are any number of reasons to attend a funeral virtually.

COMPLICATED FEELINGS ABOUT THE FUNERAL

The eldest sister, who was attuned to her sisters' personalities and mental states through long experience, was tactful in her preparation of a sad event like a funeral. For example, she did not share the ceremony for placing the body in the casket or the wake via webcasting. "Seeing someone who looks like they might wake up at any moment be interred in a casket makes you feel a little sentimental. My sisters are more emotional than I am, and because I thought they would probably cry if they saw it, I decided not to live stream it. But I wonder if it was the right call. It's hard to say what the right thing to do is in that kind of a situation," she said, showing her consideration for her sisters. Even so, "When tying the knots in her funeral obi [kimono sash] as part of the preparations for her journey into the Pure Land, there was a scene where I acted as a sort of representative for all us granddaughters. I thought I should have at least shared that with my other sisters."

She said she took a video of what the casket looked like afterward, but clearly she had mixed feelings. Also, apparently the third sister did not attend the casket preparations and the wake, but she joined the rest of the family on the evening of that day.

Any experience via media, not just virtual funerals, can be edited. In other words, it is possible to pick and choose what is shown and what is not shown. This was the solution of the eldest sister, who wanted to give her sisters a chance to say goodbye to their grandmother but did not want to make them overly sad, and who was familiar with digital devices and webcasting.

FOR THE ELDEST SISTER, THE CASKETING
WAS THE FAREWELL CEREMONY

Of course, the eldest sister was not unmoved by having to say goodbye to her grandmother. She said the following about the change in her feelings at her grandmother's funeral: "By the time the funeral service started, I had already finished being sad. No, before even the wake. I was saddest during *nōkan* [the preparation of the body for the casket]. Although I think part of it was also

that I entered work mode. Since it was my job to livestream the funeral, it wasn't the time or the place to feel sad."

For the eldest sister, the nōkan ceremony had been the *kokubetsushiki* (time for the final departure to the crematorium). Of course, this was also partially due to self-management, thinking that she needed to be prepared for the task of webcasting. If she were overcome with grief, she would not be able to do her job. Incidentally, the eldest sister is a musical performer and has ample experience in mental control due to her experiences of standing onstage.

THE SCENE OF HEIGHTENED EMOTIONS, THE CLIMAX OF THE FUNERAL SERVICE

As with K family, the climax of the S family funeral was right before the funeral procession, the scene of final parting, when flowers and mementos were placed in the casket before it closed. In the case of K family, there had been time before the funeral procession for the siblings of the deceased, attending remotely, to say their goodbyes while looking at the face of the deceased. Conversely, in the case of S family, the fourth sister, the second sister who was able to join the call in the middle of the ceremony, the son and daughter of the second sister, and the in-person attendees all spontaneously called out "Grandma, thank you!" many times.

The funeral home at S family's funeral had prepared a service where you could write a letter to the deceased or fold a paper origami crane and place it into the casket. When she heard about it on the day of the wake, the eldest sister asked the second and fourth sisters if they wanted to write a letter through the family group chat and ended up penning letters from both. Flowers, paper cranes, the letters from her grandchildren (including the cousins), and other items were placed in the casket to see their grandmother off. Asked which was the scene in which the farewell to her grandmother was conveyed, the eldest sister reviewed the video recording and stated, "I think it's this, piling on the flowers, closing the lid, sending her off. Even my cousins cried harder than you'd think."

The video captures the scene of the third sister, standing before the prettily decorated casket of her grandmother, waving her daughter's hand and saying, "Bye-bye, Grandma!" (Figure 5). When the lid closes and it is finally time to carry out the casket, she cuddles her daughter as tears run down her face.

Figure 5. The great-granddaughter waving her hand before the casket is carried off.

The Value of a Religious Ceremony

Once again, for the mourners attending funeral services in Japan today, one of the most important events is the time for goodbyes before the casket is carried out.[23] How much value do the reading of sutras by the priest, the Buddhist sermon, and the burning of incense—all originally considered indispensable for a funeral—have for the funeral attendees? In the funeral service of S family, there is a scene that invites consideration of this question. I asked the eldest sister why, when it was her turn to burn the incense, she left the iPad (and by extension the remote attendees) on her chair instead of bringing it with her.

"Because I needed both hands. I told them to hang on just a second. Right, I wasn't able to bring them with me. But if I had had a small camera attached here [points to her lapel] or something like that, I probably could have," the eldest sister said, with an expression that suggested the possibility had only just occurred to her. Furthermore, "the baby [the third sister's daughter] made a fuss, she said she felt a little bit regretful that she didn't get a chance to burn the incense. But since she had other opportunities to say a proper goodbye, I don't think it was a problem."

Technically, the third sister's husband, while holding their child, was supposed to burn the incense as a representative for the whole family, but that did not work out. Ultimately, however, the fact that they were not able to

participate in the incense-burning ceremony was only a slight regret. This would appear to indicate that, rather than the stiff formality imposed upon funeral attendees in ritualized group actions such as the laying of flowers or offering of incense, what was more important for the bereaved family was whether each attendee had enough time to say their goodbyes to the deceased.

BOTH ATTENDEE AND LIVE STREAMER

At the S family funeral service, the eldest sister was both attendee and live streamer. Keeping in mind her sisters, who were participating through the screen, she had the role of making her sisters feel like they were "on-site." She also shouldered the responsibility for making the in-person attendees aware of those attending remotely. While also an in-person attendee herself, she devoted herself mainly to the task of webcasting and oversaw the experience of the virtual attendees. However, it is rare to find someone who is able to be both an attendee and a live streamer at the same time. The success in this instance was due largely to the eldest sister's previous experience and skill.

The Future Direction of Virtual Funerals

THE OLDEST SISTER AS REMOTE FUNERAL CONDUCTOR

At the virtual funeral service of S family, the oldest sister (the daughter of the chief mourner and the grandchild of the deceased) took a central role in implementing the webcasting. By having someone whose position was central in the family take on that role, it was possible not only to find suitable camera angles, but also to ensure there was enough time for remote participants to communicate with in-person participants. Moreover, being in a position where she could ask other attendees for assistance when necessary was beneficial. Had a third party assumed that role, it is unlikely they would have achieved the same level of success.

The eldest sister of S family effectively fulfilled all the requirements of an RFC. She was able to conduct the virtual funeral through her knowledge of funeral procedure, her technological literacy relating to webcasting, and her ability to manage both in-person and remote attendees. Furthermore, she was able to adapt the service in response to the familial relationships between members of S family and their relatives, and to the emotional state of the people attending the funeral. Specifically, because she fully understood the thoughts and motivations of each member of S family in regard to the funeral

service, she was able to create an environment without deficiencies for either the in-person or the remote attendees.

Based on the above analysis, I would like to add "understanding of the motivations of the attendees in regard to the funeral" to the revised list of knowledge and abilities required of an RFC, as below.

Updated List of Proposed Qualities of an RFC

1. Familiarity with typical funeral procedure
2. Understanding of which are the important scenes of a funeral
3. Understanding of the motivations of the attendees in regard to the funeral
4. Technical setup for webcasting
5. Simultaneous management of in-person and virtual attendees
6. Ability to perform the role of another funeral attendee

A VIRTUAL FUNERAL IN THE HANDS OF THE FAMILY

In contrast to the virtual funeral of K family, where the research team staff including the author took on the role of virtual funeral service provider, in the case of S family everything was handled within the family. K family's funeral took place during the period of limited mobility due to COVID regulations, and moreover they were seeing someone off who had died relatively young. Their funeral was in no way inferior to that of S family. The key point is that they were very different experiences.

During K family's funeral service as well, there was a scene of intimate conversation among members of the family. After the wake, the wife (chief mourner of the deceased) exchanged greetings with her sister-in-law and family who had attended remotely. Furthermore, the words of parting said by the siblings who were attending remotely before the casket was carried out left the greatest impression.

In the case of S family, basically the whole program went according to the decisions of the eldest sister. Rather than focusing on webcasting the service, effort was put into facilitating intimate conversation among the family surrounding the deceased. As with the K family, the most emotionally intense moment for the S family attendees was just before the casket was carried out. But the moment was used for everyone in attendance, whether in-person or remote, to spend time saying farewell to the deceased in their own way.

The time for family and relatives to catch up before the start of the funeral services is very important. Because one can no longer act freely once the service starts, the time before the ceremony in which in-person attendees and remote attendees exchange greetings and catch up is precious. The feelings of unity between the people about to attend the ceremony deepen as a result. It should be noted that even if a third party is shouldering the responsibility of conducting the virtual funeral, they should deliberately approach the in-person attendees for a conversation before the ceremony.

In the case of webcasting among family, it is easy to show consideration for one's loved ones and respond to the wishes of remote participants to film more of this or that. Conversely, in the case of a webcasting mediated by an outside service, it is difficult to request what one wants to see personally. In the case of a third-party intermediary, the question of how to create an atmosphere where it is easy to make requests should be given particular attention.

Nowadays, a funeral service is not limited to set rituals and ceremonies. The case of S family causes one to reflect on the expectations and wishes of participants during a service.

Looking Ahead to Virtual Funeral Design in the Near Future

The protagonist of this article is the eldest sister, who played a central role in the S family funeral. However, based on this example, it is unlikely that most families would be able to implement a virtual funeral like the one conducted by the eldest sister. For example, in the case of K family there was no internet connection at the homes of the siblings of the deceased who attended remotely, nor did they have the necessary technological literacy to operate digital devices. Consequently, equipment was sent and personnel dispatched to take care of setting it up. In the case of S family, because the younger sisters who were connecting remotely already had the necessary technological skills, there was no need to make special arrangements.

Also, the eldest sister was already what one might call the key pillar of communication within the family. It was because of her thorough understanding of the personalities and psychological tendencies of each of her family members and relatives that she was able to conduct the virtual funeral. Additionally, she had experience performing remote fieldwork using Zoom, so there was no problem in terms of technological competence. A case like this,

where there is someone who meets all the necessary conditions among the family or close relatives of the deceased, is rare.

The problem with the example of S family, although this can be said of examples from previous research as well, is that a case study in which all favorable conditions happen to be met does not equip one to deal with the overwhelming majority of cases that do not fit that pattern. From here on out, I will discuss what kind of design is required to support the implementation of virtual funerals.

First, the most convenient case would be one in which conditions similar to those of S family are met. In such a case, the minimum requirement of "tools for families to implement virtual funerals" would be enough. So long as there is someone who does not need assistance to prepare a tablet or smartphone for remote connection and ensure there is an internet connection, there should be no problem. However, there is a margin for businesses to mediate by providing a technological preparation support service to those who are unfamiliar with the equipment or technological settings.

The next aspect to be considered is "tools for businesses to implement virtual funerals." This is equipment that can be used by funeral home staff, for example. The set should include a preestablished Wi-Fi connection. The staff should possess the basic qualifications of an RFC, including "awareness of the expectations of the attendees in regard to the funeral," which was added to the list in this paper. The staff, while acting as an assistant to the bereaved family, should cooperate with the mourners to facilitate the virtual funeral.

Finally, while this is not limited to virtual funerals, it is imperative to build a relationship of trust with the bereaved family before the day of the funeral.

Conclusion

In this article, I have reported on the funeral service of a family (S family) held toward the end of 2023, that included attendees who participated remotely (virtually) via the online meeting platform Zoom. At this virtual funeral service, no funeral home staff members or other broadcast support staff were involved; instead, everything was left entirely in the hands of the family. It became a space in which the family members, who had a close relationship, could gather around the deceased and each say their farewells in their own way.

I once facilitated the virtual attendance of another family's funeral service (K family). At the time, my role was essentially technical support for the funeral webcasting. Amid various technological limitations and concerns, I provided the elderly siblings of the deceased with an opportunity to say their goodbyes. Based on the experience of K family, I defined the five conditions required of an RFC, someone who uses their knowledge of funeral rites and the technological literacy necessary for webcasting to manage in-person and virtual attendees.

I was surprised to find that the eldest sister of S family fulfilled all five conditions. In addition, she understood in detail the "motivations of each attendee in regard to the funeral," and applied that knowledge to the performance of S family's remote funeral service. However, it is rare to find such a qualified individual among a bereaved family. What can we learn from the example of S family, and how can we apply it in funeral services going forward?

Now that the COVID lockdown is over, it appears at first glance that virtual funerals will no longer be held in Japan. However, in light of research results from abroad and the example of S family, it is clear that the demand for virtual funerals has not disappeared. The focus from now on should be on the development of technology and a design appropriate for virtual funerals implemented by third parties working together with the bereaved family. As with S family, we must aim to construct a service that does more than simply broadcast and transmit the scene at the venue, but also facilitates intimate communication among the family.

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Notes

1. In this article, the terms *funeral, funeral rites, virtual funeral, hybrid funeral, remote funeral,* and similar, are used. Unless otherwise specified, *funeral* in this article indicates the Japanese-style wake (*tsuya*), funeral (*sōgi*), and final farewell ceremony (*kokubetsushiki*). *Remote funeral (attendance)* means the real-time remote attendance of such a funeral service over the internet. Additionally, in the case that both in-person participants and online (virtual) participants attend, the term *hybrid funeral* is used. Furthermore, *hybrid funeral service* is the generic term to identify either of these (remote funeral service or hybrid funeral service) and includes other cases in which information technology methods are used or used jointly.

2. HCI is the research field relating to interactions between humans and computers, or between humans with computers as an intermediary. HCI design research refers to designing new HCI systems, or research about the act of designing itself.

3. Uriu Daisuke, *Kojin ni aeru mado "Fenestra": "Dijitaru no katami" de kojin wo shinobu, seikatsu ni najimu kuyō girei no dezain* [Fenestra: Window to meet the deceased--Designing memorial services fit into everyday life with "digital remains"] (PhD diss., Keio University Graduate School of Media Design, 2014); Uriu Daisuke and William Odom, "Designing for Domestic Memorialization and Remembrance: A Field Study of Fenestra in Japan," *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)* (2016): 5945–57.

4. *Domestic memorialization* refers to memorial services practiced at home, such as rituals in front of a Buddhist home altar.

5. The celebration-of-life ceremony (*owakarekai*) is a separate ceremony held on a different day than the funeral, in which loved ones gather to reminisce about the deceased. Also called "ceremony of remembering" (*shinobukai*) or "ceremony of thanks" (*kansha no kai*). The death anniversary ritual (*kaiki hōyō*) is a ceremony held at particular times (e.g., forty-nine days, one year, two years) after the funeral, in which loved ones gather and pray for the soul of the deceased to rest in peace.

6. Tachi Susumu, "Baacharu riariti to ha" [What is virtual reality?], Virtual Reality Society of Japan, last modified January 13, 2012, https://vrsj.org/about/virtual reality/.

7. Uriu Daisuke, "Paneru no Shushi to Matome" [Gist and summary of the panel], *Religious Studies* 97, Special Issue of the 82nd Academic Conference Bulletin (2024), 110–11.

8. The wake was held on June 22 (Monday) and the funeral and memorial service the next day on June 23 (Tuesday). The research team received word about this opportunity late at night on June 19 (Friday). At the time the first state of emergency declaration had just been lifted, and there were even people among the members of the research office who came to the office in person for the first time in order to prepare the webcasting. The preparation period for funeral services in Japan is short to begin with, but at the time it was a particularly unusual situation, and there were concerns about getting everything ready in time.

9. Uriu Daisuke, Toshima Kenta, Manabe Minori, Yazaki Takeru, Funatsu Takeshi, Izumihara Atsushi, Hiyama Atsushi, and Inami Masahiko, "Enkaku sōgi sanretsu shien jissen: Izoku ga 'VR sōgi' ni kitai suru koto" [Implementing support for remote funeral attendance: What the bereaved family expects from a "VR funeral."], *Proceedings of the 25th Annual Conference of the Virtual Reality Society of Japan* (September 2020), 1A1–7.

10. Uriu Daisuke, Toshima Kenta, Manabe Minori, Yazaki Takeru, Funatsu Takeshi, Izumihara Atsushi, Kashino Zendai, Hiyama Atsushi, and Inami Masahiko, "Generating the Presence of Remote Mourners: A Case Study of Funeral Webcasting in Japan," *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)* (2021), article 629.

11. Uriu Daisuke, "Enkaku Sōgi Chūkeisha ni Motomerareru Chishiki to Nōryoku" [Knowledge and abilities required of remote funeral conductors], *Religious Studies* 95, *Proceedings on the 80th Academic Conference Special Issue* (2022), 267–68.

12. Uriu Daisuke, Kim Satbyul, Niwa Tomoko, Takagi Ryōko, Tanka Daisuke, "Sōgi no Baacharuka: Kadai to Tenbō" [The virtualization of funeral services: Challenges and prospects], *Religious Studies* 97, *Proceedings on the 82nd Academic Conference Special Issue* (2024), 104–11.

13. Andie MacNeil, Blythe Findlay, Rennie Bimman, Taylor Hocking, Tali Barclay, and Jacqueline Ho, "Exploring the Use of Virtual Funerals During the COVID-19 Pandemic: A Scoping Review," *OMEGA—Journal of Death and Dying* 88, no. 2 (2021): 425–48.

14. In Islam, only men are allowed to enter the part of mosques where funeral services are conducted. However, there is nothing forbidding women from watching a funeral online, so consequently women were able to attend as well.

15. Cliff Yung-Chi Chen, "Grieving During the COVID-19 Pandemic: In-Person and Virtual 'Goodbye,'" *OMEGA—Journal of Death and Dying* 89, no. 3 (2022): 1176–92.

16. Jennifer Riley, Vikki Entwistle, Arnar Arnason, Louise Locock, Paolo Maccagno, Abi Pattenden, and Rebecca Crozier, "Hybrid Funerals: How Online Attendance Facilitates and Impedes Participation," *Mortality* 29, no. 3 (2023): 593–611.

17. Jennifer Riley, Vikki Entwistle, Arnar Arnason, Louise Locock, Rebecca Crozier, Paolo Maccagno, and Abi Pattenden, "Why Does Funeral Attendance Matter? Revisiting 'Configurational Eulogies' in Light of the Covid-19 Pandemic in the UK," *Mortality* 29, no. 4 (2023): 706–27.

18. Alexander Burrell and Lucy E. Selman, "How Do Funeral Practices Impact Bereaved Relatives' Mental Health, Grief and Bereavement? A Mixed Methods Review with Implications for COVID-19," *OMEGA—Journal of Death and Dying* 85, no. 2 (2020): 345–83.

19. Julia L. Frydman, Eugene W. Choi, and Elizabeth C. Lindenberger, "Families of COVID-19 Patients Say Goodbye on Video: A Structured Approach to Virtual End-of-Life Conversations," *Journal of Palliative Medicine* 23 no. 12 (2020): 1564–65.

20. Peggie Mackenzie, "Mom's Virtual Memorial Was Beautiful and Gave Us the Closure We Needed," *Toronto Star* (December 13, 2020) https://www.thestar .com/life/relationships/mom-s-virtual-memorial-was-beautiful-and-gave-us -the-closure-we-needed/article_2ea050d2-9888-5281-86e3-17812130b637.html.

21. Alexandra Bitusikoya, "COVID-19 and Funeral-by-Zoom," *Urbanities—Journal of Urban Ethnography* 10, no. 4 (2022): 51–55.

22. The group chat consists of S family's father, mother, and four daughters. The eldest daughter lives with her parents; the second, third, and fourth daughters each are married and live outside of the house. The second daughter lives in the United States, and the third and fourth daughters live within walking distance of their parents' home.

23. Since filming at a crematorium is forbidden as a rule, in Japan virtual funerals and remote attendance must end before entering the crematorium. Also, even if it is not a virtual funeral, one is able to spend a greater amount of time with the deceased before the casket is carried out.