Aesthetic Nostalgia Mediated Design for Long Distance Relationship

Xuqin Yu

Keio University Graduate School of
Media Design, Yokohama, Japan
annsuee@outlook.com

Masa Inakage

Keio University Graduate School of
Media Design, Yokohama, Japan
inakage@kmd.keio.ac.jp

Atsuro Ueki

Keio University Graduate School of
Media Design, Yokohama, Japan
atsurou@kmd.keio.ac.jp

ABSTRACT

New technology and media platforms are emerging to support communications between Long Distance Relationships (LDRs). But few of them are aiming at a specific emotional expression such as nostalgic feelings. As Svetlana Boym says, nostalgic love can only survive in a Long-Distance Relationship [1]. Nostalgia is a common emotion we feel towards people we loved but living in distance. It has been shown to have benefits for relationship bonding and human well-being [2]. While most nostalgia designs are emphasized on retro style and memory-related uses, nostalgia's aesthetic meanings and reflective attributes are being ignored and lack theoretical exploration.

Missing someone who is absent is just like J. D. Salinger's description about love: "a touch and yet not a touch" [3]. The multi-layered emotion is hard to describe and harder to express over distance. Since nostalgic emotion is a perfect bridge for shortening psychological distance and establishing a real lasting, organic relationship bonding, we believe it is timely to create a new language to deliver this subtle emotion.

In this paper, we propose an LDR mediated design concept based on nostalgia theory, followed by two design cases: NostosMoon and NostosLamp. Those design cases feature three factors: metaphorical nature-related content, slow and reserved way of interaction, and realized tangible output. We would like to open discussions on how factors that are seemingly opposite with closeness actually enhance intimacy and strengthen bonding between LDR groups, thus influence the nostalgia mediated design.

CCS CONCEPTS

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models.

KEYWORDS

Nostalgia Design, Eastern Aesthetics, LDR Communication, Mediated Communication, Slow Media, Emotional Design YUXUQIN, MASA INAGAKE, ATSURO UEKI. 2021. Aesthetic Nostalgia Mediated Design for Long Distance Relationship: In ARTECH 2021,

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1 INTRODUCTION

Deriving from the Greek word *nostos* for return and *algos* for suffering, the literal meaning of nostalgia is the suffering caused by yearning to return to place of origin. In today's context, nostalgia often refers to the longing for the past or reminiscence for something or someone no longer exists.

Along with the digital revolution, new definitions of nostalgia are coming up. *Nowstalgia* and digital nostalgia [4], indicates nowadays digital archiving culture: selfie, sports camera, social media, made the past everywhere, coexisting with the present. Nostalgia is no longer restricted within the long-lost past, people are preserving every present moment. Thus, nostalgia shifts from temporal to *Atemporal* which indicates it standing outside of time. [5] The *Atemporal* version of nostalgia is so-called postmodern nostalgia. Higson argues that postmodern nostalgia erases the sense of distance between past and present. Memory is often not even invoked in postmodern nostalgia experience, let alone wistfulness. He further claims that the wistfulness is the essence of nostalgia: "nostalgia is precisely that experience of longing, that experience of wistfulness. It is a fantasy of returning home, not an actual journey home."

In this paper, we are not intended to go deeper into nostalgia's semantical meaning. Rather, we want to focus on nostalgia's aesthetic meaning, that is the "wistfulness", the "contemplation" in nostalgia. We choose LDR as our studied group considering the yearning feelings towards someone who is far away and the beautiful sadness involved in having someone in heart, share characteristics with aesthetic nostalgia. And those subtle feelings are not only important for maintaining intimate relationships, also meaningful for guiding a real inclusive emotional interactive design.

The LDR group in our paper stands for not only the romantic relationships but all kinds of close relationships that are living apart including friends and families.

2 RELATED WORKS

Nostalgia, as a notorious emotion for its ambiguity, is hard to describe, and harder to be delivered. Although nostalgia has lots of

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positive social benefits, few designers tried to utilize the emotion to develop a relationship bond. On one hand, most of available nostalgia designs are applied to market business and political users [6]. On the other hand, nostalgia between close relationships is a multi-layered emotion. Most mediated designs also show a lack of ability in delivering such subtle emotional signals.

Numerous creative platforms are made on mediated LDR design. Many are inspiring designs in terms of providing sharing experience and increasing intimacy, such as CoDine system [7], a multi-sensory system for remote dining. And Kissenger [8] for transmitting a kiss between a separated couple. Media designs with rich content and multi-sensory are perfect tools in representing someone and transmitting explicit information, but they may not be suitable in terms of delivering subtle inner emotion. On contrary, the easy accessibility may affect the feelings in an unexpected way.

There are designs focusing on subtle emotional interaction. Keep in Touch [9] is a networked fabric touchscreen with a blurred digital projection of the participant's lover. It is designed to support intimacy for LDR couples through touching and body language. Connected Candles is a peripheral emotional interface [10]. By lighting up the candle flame, designers want to build a poetic connection between couples. The above designs are focusing on general emotional experience, but there are different dynamics going on between LDRs. Sometimes they just want a call, but sometimes there's nothing like a call for emphasizing the distance after hanging up. It will be interesting if the designed system was targeting a specific type of experience [11]. In the following chapters, we target at the specific nostalgic experience between LDRs to develop our design concept.

3 THE CONCEPT

Hong Li et al. developed a codebook consisting of several attributes to systematically analyze unconventional LDR interface design [11]. From listed attributes, we selected "nature of message" and "interaction types" as our key design attributes. Gooch and Watts created a framework for designing intimate communication devices [12]. Based on their suggested methods, we regard "effort" "realized output" "metaphor of use" as our appropriate design methods. We further analyze and refine those factors from the special lens of aesthetic nostalgia.

Combining interactive design methodology and nostalgia theory, we present here a design concept for LDRs to deliver their nostalgic missing feelings in an aesthetically pleasing way. The concept is made up of three factors. These factors are: nature-related metaphor in content, distance in interaction, *realised* tangible output.

3.1 Nature-related Metaphor in Content

Content refers to what kind of information designers should plan to use to express the nostalgic feelings. The use of metaphor in content can be understood as creating abstract, implicit messages.

The bittersweet emotion of nostalgia is universal, but the way of expressing it varies. Many eastern countries, like China and Japan, are well known for their reserved way of expressing emotion. For many eastern countries, good communication is metaphorical, layered and may depend on copious subtext, as opposed to logical, direct and transparent expression. [13]

China has a long history of using metaphors in communication. Using nature as a metaphor to express feelings is a typical method widely used in Chinese literature, songs and movies. There is a well-known Chinese poem *Shuidiao Getou* saying, "the moon does wax, the moon does wane. And so men meet and say goodbye. Though miles apart, we will share the beauty she displays". Chinese use the moon as a metaphor to express their love, caring and missing feelings towards hometown and family. Japanese are also famous for reflecting their sentiments in nature, especially in seasonal changes. Events such as the annual cherry blossom festival reflect their lament towards the transience of time.

We believe that nostalgia shares many similarities with eastern aesthetics. And we propose, creating a metaphorical, implicit content in interaction could be more favorable in terms of delivering the nostalgic feelings.

In our following design cases we employed the idea of using nature to deliver the subtle emotion. The content itself is just a metaphor used to convey the words "I miss you".

3.2 Distance in Interaction

Distance is a fundamental concept in nostalgia theory. As Stewart says: the nostalgic is enamored of distance [14]. Distance triggers sentimental feelings, arouses aesthetic awareness of the transience of life and things, and lays the basic wistful tone of nostalgia. How to create a meaningful but not superfluous distance is the key while designing nostalgia.

George Eliot once wrote: Only in the agony of parting do we look into the depths of love. Distance sometimes breeds positive nostalgic feelings between LDRs. Recent research shows that couples in long-distance relationships are equally or even more trusted and satisfactory than geographically close relationship. This helps to validate the view that absence makes the communication grow fonder [15].

In LDR communication, we understand distance as less easy to access, less obtrusive. It is the opposite of technology mainstream advocated belief of instantaneous and seamless connection. It could be further interpreted as *slowness* and *effort* in interaction design.

Slowness refers to the time needed for completing message exchange. Since most mainstream communication tools are used for synchronized communication, it may cause reply pressure. Nostalgic feelings are better expressed gently and quietly. Asynchronous communication or one-way directed communication are recommended. Besides, slowness not only gives time and space for privacy, the waiting itself also makes everything more precious.

Effort stands for difficulty in completing the process of interaction, the time consumed and attention required in transmitting and receiving action. As Gooch mentioned, effort could be regarded as a caring signal and well appreciated in intimate communications [12]. In intimate relationships when people value emotion more than efficiency, ease of use is not always right. Hand-written letters, crafted gifts are good effort examples.

3.3 Realised Tangible Output

According to Gooch, outputs can be categorized as fleeting or realized [12]. A realised output means something can be kept in a

Figure 1: Left: handmade moon sticker. Middle: written postcard. Right: moon pictures taken by participants

tangible, physical form. Common examples are letters, text messages. While the fleeting output, similar to the concept of ephemeral UI, is temporal in nature and will disappear with time.

Dominik Schrey points out that the distinct sense of nostalgia that western societies have developed has to be understood as an integral aspect of western culture of preserving and storing. But in the increasingly mediated life environments, everything that is preserved and remembered still gets lost and forgotten, and thus creates a deliberate emptiness. [16] With this in mind, it is important to consider the “mediality” of nostalgia itself. Japanese aesthetics “mono no aware” which stands for gentle sadness about the impermanence of life, is a similar notion with nostalgia. But compared to actions of storing and reliving the digitalized time, the idea of “aware” emphasizes sentimental awareness towards transience in life and a detached state of contemplation.

Laura suggests that in our digital video world, the nostalgia for analog video can be described in C. S. Peirce’s terms as a longing for Firstness. “The dropout and decay that correspond to our bodily mortality” [17]. We agree that the sense of passing of time, awareness of transience in life, are important in triggering the feeling of nostalgia. But due to digitalization, we can hardly feel the time-lapse. We propose that an anti-fleeting, preservable, physical form of output, is preferable in nostalgia design. We should think carefully about how to represent the time traces and design a unique tangible output in order to create stronger and lasting emotional bonds in an age of disposable technology.

4 DESIGN CASES

In this section, we present two pilot design studies: NostosMoon and NostosLamp. The main concept is using the nature object (moon, weather) as implicit content to deliver subtle emotion in a tangible form. Our hypothesis is that by delivering the abstract message in a slow and realised style, participants can catch special emotional signals and understand it as “I miss you” message.

4.1 NostosMoon

The overall idea is inspired by the famous Chinese poem, Shuidiao Getou: “though miles apart, we are still able to share the beauty of the moon together”. We think by utilizing the socio-historical context of the moon, participants’ attention can be shifted from the screen to the peripheral natural environment thus creating an aesthetic interaction that is different from verbal-based instantaneous communication and is able to deliver subtle emotions in a poetic, aesthetic way.

We came up with a NostosMoon design and carried out a pilot study with the Wizard of Oz prototype (Figure 1). The NostosMoon system was acted by the author. We had 12 pairs (24 participants: 2 couples are friends, others are lovers) aged from 21–30. They are all in a long-distance relationship. Meeting frequency varies from once a week to once half a year. Most of them use smartphones to text, call, and face-time with each other. We implemented the test for one week.

Participants were divided into sender and receiver groups. The sender group was asked to send a picture of the moon to NostosMoon system. So they had to actually go out, found the moon and took a picture.

When the NostosMoon system received the picture, a hand-made moon sticker would be made according to the moon phase in picture. NostosMoon then would send the sticker’s picture instead of the real moon picture to the receiver group.

The crafted moon sticker received by the receiver group indicated this was the moon sent out by their partner and this moon phase was what they were looking at.

Finally, we sent out a real postcard by post recording all the moon phases as a tangible memorial to the participants. After the test, we conducted both semi-structured interviews and questionnaires to evaluate how the participants perceive the experience. The result reveals that a clear majority of 21 out of 24 participants like the implicit way of connection. Some mentioned in the interview: “The missing feelings are subtle emotion, when you say it out, it easily fades away. The moon is a romantic symbol and is very suitable

Figure 2: NostosLamp System

for conveying this kind of emotion.” 22 out of 24 like the idea of using the nature as message content, they mentioned they had to go outside to take picture of the moon, sometimes had to wait for the clouds to drift away, and it brought them a small moment of escaping from social life and experiencing the nature. It reveals the slowness is well perceived and appreciated in the interaction: “I am busy at work. I like the way by not sending a direct message, so I don’t need to worry about reply.”

Participants expressed the psychological demand that they wanted to receive a physical result of this connection in order to keep it as a memento. And someone mentioned the importance of tangibility and slowness: “It reminds me of my parents’ youth time, they have to write letters to keep in touch. Dozens of letters are still being kept in our house.” From the receiver group, 11 out of 12 participants understand the picture of the moon as a message of “I am missing you”. They felt touched by the beauty of the lunar phase changing: “It reminds me it has been a while since we last meet in a poetic way.”

The NostosMoon system indicates nature-related content, implicit and slow interaction, tangible things can contribute to delivering the nostalgic feelings and are worth investigating further.

4.2 NostosLamp

In order to further evaluate the concept, we built a prototype named NostosLamp. The idea derives from observation: we found out that in a parent-children relationship, romantic elements are less important than the caring signals. One of the most common topics between mother and son is the weather condition. They want to know how’s the weather going so to remind each other to keep warm, etc. And they use this as a small chat to keep in touch. We believe this is also a subtle way for the parent-children relationship to express the nostalgic “I miss you” feelings.

We set a crafted, handmade tangible smart lamp which was remotely controlled by the mother in her son’s room. Interaction design follows the principles of content-less, nature-related, tangible medium, slow and subtle in interaction. The content of the message was customized as: if temperature in the mother’s city Y was higher than that in the son’s city T, the lamp’s color would be warm, and vice versa (Figure 2). The mother should calculate the number of temperature difference between two cities and use smartphone to send the number to the lamp server. According to the number, the lamp would show different color in the son’s bedroom.

We created a website for mobile phone to access and send number to the lamp server. We also created an APP for mac to control and conduct the turning-off command to the lamp (Figure 3).

We conducted the test for one week and did a semi-structured interview. The overall feedback shows that the son who saw the

Figure 3: Phone accessible website and Lamp control App

lamp everyday has much more emotional arousals compared to the mother who just used the smartphone to send numbers. The son mentioned that: “I came home late and suddenly saw the lamp was on. I knew the signal came from my mom thousands of miles away. I can feel she’s thinking about me.” From the mother’s side, she mentioned that the reason she was not evoked much emotional feeling was that the action (sending number) was too simple. But she enjoyed checking the weather: “The weather makes me imagine, like, it’s sunny day, he might go out for fun., etc.”

The purpose of the test was: using a customized and nature-related, implicit signal (weather difference) to deliver the message of “I miss you”. Different from the moon idea, the idea of using temperature difference is less romantic but more caring. However, compared to taking picture of the moon, calculating numbers is less aesthetically pleasing and less effort-taking. Also due to a lack of feedback from the receiver, the sender may feel less motivated. In the future we should add more aesthetical elements in the interaction and dig more into how to create unobtrusive feedback.

5 CONCLUSION

The overall results suggest in a long-distance relationship, most people feel the limitation of conventional communication and the easiness of digital interaction sometimes spoils subtle emotions. There is a growing need for LDRs to use new approaches to express subtle feelings. Nostalgia as layered subtle emotion, its sentimental wistfulness is difficult to catch and deliver. Compared to high-presence and rich-content interactions, we propose implicit content, slow and effortful way of interaction, realized tangible forms are preferred in nostalgic emotional communications between LDRs.

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REFERENCES

- [1] Boym Svetlana. 2007. Nostalgia and its discontents. *The Hedge-hog Review*, vol. 9, no. 2, 2007, p. 7+. Retrieved August 1, 2021. link.gale.com/apps/doc/A168775861/AONE?u=anon-94344ce7&sid=googleScholar&xid=9e3e8356
- [2] Hepper, E. G., Wildschut, T., Sedikides, C., Robertson, S., & Routledge, C. D. 2021. Time capsule: Nostalgia shields psychological wellbeing from limited time horizons. *Emotion*, 21(3), 644–664. DOI:<https://doi.org/10.1037/emo0000728>
- [3] Jerome David Salinger. 1941. *The Heart of a Broken Story*. September 1 issue of *Esquire* magazine. New York, NY.
- [4] Ezequiel Korin. 2016. Nowstalgia: articulating future pasts through selfies and GoPro-ing. P.50-60. vol.4, *medien&zeit*.
- [5] Andrew Higson. 2014. Nostalgia is not what it used to be: heritage films, nostalgia websites and contemporary consumers. *Consumption Markets & Culture*, 17:2, 120-142. DOI:<https://doi.org/10.1080/10253866.2013.776305>
- [6] Xue Haian. 2017. On design and nostalgia: from the perspectives of culture, experience and design strategy. Ph.D. Dissertation. Aalto University. Espoo.
- [7] Jun Wei, Xuan Wang, Roshan Lalintha Peiris, Yongsoon Choi, Xavier Roman Martinez, Remi Tache, Jeffrey Tzu Kwan Valino Koh, Veronica Halupka, and Adrian David Cheok. 2011. CoDine: an interactive multi-sensory system for remote dining. In *Proceedings of the 13th international conference on Ubiquitous computing*, September 17-21, 2011, Beijing, China. ACM Inc., New York, NY, 21–30. DOI:<https://doi.org/10.1145/2030112.2030116>
- [8] Hooman Aghaebrahimi Samani, Rahul Parsani, Lenis Tejada Rodriguez, Elham Saadatian, Kumudu Harshadeva Dissanayake, and Adrian David Cheok. 2012. Kissenger: design of a kiss transmission device. In *Proceedings of the Designing Interactive Systems Conference*, June 11-15, 2012, Newcastle Upon Tyne United Kingdom. ACM Inc., New York, NY, 48–57. DOI:<https://doi.org/10.1145/2317956.2317965>
- [9] Nima Motamedi. 2007. Keep in touch: a tactile-vision intimate interface. In *Proceedings of the 1st international conference on Tangible and embedded interaction (TEI '07)*, February 15 - 17, 2007, Baton Rouge Louisiana. ACM Inc., New York, NY, USA, 21–22. DOI:<https://doi.org/10.1145/1226969.1226974>
- [10] Jonna Häkkinen, Hong Li, Saara Koskinen, and Ashley Colley. 2018. Connected Candles as Peripheral Emotional User Interface. In *Proceedings of the 17th International Conference on Mobile and Ubiquitous Multimedia (MUM 2018)*, November 25 - 28, 2018, Cairo, Egypt. ACM Inc., New York, NY, USA, 327–333. DOI:<https://doi.org/10.1145/3282894.3282909>
- [11] Hong Li, Jonna Häkkinen, and Kaisa Väänänen. 2018. Review of unconventional user interfaces for emotional communication between long-distance partners. In *Proceedings of the 20th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '18)*, September 3 - 6, 2018, Barcelona, Spain. ACM Inc., New York, NY, USA, Article 18, 1–10. DOI:<https://doi.org/10.1145/3229434.3229467>
- [12] Daniel Gooch and Leon Watts. 2011. A design framework for mediated personal relationship devices. In *Proceedings of the 25th BCS Conference on Human-Computer Interaction (BCS-HCI '11)*, July 4 - 8, 2011, Newcastle upon Tyne, United Kingdom. BCS Learning & Development Ltd., Swindon, GBR, 237–242.
- [13] Erin Meyer. 2016. *The culture map: Decoding how people think, lead, and get things done across cultures*. PublicAffairs. New York, NY.
- [14] Susan Stewart. 1992. *On longing: Narratives of the miniature, the gigantic, the souvenir, the collection*. Duke University Press. Durham, North Carolina, USA.
- [15] Crystal Jiang Li and Hancock, Jeffrey T. 2013. Absence makes the communication grow fonder: geographic separation, interpersonal media, and intimacy in dating relationships. *Journal of Communication*. 2013, Vol. 63, No. 3, 556-577. DOI:<https://doi.org/10.1111/jcom.12029>
- [16] Dominik Schrey. 2014. *Analogue Nostalgia and the Aesthetics of Digital Remediation. Media and Nostalgia*. Palgrave Macmillan Memory Studies. 27-38. Palgrave Macmillan, London. DOI:https://doi.org/10.1057/9781137375889_2
- [17] Laura U Marks. 2002. *Touch: Sensuous theory and multisensory media*. University of Minnesota Press. South Minneapolis.