Postal letters in digital era

How could digital tech help better convey &
preserve the value of postal letters?

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INTRODUCTION

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0. The fading of postal letter in digital world

The history of sending messages by letter can be traced back to the early civilizations of mankind like ancient India, ancient Egypt, and Sumer. In ancient times, people wrote letters on a variety of materials including metal, lead, wax-coated wooden tablets, pottery fragments, animal skin, and papyrus, while in modern times, handwriting and typing have become the mainstream methods of letter writing.
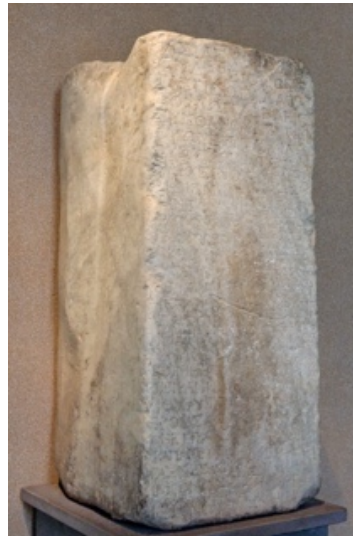
Figure 1 Letter of Darius the Great to Gadatas, circa 500 BC (Source: Wikipedia)

Letters have played many roles in history. It is the most basic private communication channel, a public media for delivering news, a literature for written expression, and a window for people to connect with the world. For centuries, letters were the primary form of personal and business communication, before the telegraph, the telephone, and the Internet diminished their primacy.

However, over the past two decades, the number of postal letters has declined dramatically, showing a disturbing trend. Data from the United States Postal Service (2018) indicates an evident and continuous decline in the volume of the First-Class mail over the past decade, which reached its minimum number in 2017, 59.6 billions of pieces. Although the decline started to slow down, it has steadily reduced from 2014 to 2017 even in each quarter.
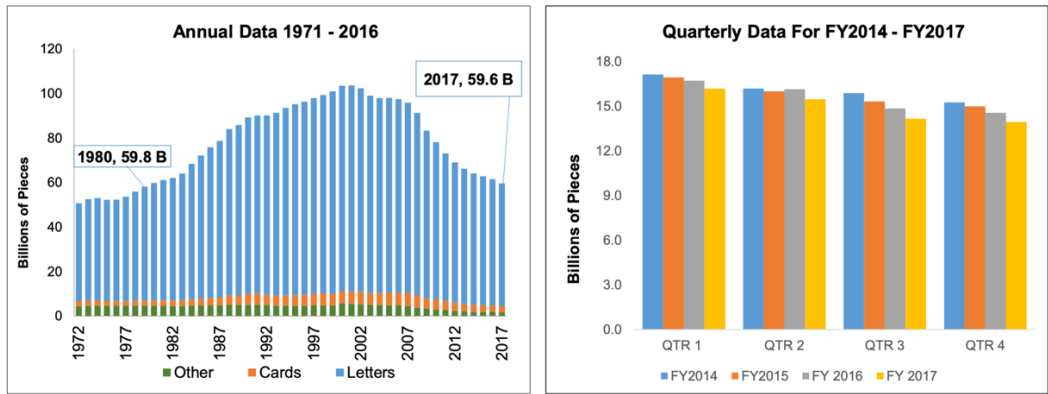
Figure 2 First-Class Mail Volume Trends (Sources: Left: OIG analysis of RCF Economics and Financial Consulting, analysis of U.S. Postal Service, Household Diary Survey (HDS) reports, FY 2001 to 2016. Right: U.S. Postal Service, Revenue, Pieces, and Weight Reports, FY 2014 – FY 2017.)

A further breakdown of the data shows that this substantial decline is largely attributable to the fact that less families have continued using postal letter to maintain personal correspondence. From 2001 to 2016, the correspondence between households and other households dropped more than 60%. In the past 15 years when electronic devices are gradually prospering, the instant communication, including telephone, email and immediate message, has been a more effective replacement for physical letter when the parties involved have a more personal relationship, as is usually the case with household-to-household correspondence (Office of Inspector general 2018).

Correspondence Between Households and	2001	2006	2011	2016	2001–2016 % change
Other Households	7.1	6.2	3.5	2.8	-61%
Businesses*	13.1	12.1	10.9	10.6	-19%
Government	2.4	2.3	2.5	2.5	4%
Total Household Correspondence	**22.7**	**20.7**	**16.9**	**15.9**	**-30%**

Figure 3 Correspondence Sent and Received Between Households, Businesses, and the Government (Source: OIG analysis of RCF Economics and Financial Consulting, analysis of U.S. Postal Service, Household Diary Survey (HDS) reports, FY 2001 to 2016)

The electronic diversion has also had a stronger effect on letter usage among young people. The data illustrates that households headed by someone aged 65 or older sent and received an average of 1.6 letters per week in 2016, almost double the amount of households headed by someone aged 25 to 34. The Younger generation who has

grown up with electronic alternatives such as email and texting may never even use postal letter for personal communication, which phenomenon is regrettably known 'death of the letter'.

Pieces per Week

6
5
4
3
2
1
0

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

—— 65+ —— 55 - 64 —— 45 - 54 —— 35- 44 —— 25 - 34
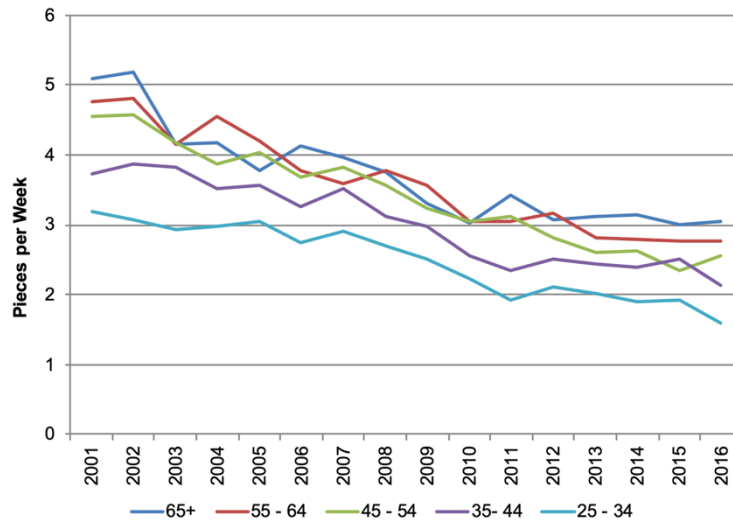
Figure 4 Correspondence Mail Sent and Received per Week by Age of Household Head (Source: OIG analysis of RCF Economics and Financial Consulting, analysis of U.S. Postal Service, Household Diary Survey (HDS) reports, FY 2001 to 2016.)

Instant message has superseded traditional letters with its character of immediacy, in the form of synchronous communication instead of the asynchronous one. As Stanley (2015) summarized, the compression of time/space occurs as a fundamental change in digital forms of communication. Since everything happens online, it leads to the immateriality of correspondence, with absolutely the absence of artificial traces such as handwriting. And therefore, the instant message is seen as lacking warmth, sincerity, and touching moments. Although the traditional letter has been ridiculously called "snail mail" (Henkin 2008), which seems so slow, so heavy, and so material by current technological standards, the sense of anticipation and intimacy brought by postal letters has always held an important place in people's hearts. The presence brought by physical personal letters cannot be ignored for its emotional and spiritual support.

Therefore, under the circumstance that digital media is destined to continue to grow wildly, how to take good advantages of the Internet to retain and carry forward the letter culture has become an important issue. 'New hybrid communication services' of both traditional letter mail and electronic communication service should be developed to face the new challenge.

1

THE HISTORY OF LETTER: HUMAN'S DESIRE FOR COMMUNICATION

LITERATURE REVIEW

1 The history of letter: human's desire for communication

1.1 Post a letter was a luxury

The impulse to post a letter is born out of our desire to communicate with family and friends who are far away, aimed at constructing a sense of immediacy, intimacy, and presence. Because of the correspondent's absence, the mail, as a vehicle, carries our desire to communicate and to strengthen and consolidate intimacy. In this situation, a letter incarnates absent friends and family and becomes a physical presence, bringing distant people to our sight. However, in the early days of modern postal history, sending letters was a luxury for ordinary people. The un-systematized, idiosyncratic character of the postal conditions shaped the very nature of the letter (Daybell 2012).

On the one hand, the postal network was only used for official government communications. Private letters could not be forwarded through formal postal network and people had to find their own alternative ways of sending letters. Take the UK as an example, it was until 1635 that the royal post could be opened up to private mail.

Figure 5 Royal Mail Coach circa 1804 (Source: Houghton Library, Harvard University)

When Royal Mail did not intend to deliver personal letters, people could only turn to a cheaper and more available choice, the carrier service. Daybell (2012) indicates that 'Private' letters were delivered by personal servants, entrusted to merchants and

chance travelers; conveyed by carriers and foot-posts. But such a carrier service was very complex, unstable. The delivery network constructed by carrier services is geographically uneven, meanwhile, the carrier service has a multitude of localized variations. Writers were often forced to rush through letters to catch up with a carrier who is suddenly leaving. The carrier might be robbed on the road and the letter might be lost or sent to the wrong place. Unpredictable carrier networks forced the exchange of correspondence to be delayed, or even eliminated.

On the other hand, even if there were official postal channels available for private use, the unsystematic postal network and high postage rates also discouraged people from sending letters. Since postage of sending a letter was too expensive, an interesting phenomenon that emerged in the United States was that people posted newpapers instead of letters.

Newspapers were the staple item of postal exchange from the early years of U.S. mail service (Henkin 2008). Before 1845, it was much cheaper to send a newspaper than a letter, as sending a single-sheet letter 500 miles away is almost 17 times more expensive than mailing an entire newspaper. Such staggering prices made epistolary contact a luxury, so exchanging newspapers became an affordable alternative and an obscure means for civilians to keep in touch. The newspaper could not bring information or words directly related to the sender, but people hope that it convey the messages and news of the hometown as a public medium. The topic discussed through the ink on the newspaper were highly possible to be something that both contacts are familiar with. For the recipient, part of the attraction of this newspaper is it served as a souvenir from a far-off place, evoking a memory or longing for the hometown. In addition, as an article in New Orleans Picayune suggested that posting printed newspapers provided a natural excuse for those negligent of epistolary correspondence who were too lazy to take a pen.

Although sending newspapers partially alleviated people's need for communication, the urge to write letters remains unchecked. Therefore, in the latter stage, American started to risk breaking the law, tried to hide and transmit information in newspapers, and even created complex codes for this task. By 1842, in response to the rampant public subterfuge to disguise letters as newspapers, the U.S.Post Office adopted an extremely strict interpretation of the ban on writing in printed newspapers. As Henkin (2008) explained, this rule "acknowledged the way transient papers functioned as correspondence and also pointed to the difficulties of protecting the newspaper rate against stowaways". In this process, history has witnessed the development of popular epistolary impulses of how a nation became desperate to correspond. The U.S.

post offices were newsstands, and letters were expensive guests on conveyances meant to transmit the news.

Despite the limited postal conditions, people tried to find ways to communicate as much as possible. No matter of the carrier service or the newspaper message, private letters were transported by varying methods that overlapped and co-existed with official modes of delivery. Even with the use of precarious and dangerous means of mailing, people still wanted to satisfy their natural desire to connect with distant contacts, which means the democratization and popularization of postal letter is imminent.

1.2 Democratization and Popularization of handwriting letter

After the difficult and chaotic era of mailing, various countries ushered in a new period with the democratization and popularization of letters.

The 'personal' mail has been permitted to be delivered through the royal postal system in the UK, since in July of 1635 Charles I issued a proclamation 'to settle a running post' between London and cities in England, Scotland, Wales and Ireland.
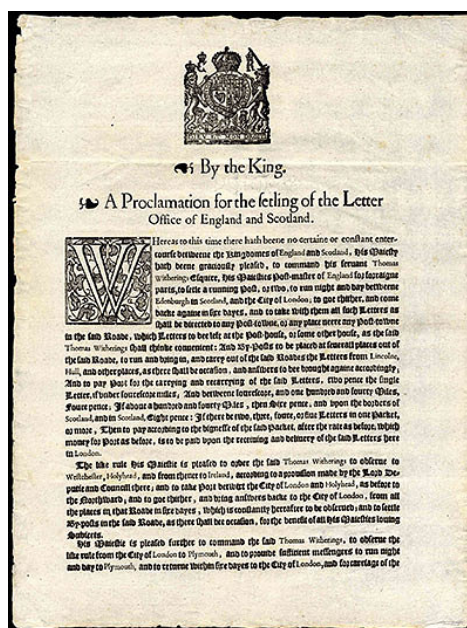
Figure 6 1635 Proclamation (Source: The British Postal Museum & Archive)

Similarly, between 1845 and 1856, the postal legislation has been amended several times in the United States to reduce the once high postage and encourage the mass participation of post. Thereafter, the primary category of mail would consist of letters—a homogeneous class of prepaid correspondence—circulating without

restriction within a postal network. Sending a letter had been transformed into a fundamentally affordable activity (Kielbowicz 1984, John 2022).

This transformation it could be argued altered the very nature of the early modern letter as the advent of a national system open to all meant that letter-writing was more secure, regularised and reliable (Daybell 2012). Since then, education and literacy rates have also gradually expanded. The skill of writing letters is not only limited to the elite, but also more widely spread to different classes who traditionally weren't involved in the high levels of literacy. In the 18th century, with the development of the postal network and transportation, and the popularization of literacy and letter-writing skills, letters were truly democratized. High-speed coaches crammed with letters and newspapers sped to every corner of the land. In Whyman's words (2009), the pen, the post and people became permanently connected to each other.

1.3 Private letters become literary works

Under the closer postal relationship, every acts of correspondence participated, constructed, and deepened letter culture. Widely shared salutations, addresses, and expressive habits gave rise to highly formulaic patterns of personal letters. In terms of format, epistolary has gradually become a special way of expression. And from the view of content, private letters are considered to reveal the true character of human beings through its privacy and intimacy, meanwhile expressing the author's thoughtful thinking about life. Henkin (2008) calls letter "repositories of the secrets of the human heart." The stylistic and content characteristics of the letters lead them to a middle ground between the public and private worlds and become a more profound literary work.
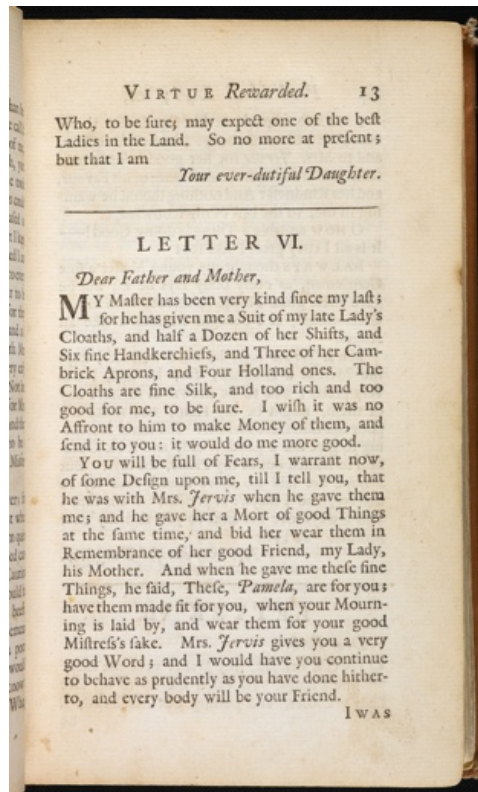
Figure 7 *Pamela* (Source: British library)

Poet Alexander Pope (1688-1744) pioneered the first comprehensive publication of his own English letters during his lifetime. Curran (2018) commented "in doing so he set a new kind of precedent for epistolary self-fashioning by authors and other famous people". Meanwhile, Letters also contributed to new narrative form – epistolary fiction. It appeared in the 17th century and reached its peak of popularity in the 18th century. Samuel Richardson (1740), the author of famous epistolary novel *Pamela,* summarized the technique of writing a novel in letters as 'writing to the moment', which relies upon 'effects involving authenticity, intimacy and immediacy' (Curran 2018). Literature in the form of letters invites readers to enter the privacy of characters and understand their unconscious motivations and desires. Furthermore, due to the exposure of the letter to the author's daily life, letters therefore have a crucial influence on the evolution of biography since letters represent authentic documents of writers and celebrities. Example of this include James Boswell's *Life of Johnson* (1791), which used letters as a way of 'interweaving what [Samuel Johnson] privately wrote, and said, and thought'.

Both letter novels and celebrity biographies declare that letters are not only a means of communication, but also the crystallization of profound thoughts. As Siegert (1999)

wrote in his book *Relays: Literature as an Epoch of the Postal System*, literary works were able to live off such communication.

1.4 The newly inclusive post: more physical enclosures

As letter-sending activities are gradually integrated into people's daily life, not only the handwritten letter itself, but also more attachments were included in the mail and sent to the correspondent. Henkin (2008) names these attachments as the tokens of physical presence, typically including money, images, and seeds.

1.4.1 Money letter as transaction

Money letter is a very common money transaction method for most Americans. In 1855, the actual amount of money remitted annually in the mails was more than one hundred million dollars. Such transactions have increased more with the spread of the postal network and the reduced price of postage. Because of the huge lure of money lurking in the mail, Letter theft was so rampant that it became such a common social phenomenon (Holborook).

Light and portable money letter helped people keep in touch with acquaintances and even establish new relationships by circulating in the postal network. These money letters not only represented the transactions of residents dealing with family affairs and personal relations, and a considerable part of them were sent by merchants, who tried to seize opportunities for market expansion and economic growth. The practice of attaching money to letters reflected and reinforced the mobility of persons, the extensive reach of commercial relations, and the increasing interconnectedness of society's disparate elements (Henkin 2008).

1.4.2 Photos and seeds embody absent contacts

While posting money was more for explicit material exchange and transaction as life necessities, the photos and agricultural sample expressed user's different fascination with the long-distance connection from the emotional perspective.

Thanks to the U.S. Postal Reform of 1845, the cost of adding a daguerreotype to a letter was reduced to nothing, and photographic portraits could travel free throughout the united states (Leonardi and Natale 2018). Thus, Daguerreotype portraits entered American life and quickly became a staple item of postal exchange (Henkin 2008), which phenomenon could be proved by thousands of remaining

daguerreotypes from The Dead Letter Office (a unit of the U.S. Postal Service tasked with finding the correct addresses for letters deemed undeliverable).

Figure 8 A panel of cartes des visites and tintypes received by the U.S. Post Office Dead Letter Office between 1861-65 (Source: Collection of George Eastman House)

The popularity of daguerreotype in mail network is based on two main reasons. First, the photo shows the gesture of personal communication. This held a powerful appeal "in a mobile and transient society concerned with preserving stable images of personal identity" (Henkin 2008). Second, these photos helped postal users to complete the further imagining of distant correspondents by visualizing and embodying the absent people. Also, mailing portraits is easier than handwriting for new postal users who are not familiar with long-distance communications, such as soldiers. As Luther (2016) wrote, during the American Civil War, thousands of young people traveled to far-flung training camps and battlefields. But many of them had only limited education experience and might never have written a letter before, while they relied much on the mail to ease their homesickness once reaching there. And the daguerreotype fulfilled the promise of these soldiers to mail letters back to absent friends and families. Iowan J.H. Williams pronounced the daguerreotype "as good as a short visit", and Mary Wingate praised the silence of the daguerreotype since it "speaks words of love to me which the rest do not understand".

In addition, Henkin listed some of the complaints people may have about portraits. For example, because the camera cannot fully restore the look or appearance, people often attach some disclaimers with the letter, like "the camera could not capture the 'roguish twinkle in her eye'" or "my friends say it looks rather older than the original". Another typical case is that photos can only convey static moments. For those who are away all year round, the inability to track changes and developments in the appearance of loved ones, is another regret caused by the daguerreotype, especially for the family with very young children.

Although the daguerreotype is read as an equivocal mix of satisfaction and frustration, it represents a broader pattern of response to mail. People's personalities are further enhanced through their own unique and recognizable images, while a clearer fantasy for correspondent is achieved through mail.

As to another interesting enclosure, agricultural samples, the most common one attached to letters were generally seeds, although a small number of flowers appeared in the letter archives.

Figure 9 Seed packet made from 1790 sermon (verso), 490 (J) Carpological Collection, Linnean Society

(Source: the Linnean Society of London)

This romantic act was performed by both men and women, "from genteel Easterners to military personnel in Mexico and rugged migrants along the overland trail" (Henkin 2008). Immigrants wandering abroad always have a special nostalgia for their hometown. The seeds brought along with the letter meant that they had the

opportunity to restore the cultivated garden of their eastern old country in new soil where they lived, to revive their memories of being at home. The familiar aroma of the flowers from these seeds is also a symbol for those who travel far, as Charles Jones appreciated it as "an index, a representative, of that atmosphere fragrant with love and tender remembrance ever cherished there."

Figure 10 Interior of seed packet made from 1790 sermon (verso) with inner packet, 490 (J) Carpological Collection, Linnean Society (Source: the Linnean Society of London)

In addition, the arrival of seeds tended to emphasize the wondrous feature of postal transmission. This feeling of amazement was evident when Henry David Thoreau received international letters. In his reply he wrote "It is hard to believe that England is so near as from your letters it appears and that this identical piece of paper has lately come all the way from there hither, begrimed with the English dust…" This kind of surprise not only contains the emotional touch caused by the relationship with the sender, but also reflects the recognition of the diversity capability of the postal network. Seeds arriving across mountains and seas represent a poetic and resonant social connection. The possibility of being sown means that after the plant is sent, it can take root and sprout in a new piece of land, and finally produces the same flowers as the original land under great expectation. A more lasting relationship therefore can be developed between sender and recipient around the plant.

Summary

The typical case of money, photos and seeds as letter attachments suggested the common awareness of the vast possibilities of material exchange around the postal

network. While money letter is a practical transaction method to build social connections, photos and seeds inside the mail express a different fascination of absent correspondent's traces. These items tend to perform as a vehicle or medium. They carry people's desire to strengthen and consolidate intimacy, to acquire additional story and memory besides the handwriting letter.

During this trend of increasing various attachments, the postal letter, which was only the communication for official correspondence, became a window for the public to interact with the world. Every mailable object introduced into the daily experience of ordinary Americans by mid-century shaped the meaning of the newly inclusive post (Henkin 2008). Thus, mail includes not only the information that must circulate in dealing with public affairs, but every possible form of human contact, commerce, desire, and interdependence.

1.5 The nature of letter

The history of the postal letter bears witnesses to people's strong impulse towards communication, and how this impulse change from breaking the shackles to becoming more diverse, deeper and emotional. The strong desire to communicate was suppressed in the early days by the constraints of postal conditions, but with the development of transportation technology, the increase of population mobility, and the spread of literacy, correspondence has achieved its democratization and population. At the same time, the letter culture is also expanding in both depth and breadth. In depth, the letters of writers and celebrities have gradually developed into insightful literature, meanwhile the epistolary style has created a new literary genre of the epistolary novel and laid the foundation for autobiography. In terms of breadth, the letters began to move towards the new inclusive postal service. Diverse attachments in personal letters emerge in an endless stream. People are not only satisfied with the pleasure brought by handwritten letters, but also desire to obtain richer practical value or emotional experience through different attachments as a medium.

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various attachments, the postal letter, which was only the communication for official correspondence, became a window for the public to interact with the world. In this way, every mailable object introduced into the daily experience of ordinary Americans by mid-century shaped the meaning of the newly inclusive post (Henkin 2008). Thus, mail includes not only the information that must circulate in dealing with public affairs, but every possible form of human contact, commerce, desire, and interdependence.

Although the letter's practical significance in conveying information is gradually occupied by instant communication nowadays, the physical letters shaped by the ancient and time-honored communication impulse still bring people irreplaceable intimacy and emotional value of letters. And this impulse's quality actually grows with the improvement of communication conditions. People yearn for the freedom of correspondence in the era of inability to contact, desire various attachments as mediums to create more memories and stories when letters gain democracy, and pursue higher-quality emotional value from letter along with increased communication speed. Where does the value of letters, especially emotional value, come from? The next chapter will analyze this from the aspect of letter's materiality.

2

MATERIALITY MAKES A LETTER UNIQUE

LITERATURE REVIEW

2. Materiality makes a letter unique

2.1 The variety of materiality

The "materiality" is identified as one of the key points where departs paper-based postal system from the electronic mail (Milne 2003). The 'material mediation' costs more intensive labor (Stratton 1997), and such labor leaves traces on the letter and leads to its individualized quality.

The materiality of letters represents infinite possibilities for personalization, which can be realized by various materials and tools. During the writing and mailing process, this diversity created the epistolary culture and art, offering opportunities for correspondents to add personal imprints on their unique expressions. Writing letters requires "proficiency in a range of materials and tools, as well as a range of practices that vary by social status and context" (Daybell 2012). Whether it is the stationery, ink, and pens for writing letters, or the envelopes, stamps, and sealing wax to for posting, people need to conduct subjective choices on them. And this kind of choice become broader with the development of technology.

Take letter paper as an example, in the early days, paper was expensive, and its price varied according to quality, type, and size. This made the economical use and recycling of paper a common phenomenon. Even the bottom or back of a letter was used to draft responses. With the development of printing and paper making, the papers became common available. But people were no longer satisfied with just seeing the text on the paper. Curious family and friends also wanted to gain visual access to the environment in which the correspondent lived. As a result, many pictorial stationeries and illustrated envelopes came into being.

The most representative type of pictorial stationery appeared in the United States during the California Gold Rush in the 1850s. Baird (1967) suggested the pictorial stationeries were sold in enormous quantities throughout the 1850s, and they "remain the major surviving visual account of California in that era". Much of the stationery depicted typical life in California, including the images of miners, natural beauty about California's flora and fauna, port spectacles full of cruise ships, and so on.

Figure 11 California Gold Rush Illustrated Letter Sheet

In terms of writing space, these letters were almost completely covered with images on at least one side, leaving little room for long letters, which is a good thing for those who are not good at writing letters as "it helps to fill out the sheet & thereby save the trouble of writing long letters". The use of many illustrated stationeries in the 1850s already indicated a strong postal impulse for image and visual access. In addition to the theme of immigrants' life, Civil War led to the emerging of illustrated envelopes celebrating the Northern cause bore mottos, pictures of Union commanders, and various patriotic images, which "amounted to a mass patriotic expression" and "became… a phenomenon of the times", as Benjamin Lossing noted.

The illustrated stationery sold, bought, and mailed can be considered early postcard models, although it was only in the 20th century that truly visual postcards are frequently exchanged in the postal network.
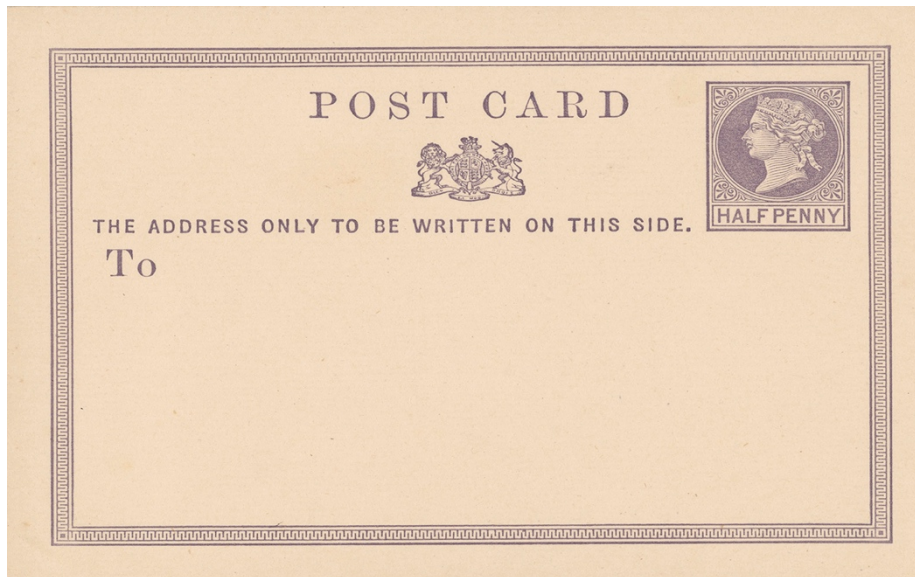
Figure 12 Britain's first Official Post Card with a printed stamp (1870) (Source: The Postal Museum)

The character distinguishing postcards from other sheets as post material is that it breaks the shackles of the fixed letter-writing formula along with epistolary culture, allowing people to write letters with a more relaxed attitude. The essence of early postcard innovation was its cheap price, compact size, and ease of messaging. It provides a built-in excuse for being brief, in other words, it "justifies, from the outside, by means of the borders, the indigence of the discourse". The popularity of postcards means the bar for mail exchange is further lowering.
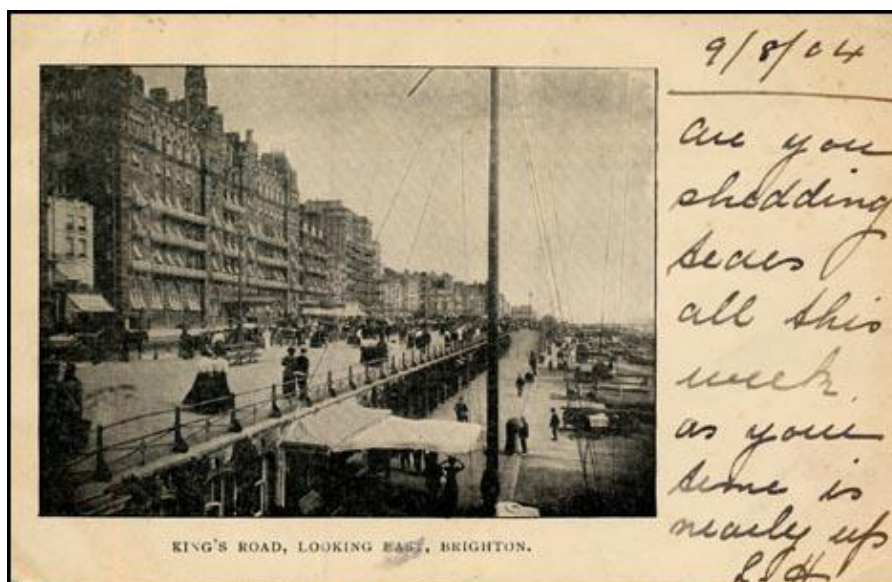
Figure 13 Picture postcard of Brighton's King's Road, looking east. (Source: Brighton Photographers Part 6: Seaside Photography - The Picture Postcard 2003)

The choice of plain letter paper reflects a focus on the pure language expression, while selecting imaged stationery conveys a specific visual intent, and choosing postcards means that short messages will convey a more relaxed and casual greeting through a semi-public medium. From paper to pens, ink, envelopes, stamps and sealing wax, the diversity of materials means that people need to make choices when writing letters, while these choices themselves are often related to personal consciousness, aesthetics, and life experiences. At the same time, how these selected materials are used is another way of expressing personal uniqueness. The gesture of writing the letter, the quality of the paper, the way of writing, the size and position of the space all affect the flow of ink on the page, thereby produce different calligraphic effects. These writing materials and handwriting combined with delicate stamps, sealing waxes and stamps make letters a delicate art, then delivered to the recipient with a personalized personal trace.

2.2 Letter carries traces

2.2.1 Human's obsession with other's traces

The materiality of the letter allows it to carry people's traces in the form of a physical medium. And such traces are fascinating since the changeable traces enabling multi-sensory communication broadens the variety of letter's emotional experience.

On the one hand, traces allow multisensory communication. Letters often evoke emotions through touch, sight, and even smell, which manifested as touchable paper and handwriting, licking of stamps, and the texture and aroma of all these materials. Margaretta Jolly (2017) approves the term "sensory literacies" proposed by Kathy Mills (2017), which emphasizes sensory perception constitutes the primordial channel where a person acquires knowledge about the material world. Jolly (2017) therefore credits the fascinating aspect of postal letters for human's fetishizability on traces of another's presence. Letter reinforces the multi-sensory traces of the human body's involvement through its physical form, which makes this traditional communication method valuable. Within the process of writing, posting, receiving, and reading, bodily interaction with postal material, whether an envelope, paper or appendence, surrounds human's response for communication. The sensory communication based on the personal traces, especially the tactile experience and visual effects, realizes people's closeness to the distant correspondents. Hence, in this flat space shaped by letters, people could feel a sense of double intimacy both physically and psychologically.

Figure 14 Episode 183 (Source: Dead Letter Office)

On the other hand, such traces may change. This change comes from both the natural environment's influence on material's physical properties, and the new artificial traces created by the recipient's interaction. The paper may age and signatures may fade, while the recipient may crumple the paper or leave fingerprints. The changes that age has brought to the letter make it more valuable, as it may die. This possibility makes people cherish the letter and the labor meaning behind it. At the same time, new traces added by the recipient also made the letter thus became a communication channel with unique memories of both parties.

2.2.2 Body and environment traces evoke senses of presence and intimacy

A defining feature of epistolary discourse is to achieve an imaginary sense of intimacy through the construction of epistolary presence. And the mention of physical body, the scene of writing, and the material conditions of the postal service are the main methods to convey and invoke this sense.

Esther Milne (2003) suggests presence is an effect achieved in communication when interlocutors imagine the psychological or, sometimes, physical presence of the other. Letter, defined as a kind of intimate conversation, is an effective medium for realizing presence. A clear fact of letter communication is contacts are separated in physical space. In the other words, there exists physical absence, which offers impetus and material for creating imagination. Absence leads to the asynchronous communication and therefore creates a free, blank, and creative opportunity to talk. Milne (2003)

suggests it opens a discursive space in which desires and subjectivities that might not otherwise be articulated can be explored. This space enables people to construct "an imaginary, incorporeal body" for correspondents in the process of exchanging letters. According to David Presley (2001), a letter promises the opportunity for "souls" to "escape" the biological constraints of gender. In this case, our body, or biological camouflage, is removed and only the imaginary body exists.

By referring to the corporeal body and material conditions in the letter (including the scene of writing, the place where the letter is received, postal technology like vehicle and service and so on), the absent correspondent become "visible". Similarly, the materiality of the letter, such as the trace of handwriting or the paper, which was touched by correspondent, is made to stand for the correspondent's body. On the one hand, these physical traces as signifiers of "embodiment", proof that the fleshly body of the epistolary author is "present" at the time of writing (Milne 2003). On the other hand, the body involvement has an individualized quality since the traces represent a very personal identity and memory. All of these helps to construct the fantasized body to realize a deeper and more free conversation.

2.2.3 Handwritten signature and its legal capacity

Within epistolary practice, handwriting signature is irreplaceable for its legal capacity, since only this physical form can carry legally valid handwriting signature and move worldwide. Up to now, official documents are still sent by post, rather than being superseded directly by the faster electronic form. This phenomenon reflects an important fact, that only the handwriting signature on the physical letter can be legally used to represent personal identity and volition, instead of the electronic one. Letters have been a normative and routinized genre in modern society for hundreds of years, during which time personal signatures in letters have been used as legitimized identifiers as DNA, facilitating countless business dealings. Signature as an irreducible and inalienable marker of identity persists in an era of digital remediation (Grusin 2006).

Figure 15 Teddy Kollek's signature official letter published 10 year anniversary of Israel (Source: Ebay)

The two most important features of signatures revolve around two keywords, handwriting and memory. Handwriting is seen as inextricably linked to personal identity, and this uniqueness plays an important role in securing and empowering a person to act as a legal or brokerage agent. Thornton (1996) summed up historical understandings of the nature of handwriting in romantic and more modern senses, respectively, and suggested that the former had given way to the latter. In the traditional romantic sense, the handwriting formed by the author's writing posture and strength can reflect a person's character and temperament. In a more modern sense, signatures are already part of a person's biometrics, like fingerprints and DNA. A signature is biologically associated with one's distinct, unique identity, not merely a representation of an individual's personality, "but as an automatized guarantor of one's legal, contractual, economic agency".

On the other hand, the concepts of writing and memory have been linked since Plato's 'Phaedrus'. What the memory here emphasizes is the real personal intention represented by the signature. This intention is one of the fundamental reasons why the handwritten signature has legal effect. In contrast, the most common practical application of electronic signatures is to incorporate an image of a person's handwritten signature into a letter being processed, however this digital image is very easy to copy and alter. There is no way to be sure that the identity behind the digital signature represents oneself and whether it comes from one's true intentions. Whether the signature image was stolen, hijacked, or pirated by others is unknown. As digital images replace signatures, what it means to authorize or authenticate one's words becomes less and less clear (Grusin 2006). Therefore, in practice, although some national legislations recognize that electronic signatures are legally binding it

still doesn't have the exact same legal effect as a handwritten signature. Besides, Civelek (2015) suggests different countries have different legislation for electronic signatures, which lead to a result that an electronic signature formed under the laws of one country may not be recognized by another. Hence, postal letters carrying handwritten signatures have always dominated formal trade exchanges and official document communications.

2.3 Physical letters can reach the place without internet

To the groups who rely little on the internet and are socially isolated, traditional physical letter help them make new social connections as a social practice. A charitable incorporated organization in the UK named SCCCC has launched a campaign called Pen pal Scheme, inviting people as volunteers to become pen pals with the vulnerable and isolated seniors to send them postcards or handwritten letters. This scheme connected the elderly with others to lessen stress and anxiety, build stronger relationships and cure the isolated feeling.
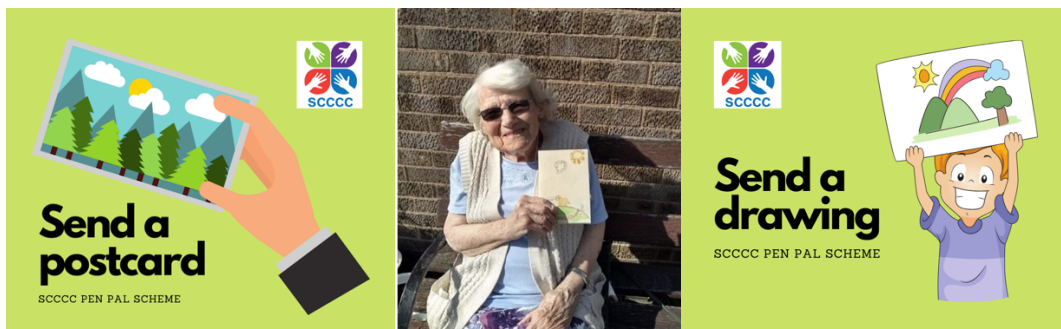

Figure 16 Poster and picture from SCCCC pen pal scheme (Source: SCCCC website)

In addition, another typical case is the pen pal scheme for prisoners. Janet Maybin (2000) conducted a research on the prisoners about their experience of the pen friend correspondence through lifeLines, which is an organization that puts potential British pen friends in touch with prisoners on death row over 1,500 members.
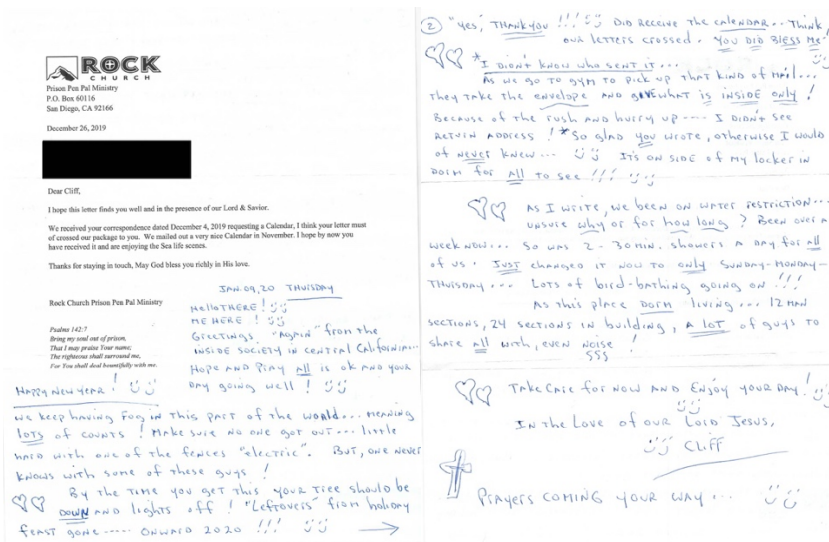
Figure 17 Letter from Rock Church Prison Pen Pal Ministry (Source: Rock Church website)

For these prisoners, writing letters is an important solace in their poor and lonely prison life, helping them ease their sense of social isolation. The correspondence with outside allows prisoners to take on different roles towards their different correspondent, within the channel of the letter. Maybin (2000) quotes a letter from one prisoner "I've found myself being an adviser, counsellor, marriage consultant, religious instructor, brother, friend, lover, editor, writer, poet". The wide range of contacts brought by the stationery help prisoners gain alternative access to the ordinary experiences of the outside world, reaching rural pastoral and natural landscapes they could not see for years. This brings great novelty and comfort to those who cannot be free. This kind of comfort also provides prisoners with the emotional support they need. Prison life itself deprives people of the right to move freely, which makes people feel that they have lost their self-esteem and their own identity. People locked up in cells can't help but wonder if they could love and be loved, and writing letters helps people reclaim this lost identity and reassures them of their own existence, as "it enabled them to express, and receive validation of, personal feelings that had long been buried". Maybin argues that letter writing is a major channel for the expression of certain moral and human attributes which are essential to the prisoner's retention or recovery of their sense of being a person. Letter communication provides an extrinsic, illuminating dialogue that reflects part of people's minds, which enables people constantly negotiate and reassess who we are in the course of our conversations (Harre 1984, Shotter 1993). Letters reinforce each person's inner identity, and this reinforcement also makes people once again have the courage and strength to face themselves, face a new pen pal relationship, and face the external world represented behind the letter.

2.4 Collection and archive value

Letter's character of materiality also contributes to its collection and research value. Letters are collected by individuals because they carry private life, intimate emotions, business, or legal information. And from a macro perspective, the letter archives of an era are the crystallization of the social and historical products at that time. The archive of postal letters offers a way for scholars and historian to explore history.

Figure 18 Four bundles of documents relating to the Senatus Academicus, where the letter from Jex-Blake was found. (Source: Box D of St Andrews archive UYUY459)

On a personal level, the main reasons motivated individuals, or families to keep letters is the sentimental wish to treasure memories. Most personal communications are memorable for their intimacy. Family letters have been preserved and handed down as a habit. For some postal users, their pre-set audience for private letters extends beyond the recipient to their future generations. Henkin (2008) cited the letter of a woman named Theodore Tilton, who confessed a desire to save her letters in order to show future grandchildren "how much their grandfather and grandmother loved one another in the olden time." Over the centuries, collections of family letters were passed from one generation to the next, as with titles and land. And this habit is exacerbated by the popularity of collecting autographs or signatures of famous letter-writers. Not to mention that the spread of stamps caused another wave of collections.

Differently, Merchants or officials keep letter for their concerns about the legitimacy of the letter and their value as business. Preserving copy of the letter both received and sent can ensure these contents can become proof of agreement. Nowadays, proper letter ordering and sorting is even seen as an integral part of an efficient business enterprise.

Apart from letter's meaning to individual, from a broader view, the systematic preservation of letters forms precious age archive, enabling further study and research. Daybell uses the world "afterlife" to describe the preserved and handed down letters. Countless letters have been dismantled and scattered over time and space into libraries, repositories, private homes, and individuals around the world. When people review these letter archives again, they can travel through time and space and glimpse the world of the past. The analysis of the contents of letters allows people to understand the previous language expressions, people's lives and thoughts, and even to discover more classic literature in the form of letter from famous writers. The examination of letter's paper, chain-lines, watermarks, ink, and quality or size of paper, on the other hand, truly reflects the level of past social and material conditions through material forms. The letter thus became a kind of corroboration of social documentary. These archives have recorded countless histories as physical evidence and become a window for people to study history.

Figure 19 The digital archive from Leiden University Libraries

3

# FROM POSTAL LETTER TO DIGITAL COMMUNICATION

LITERATURE REVIEW

3. From postal letter to digital communication

3.1 Existing forms of online communication

In recent decades, the Internet has become the worldwide communications hub for data, changing the way of correspondence. Different methods and tools of online communication offer users great flexibility.

Email service represented by Gmail and Microsoft Outlook can be counted as the earliest form of online communication. The sender and recipient communicate via an online interface while the emails are exchanged through the server. The popularity of e-mail in public communications area has greatly improved transmission efficiency, which also leads to its being blamed for the decline of postal services around the world.

Compared to email, instant message (IM) is a less formal and more casual way of contacting people. This type of online chat allowing real-time text transmission over the internet using push technology. Nowadays, more features and other new communication methods such as Voice over IP (VOIP) or video chat are also involved in these app, with typical example of WhatsApp and Telegram.
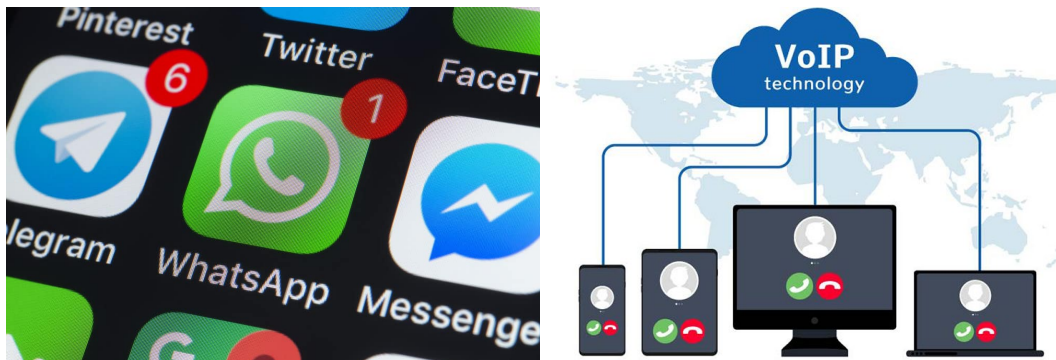
Figure 20 Instant message platforms and VoIP technology

In addition to the main contact methods of email and instant message, other popular ways of online communication have their own advantages in vertical fields. Social networks typically represented by Twitter, Facebook, and Instagram emphasize social connections for user interests, life updates, and news. Online forums allow users to interact and debating with each other by posting messages on the same trail of messages. Interactive white boards are famous tools for educational online communication, which helps user to draw, write and communicate with a simulated interface of whiteboard.
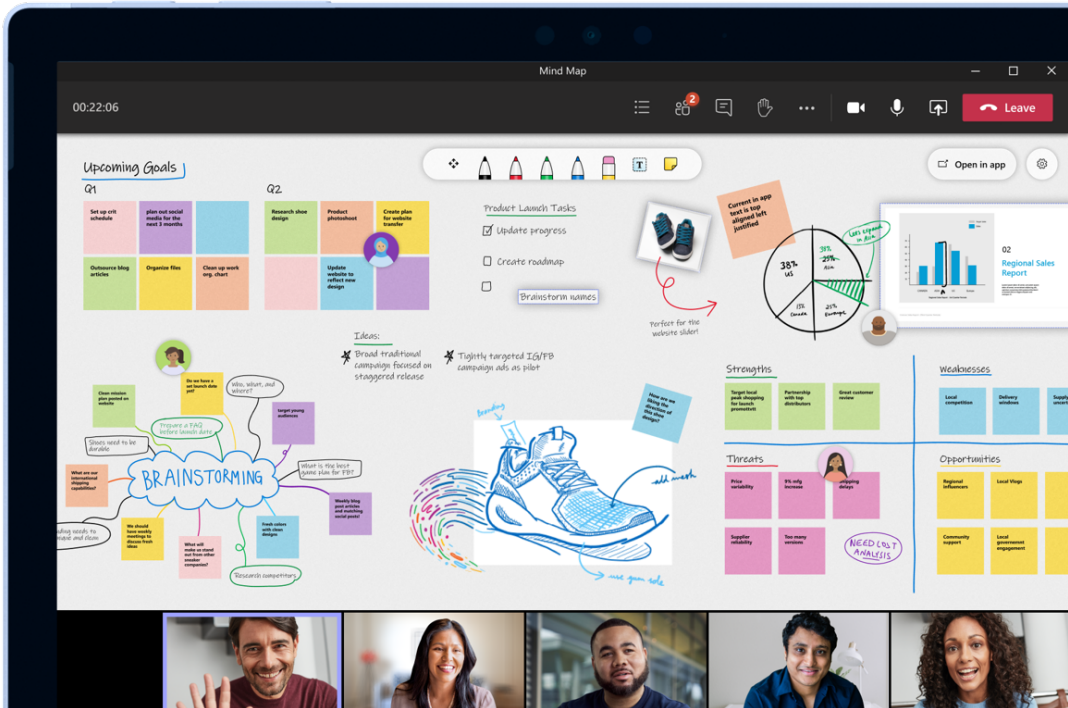
Figure 21 Microsoft whiteboard

Online communication has become an effective and convenient way of long-distance communication (Bang et al. 2014). The new concepts of mobile campaign are concluded by Myerson (2001) as sheer scale of interconnection and individual freedom. A direct manifestation of such freedom is that people can send a large amount of information unconstrained with less labor intensiveness than postal age (Stratton 1997). Personal freedom can be understood as the material barriers that people strive to get rid of when communicating, that is, a sense of overcoming the limitations of space and time.

3.2 Digital contact compared with postal letter

3.2.1 From Asynchronous to Synchronous: Space-Time Compression

The fundamental change occurring in digital forms of communication is time/space compressions. In traditional mail communication, physical absence definitely creates a temporal interval between someone's writing and another's receiving and reading. However, advances in technology allows transmitting information in a much quicker way. New digital forms of communication such as text, 'instant' messaging and push email are characterized by their immediacy (Milne, 2010). Compared with the time-consuming and asynchronous characteristics of snail mail, some scholars equate the

technological breakthrough immediacy with "synchronous". Haggis and Holmes (2011) suggest the temporal rhythms of epistolary exchanges have been dissolved (become synchronous) because rendered so short as to be effectively instantaneous.

Figure 22 Instant message

However, Stanley (2015) argues 'very quick' is not the same as, and in such arguments is mistaken for, instant and synchronous. She affirms the space-time compression involved in message transmitting, but also proposed time/space dissolution is not existing. What is certain, however, is that global communication networks do reframe people's experience of time and space. As a result of the rapid flow of data through digital information systems, distance appears to shrink and time seems to collapse (Milne 2010).

Instant message repairs the disjunction between authors and their discourse, also leading to a most common phenomenon, where people have to quickly respond back and forth to each other's message like a game of ping pong. Not only do writers need to focus on the describing of their own ideas, but they also need to discuss the contact's reaction and subsequently conversations. The massive exchange of information keeps people occupied with the newest messages or emails. And what was talked about in the past often becomes an outdated artifact, which is also doomed to the ephemerality of each message in digital world.

3.2.2 The instant nature weakens the serious aspects of communication

Communication mediated with digital technology makes people easier to contact with others, however it also "predominantly focus on quick information delivery" (Bang et al. 2014) and lacks the value of a serious interchange.

The Internet's increased speed of information transfer has made people too accustomed to get everything without waiting to maximum efficiency. Yet this instant nature also reflects a loss of value, and many scholars criticize it weakens the serious and deeper aspects of communication. Chomsky (2011) suggested "It erodes normal human relations. It makes them more superficial, shallow, evanescent". While someone else even suggested that online communication is killing literature.

In comparison, letters offer a quieter, more reflective experience, free of the ads and pop-ups of the internet world. Its materiality destinate to taking more labor and time, which contributes to the added value both emotional and literary. The survey from Citipost (2016) indicates printed words are more cognitively engaging than electronic ones, while the latter one is usually regarded as 'impersonality and lack of life' (Milne 2010). Emails cannot offer the experience as if the writer's own words are jumping off the page. It feels so much more personal to receive just one letter from someone than to receive the hundreds of messages every week.

Thus, while technology is reconfiguring our lives, the deeper sense of communication represented by the letters still 'plays a fundamental role in human evolution' Myerson (2001).

3.2.3 Diversified forms of media enrich online expressivity

Although the material aspects of letters are now eroded by the digital medium, other forms of expressivity are blossoming in email (Danet 2020). With the lack of materiality, more multimedia forms are used to facilitate communication and "embody" the writer.

Various forms of media are combined together to present the information, and more interactions are included in such features. Apart from text communication, image, audio, and video communication become common methods of contact. As "nonverbal cues", they offer valuable information such as tone and context which are helpful in "conveying the missing communicative datapoints" (Loglia 2016). The audio displays the voice inflection and volume level. Facial expressions, hand gestures, and body language could be conveyed dynamically through pictures and videos. Also, Emoticons are designed to express feelings.

Such multimedia communication therefore brings a new playfulness in digital writing and replaces the formal and restrictive nature of epistolary communication (Danet 2020). Online communication enriches people's sensory experience on sight, hearing, and even touch and makes communication more interactive and attractive. This is also a main advantage brought by internet apart from the speed of information transmission.

3.2.4 Immateriality and lack of collections

Although digital communication utilizes a variety of medias and expands the possibility of expressivity, it still lacks a physical material form. This lack makes it impossible for users to directly convey body traces through the interaction with a mobile phone or computer screen. Coupled with the fact that the instant and frequent exchange of information weakens the serious and deeper value of the conversation, personal online communication is rarely preserved and collected.

Firstly, the character of digital communication determines that internet users won't care its value so as to collect it. Emails or messages are one-time information once they are read, overwritten, or moved to trash. The messages may be deleted, but not necessarily obliterated or destroyed. To some extent it means the digital communication is more "durable" compared to material mediums. With the absence of physical medium, information in bytes won't naturally disappear, just being buried in a lot of outdated information. Humans' limited energy cannot cope with overloaded information, which determines that users will not take the initiative to deal with spam information. Thus, both the instant nature and durable quality of digital communication make the presence of digital information ignored, and the internet users have no intention to collect these digital traces. In the era of digital information surging, the next screen a user enters means that the previous message's life has come to an end, while this message has no afterlife in the form of archive or collection like a physical letter. As Breen (2002) suggests "You can't keep the email, unless you print it out but it looks very uninteresting printed out".
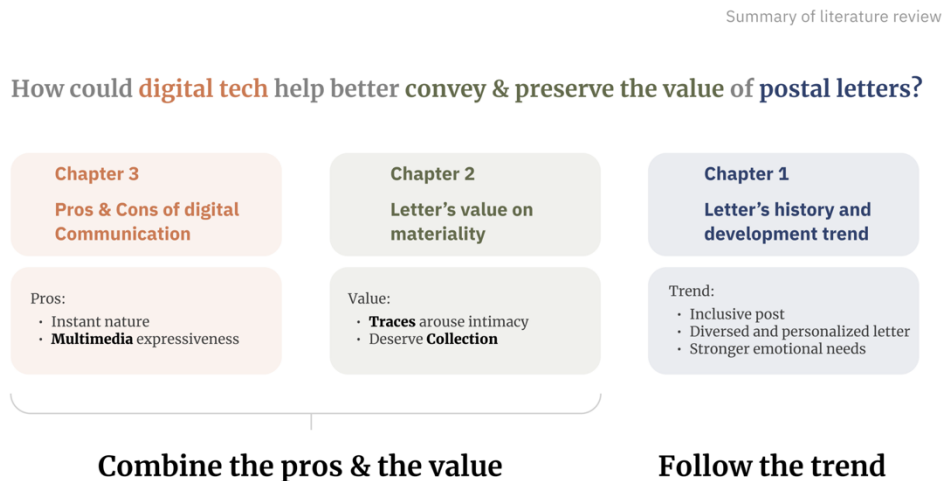
In contrast, the materiality of letters in the real world keeps them occupying a specific space. This presence reminds the recipient to re-read, collect, and deliver it. The collection of letters, in turn, could be bought, circulated, and traded, becoming a material for researchers to study history.

Secondly, although the current email system has features related to archives and collections, and different tags and folders allow users to add important content to

favorites, this function still cannot affect the user's attitude towards the value of online messages, nor can it cultivate the user habit of collecting chat history.

3.3 Summary of Literature review

Above all, the literature review part explains and responds to the questions that this thesis attempts to address: How could digital tech help better convey & preserve the value of postal letters?

How could digital tech help better convey & preserve the value of postal letters?

Chapter 3	Chapter 2	Chapter 1
Pros & Cons of digital Communication	**Letter's value on materiality**	**Letter's history and development trend**
Pros: · Instant nature · **Multimedia** expressiveness	Value: · **Traces** arouse intimacy · Deserve **Collection**	Trend: · Inclusive post · Diversed and personalized letter · Stronger emotional needs

Combine the pros & the value   **Follow the trend**

Figure 23 The structure of literature review

As the pictures displays, this question could be decomposed into three key words, and the literature review of the first three chapters is also developed around them.

The first chapter reviews the postal history, which witnesses posting private letter changes from unavailable to its democratization to the common people. The process also exposed people's growing desire to communicate, as craving for connection is a human instinct. At the same time, letters have developed both in breadth of form and depth of content, moving towards a more diverse and personalized direction. From the perspective of form, the materiality of letters enables the creations of rich letter types, attachments, and regarding stationeries. From the view of depth, the literary and ideological depth of the letters have gradually increased, from which epistolary was created as a new literary genre.

From the perspective of letter's materiality, the second chapter focuses on analyzing the value that letters bring to people. Materiality allows diverse letters to carry traces of the writer. These mutable traces allow people to sense the presence of others in a multisensory way. Specifically, traces related to the writer's body and environmental

conditions can evoke great sense of intimacy. In addition, this chapter also illustrates the value of letters from other three aspects: the irreplaceable legal effect of handwritten signatures on physical letters, the fact that postal letters can reach places without Internet, and their collection and research significance.

Chapter three lists the current prevalent forms of digital communication and contrasts them with physical letters. Digital communication emphasizes its instant nature and synchronization, which weakens the serious aspects of communication. The frequent shallow online chat and its immateriality also result in a lack of collections for digital communication. Compared to these shortcomings, the Internet's strengths lie in that diversified forms of media enrich online expressivity.

Taken together, the development history of letters is actually moving in the direction of diversification and personalization. People value the traces of contacts brought by the materiality of letters, which contributes to its solid and irreplaceable position on emotional, literary, and collectible value, compared to instant communication. At the same time, the multimedia expressive power of the Internet is also an important product of the times, which also makes the current postal communication stagnant due to its influence. While Nikali (1998) suggests 'New hybrid communication services' of both traditional letter mail and electronic communication service should be developed to face the new challenge, the report from United States Postal Service also emphasizes a greater integration of traditional mail with digital technology to bring its physical product offerings into the digital age.

Therefore, a promising conclusion is that future development should combine this multimedia expressiveness of the Internet with the material value of traditional letters. As an auxiliary means, digital technology can be used to record, collect, and organize more undiscovered traces of letter writing, amplifying the intimacy and presence of physical private letters. People can build and acquire a warmer digital archive of letters while getting a better, more assured postal delivery service.

The previous literature review helped me clarify this direction, and the following section will record how I complete this project through further research and practice, and how I use my design project to test and validate my design goal.

4

DESIGN RESEARCH

DESIGN PROJECT

4. Design research

4.1 Methodology

4.1.1 Research goal and questions

After sorting out the design direction through literature research, my next research focuses on the following three aspects:

a. Traces deserve to be collected

It's necessary to make sure which traces have not been discovered and cannot be transmitted and collected by physical letters alone, and to clarify what kind of digital technologies can assist in recording these contents. The questionnaire will be used to collect the answers directly, meanwhile, also to understand user's habit when they post letters.

b. What are the existing services related to digital mailing on current market, and what are their advantages and disadvantages?

The desk research mainly focuses on this question. While the previous chapters has discussed and mentioned the trend of mailing service from the academic view, referring to the reports, articles, papers, and books, a more specific and targeted research is needed to overview market products. Therefore, the competitive analysis and benching marking will be done to solve this problem.

c. What are the opinions of users on the existing mailing services?

The attitude of users could be detected both directly or indirectly. Questionnaire could be used to collect the subjective opinions of the interviewees, while digital ethnography could offer a sideview. By scraping the data people left on the internet, more detailed information could be exposed.

4.1.2 Research Plan

To solve these problems efficiently, it's necessary to plan the research methods targeting at different questions. During the process of design research, the first thing to do is conducting the competitive analysis, trying to figure out current digital services related to post letters and their categories. Then the benchmarking analysis could be

done to measure and compare the performance of these services from different dimensions, especially to find out the potential opportunity. Also, the competitive analysis will output a list of current solutions, which will become the base material for the coming research on digital ethnography.

Once the research target is selected from the solution list, digital ethnography research will be conducted following the process or scrapping, processing, and visualizing.

After the research, some initial conclusions will come out on a clearer and detailed design goal, and a field research is needed to again verify these thoughts. In order to obtain more research samples to verify the design direction, a questionnaire will be designed to understand people's views and attitudes towards physical letters, as well as their expectations for the digitalization of letters. Since the survey helps clarify user needs, the main features of the APP to be designed will therefore be settled. Then the design project could move to the process of digital interaction design, from building information architecture and design prototype, to test and iteration.

4.2 Research process and analysis of results

4.2.1 Competitive analysis

A competitive analysis is the process of identifying your competitors and evaluating their strategies to determine their strengths and weaknesses relative to your own business, product, and service (Pono 2018). According to the research, the service related to digital mailing could be classified into three main categories.

First is postal service support, focusing on assisting mainstream postal operators to complete postal transactions. Some of them are official integrated postal platform, developed by the postal operators themselves, such as PosteID from Italy, USPS MOBILE® from the USA and HK Post from Hong Kong. Users can reserve appointment, transact online and manage delivery through the Apps.
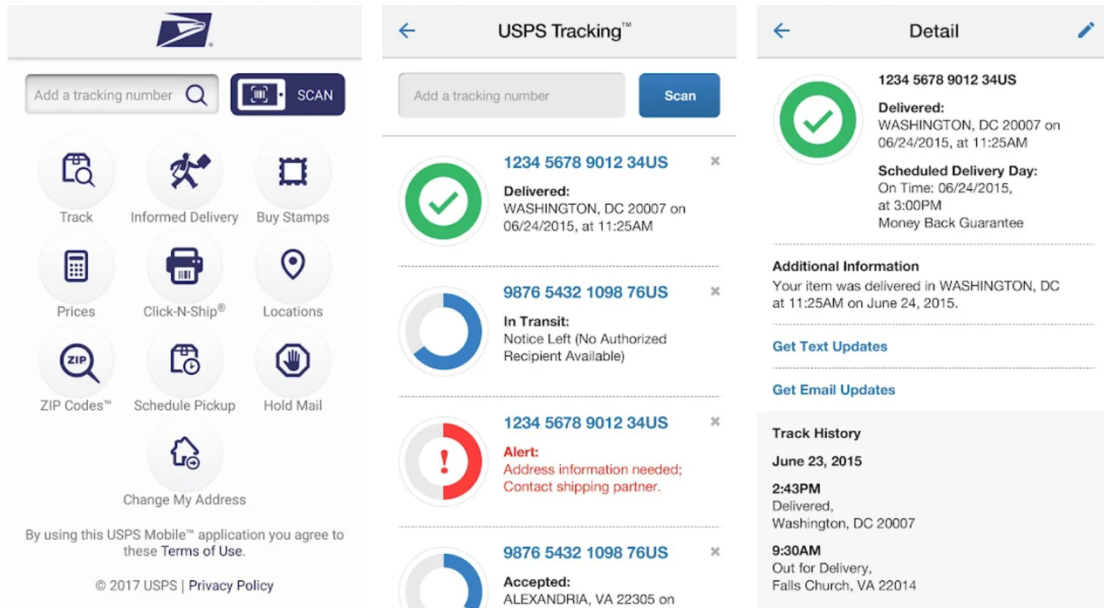
Figure 25 The interface of USPS MOBILE® (Source: Appstore)

While another typical group of apps are developed by the third party, offering postal information query. They help people calculate postage based on factors such as letter weight, mailing distance, etc. These are the typical services aimed at finishing the task of posting letters, with no extra emotional value.

Second is about finding pen pals, which involves more sentiments and interests for users. Platforms such as Slowly, VoicePenPal and Daily Postcard bring the experience of mailing in real life to the Internet. People could find pen friends and exchange virtual letter through the platform, which contributes to simulate the sense of reality and create an atmosphere for letter writing, by designing virtual stationery and stamps, extending the waiting time required for receiving letters and so on.
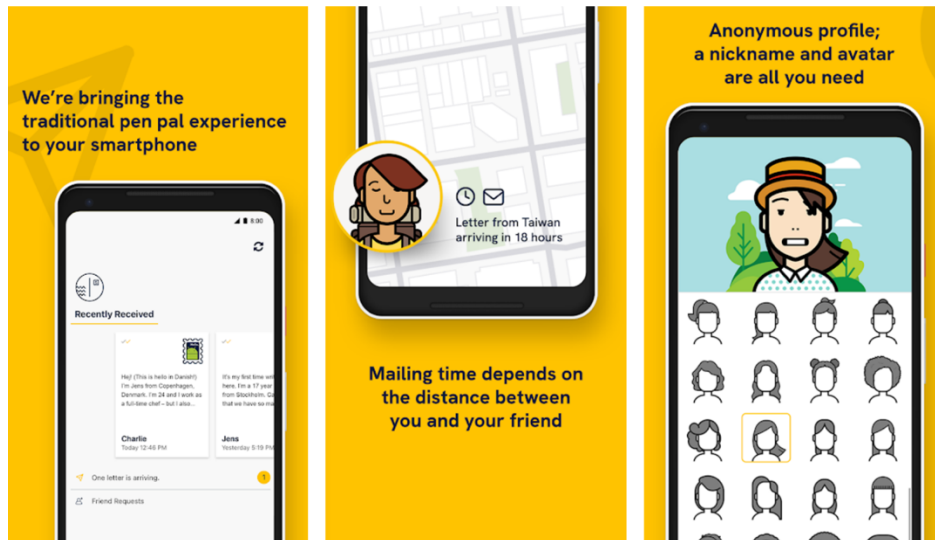
Figure 26 The Service of Slowly (Source: Appstore)

In this way, these platforms have built a community connecting pen pals and therefore received a lot of positive reviews for bringing people happiness. In contrast, platforms that can use digital technology to connect pen pals passionate about collecting physical letters is less. Postcrossing offers a place in the form of a website, where allows users to send postcards and receive postcards back from random people around the world by inventing the use of postcard ID.

The third type is an innovative design for improving the convenience and efficiency of managing physical letters.
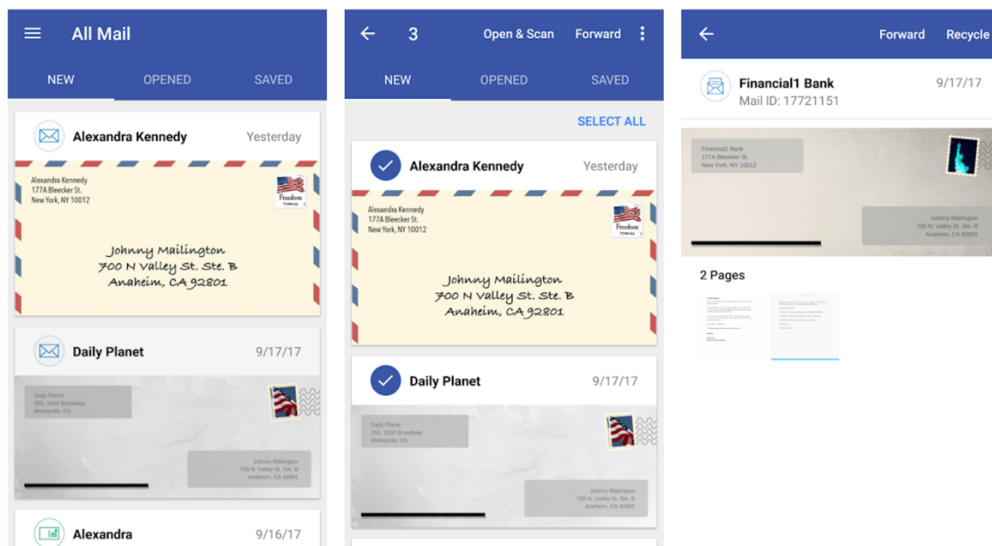
Figure 27 The Interface of PostScan mail (Source: Google Play)

Platform such as PostScan Mail and Anytime Mailbox Renter provide a software as virtual mailroom. This mailroom will scan the physical letters for its users, which allows them to control mail deliveries online, including reading, forwarding, and storing. To a certain extent, this service can be understood as mailbox hosting, which actually takes advantage of the convenience of digital technology and acts as an online filter for users' mailboxes. Such services eschew the judgment on the value of the letter and put the decision-making power in the hands of the user. It also proves that scanning paper letters is indeed a feasible step in the digitization of letters.

After figuring out current services, Benchmarking is used to measure and compare the performance on specific dimensions.
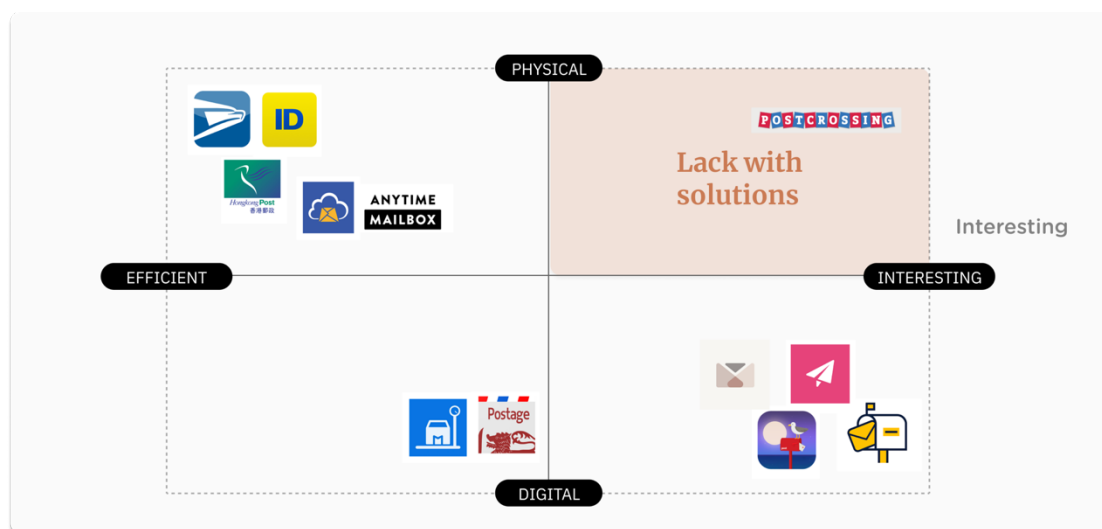
Figure 27 Benchmarking

In this case, I choose two groups of dimensions. Physical communication and digital communication are used to distinguish the service is focusing on which channel, while efficient and interesting are used to measure if the service is touching, in other words, if it is emotional or interesting enough to attract the users. The chart illustrates the distribution status of current service: Two types of products occupy the current mainstream market. One is the software that assists the transaction, delivery and receiving of physical letters for the purpose of efficiency, and the other is the online pen pal community aims at emotional entertainment. Relatively speaking, there are only very few platforms that focus on assisting the correspondence of physical letters meanwhile improving their emotional value. Since there exists such a blank, my project will focus on this aspect.

4.2.2 Digital ethnography

Considering the growing influence and presence of the Internet in ordinaries' daily lives, it's necessary to conduct the research of digital ethnography to study different forms of technologically mediated communication (Varis 2016). Regarded as representation of people's sentiment, discourse, and activities (Varisco 2019), digital content includes many aspects, including Blog posts, App reviews, Tweets, Hashtages, and so on. To study what people think about existing post service around the experience of letters and observe how people use them, proper research target needs to be chosen from them.

The investigation on digital ethnography can be divided into 4 main phases.

Figure 28 Investigation protocol of digital ethnography

First is to set the research question, making it clear the expected aim. Next phases are data collection and processing, which require to scrape all the related data, extract keywords from data, and summarize pattern from the clusters. Based on these analyses, select proper ways for data visualization and output corresponding graphs and maps as research result.

The research starts from identifying current knowledge gap. In this case, an important knowledge gap to be filled is how can the users acquire emotional value from the App? To find a practical method to solve this problem by researching, the actual research question is narrowed as a more applicable and meaningful question: Which element or concept designed in the App arouses user's emotion? Based on the question and the benchmarking result, I selected to research on the App reviews of Slowly from Google Play and App store.

Figure 29 Knowledge gap and research question

Then the next step is about data collection. With the help of the tool 'Instant data scraper', I collected 406 user comments from 2018 to 2022.
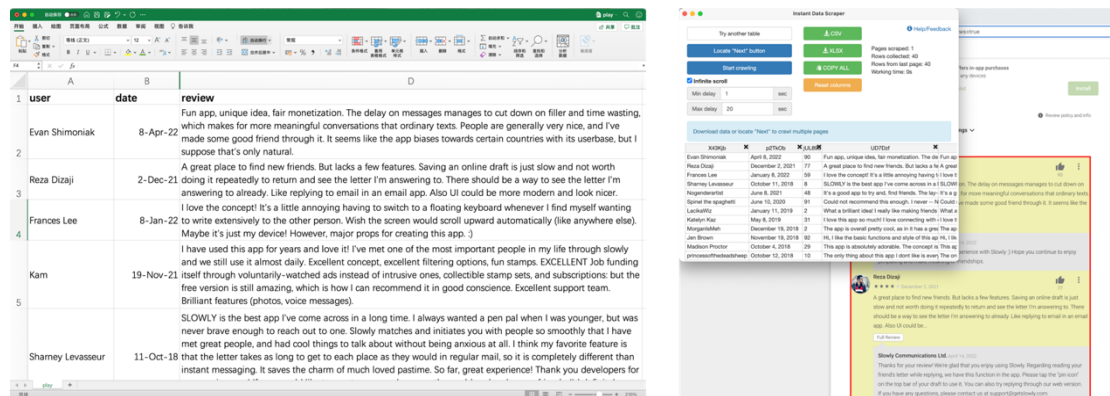
Figure 30 Data collection

After preprocessing this information (including removing irrelevant information, integrating fields to get a full review, etc.), I acquired the raw data in the form of spreadsheets.
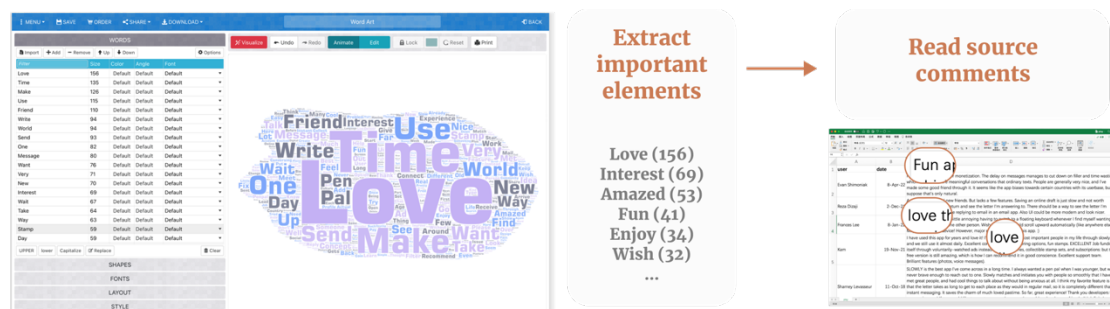
Figure 31 Data processing

43

By importing all the reviews, 'WordArt' helps automatically rank the keywords according to their recurrency. The words can be divided into three categories, topics, emotions, and actions. To answer the research question, I extracted the most important elements with high recurrency, which are emotional elements. Love (156), interest (69), amazed (53), fun (41) and wish (32) are chosen, then I went back to read the source comments to filter and cluster data. Artificial work was done here to find the similar pattern (the reason contributes to these emotions) behind all these comments.

The investigation outcome is illustrated with Sankey diagram. As a specific type of flow diagram, the width of the arrows is shown proportionally to the flow quantity, and it's helpful on locating dominant contributions to an overall flow.
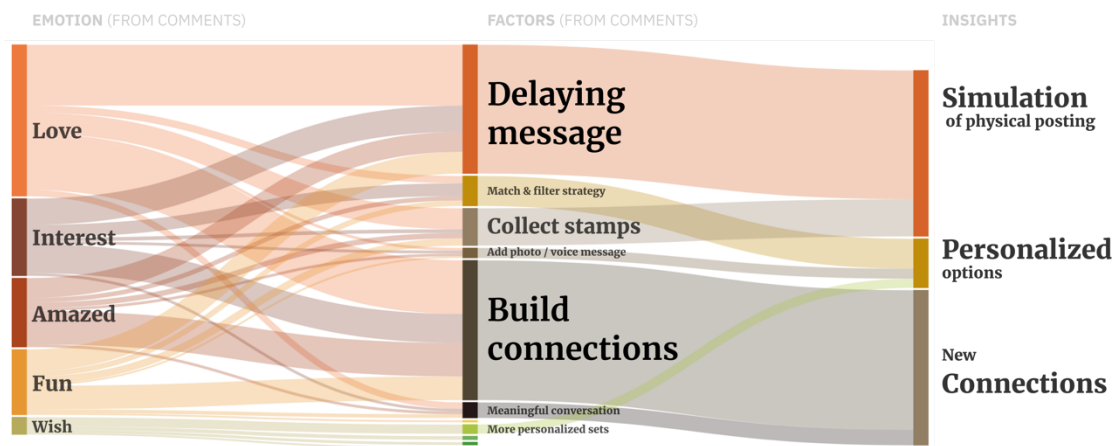
Figure 32 Sankey diagram of the investigation outcome

The diagram displays what elements or idea of the App contributes to user's emotional reaction in their comments. Generally, most of emotions are positive ones. Several conclusions could be draw from the investigation result:

Firstly, the concept of delaying message (letter) and forcing user to wait according to the geographic distance of the correspondents offer user a kind of illusion as if it's the real experience of posting letters.

- Love the concept of waiting for the letters, it gives them a weight and a depth that wouldn't have without the delay. Quality app!

- I love the letter system very much, because I don't have a lot of time to reply to constant chats, the time it took to deliver the letter gives me a lot of breather and time to think for a more genuine reply.

Secondly, the match and filter strategy allow user to make new pen friends and build global connection, this is another reason for its population.

Thirdly, the feature of collecting stamps is highly mentioned. Users tend to appreciate the delicate design of the stamp and achieve happiness during the process of collecting virtual stamps, while few of users complain the cost and wish to have cheaper or free ones.

- From collecting stamps to learning something new. I am just mad at myself for not opening the app while I was traveling!! I could have had stamps from the other countries.

- Lovely collectable stamps are adding extra charm.

- I also like the stamps idea - looks like preparing something unique for the recipient.

The phenomenon proves the important position of stamps in post user's mind. Also, it indicates that the major factors leading to the success of online post service platform are composed by two aspect: Fist is the potential to connect people with new pen pals and friends, and the second is the extent of its realistically simulating of the physical letter operation mechanism.

4.2.3 Questionnaire

To gain a broader insight of postal letter users' mailing habit, attitude, and needs, a questionnaire was used in this research. This survey is mainly aimed at postal users in Asia and Europe, and the respondents mainly Chinese and Italians. The questionnaire was distributed for one week, and a total of 51 responses were received, of which 43 were valid as completed ones. The survey publishing platforms of the questionnaires include WeChat, Xiaohongshu, Instagram, etc. Considering that the survey involves topics related to the experience of writing and sending letters, it is very important to find respondents with corresponding experience. Therefore, when the questionnaire was published through social media, it was carried out under the topic and tag related to the letter as much as possible.

The survey is divided into 5 parts, including basic information, attitude towards traditional letters and digital communication, comments on current postal service,

postal habits and preferences on some initial concept about this project, which costs about 5 minutes to complete.

Part 0 Basic information

Q1. What's your gender?

A. Male

B. Female

Q2. How old are you?

A. Below 18.   B. 18-25.   C. 26-30.   D. 31-40.

E. 41-50.   F. 51-50.   G. Over 60

Q3. Have you ever received or sent a letter to someone important to you?

A. Yes

B. No

The questions in this part are mainly used to confirm the identity of the respondents and whether they belong to the preset target group of this questionnaire. The first two questions (Q1 and Q2) of the questionnaire are designed to understand the basic distribution of respondents by age and gender. The results of the questionnaire showed that the respondents were mainly female, accounting for 69.77%. And most of the respondents were young people aged 18-30, with 76.74% for people at 18-25 years old and 16.28 for the ones at 26-30. Next, Q3 is used to confirm that the respondents are users with letter writing experience. Among the 43 people who effectively filled out the questionnaire, nearly 84% of the respondents had the experience of sending or receiving letters. The data of respondents who have not written/received letters will be excluded to ensure the reliability and significance of the respondents' data received in this questionnaire.

Part 1 Attitude towards traditional letters and digital communication

Q4. Do you think that expressing feelings in a letter is more serious or sincere than instant messaging over the Internet?

A. Yes

B. No

Q5. In your opinion, Which value makes physical letters different from Internet communication?

A. The tactile feeling of the real presence of the letter

B. It takes more energy to write letters and the heart is more sincere

C. Writing a letter is helpful for expressing deeper thoughts and feelings

D. Physical letters with personal traces (handwriting, drawings, etc.) are unique

E. Physical letters will be kept and collected separately, with commemorative significance

F. other [detailed]

Q6. Do you think each letter has a unique story and memory that deserves to be collected and preserved?

A. Yes

B. No

The first part of the questionnaire focuses on users' attitude towards traditional letters and digital communication. The previous literature review has listed the value and significance of letters, and these three questions are designed to verify if the real user's attitude matches with the conclusion that we made from the desk research.

Part 1 Attitude towards traditional letters and digital communication

Q4   Attitude towards letters' value
Do you think that expressing feelings in a letter is more serious or sincere than instant messaging over the Internet?

Q5   Opinion on letters' value
In your opinion, Which value makes physical letters different from Internet communication?

Q6   Attitude towards collection
Do you think each letter has a unique story and memory that deserves to be collected and preserved?

88.4%
BELIEVE YES

LETTERS IS MORE
SERIOUS / SINCERE

TACTILE FEELING OF ITS REAL PRESENCE
MORE LABOR MEANS MORE SINCERE
EXPRESS DEEPER THOUGHTS & FEELING
IT CARRIES UNIQUE PERSONAL TRACE
COMMEMORATIVE VALUE FOR COLLECTION
OTHER

81.4%
BELIEVE YES

LETTER DESERVES BEING
WELL COLLECTED

Figure 33 Visualization of the survey's result (1)

The survey results indicate 88.4% of the respondents agree that using letters to express feelings is more serious and sincere than digital communications. Hence, Q5 is set to understand which elements make physical letter valuable. Among the five options, letter's commemorative value for collection wins the highest number of votes (81.4), which reflects the materiality of letter is the most essential feature that distinguishes it from digital communication, and other three options about labor cost,

tactile feeling and personal trace are also considered as main factors with a similar proportion at around 75%. And Q6 also receive 81.4% of affirmative response, which means that the core concept of this project, collecting and preserve the unique story and memory behind each letter gained solid and broad recognition.

Part 2 Comments on current postal service

Q7. If you were asked to rate "emotional experience" from 0 to 10, where 0 is indifferent and 10 is warm and interesting, how would you rate the service of current postal system?
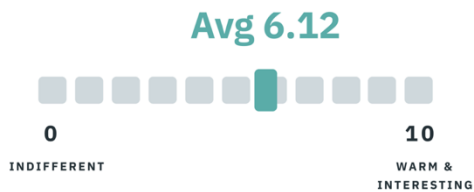
Q8. Do you think there is still much room for improvement in the current postal services in terms of bringing more "emotional value" to people？

A. Yes

B. No

Figure 34 Visualization of the survey's result (2)

The second part aims at researching how postal users comment the current postal service, especially on the emotional aspect. Q7 let the respondents to rate from 0 to 10, while the final average score is 6.12. The figure indicates that current postal system only gets an intermediate score, and it is still playing its role from an efficiency aspect. And Q8 also proves that 90.7% respondents consider more efforts need to be put on improving the emotional value it brings to people.

Part 3 Postal habits and experience

We want to design an APP that saves physical letters and records the thoughts, interactions, and journeys behind the letters, so we hope to learn more about your habits of writing/sending/receiving letters:

Q9. When writing a letter, do you have the habit to save the written letter by taking pictures or other ways as a commemoration?

The third part mentions two specific problems about user's postal habit and experience. Q9 tries to understand users' current habit on preserving letters after they finish writing.

Part 3 Postal habits and experience

Q9   Postal habit on collection
When writing a letter, do you have the habit to save the written letter by taking pictures or other ways as a commemoration?

Q10   About postal experience
What will affect your postal experience after the letter is sent?

55.8% WILL SAVE   **44.2%** WON'T SAVE

UNABLE TO KNOW THE DELIVERY STATUS OF THE LETTER	88.37%
UNABLE TO GET IN TOUCH WITH THE COURIER	48.84%
PROCESS OF WAITING LACKS WARMTH AND INTEREST	48.84%
OTHER	6.98%

Figure 35 Visualization of the survey's result (3)

The result shows more than half of the respondents will save it through taking pictures. This behavior indicates there's an existing habit and consciousness of preserving the letter. While Q6 indicates that user has such kind of awareness, Q9 actually proves that this is an applicable behavior. Then, Q10 concentrates on factors that will affect user's experience after the letter is sent, in other words, the pain point of the delivery process. The chart illustrates that most people suffer from unable to know the letter's status. While almost half of the respondents also complain at the situation of unable to get in touch with the courier and this lacking-warmth process.

Part 4 Users' preference on letter's traces

Q11. Which of the following elements do you think deserves to be discovered, recorded, and preserved in the "letter writing" session?

A. Picture of the original letter

B. Music or song you played / would share

C. The environment in which the letter was written (including the place, weather, photos of the environment, etc.)

D. The GPS location where you write the letter

E. other

Q12. What elements do you think are worthy of being discovered, recorded, and preserved in the "letter delivery" session?

A. The Routes you have taken to send letters

B. The Location where you send the letter (such as which post office)

C. The photo of posting the letter

D. Trajectory of the letter on the way

E. The story happened between the letter and the postman

F. other

Q13. Which of the following elements of physical correspondence do you think is worth discovering, recording, and preserving during the "letter receiving" session?

A. Taking pictures of incoming letters

B. Stamps, postmarks, and other special postal traces on letters

C. Receiver's reaction and mood

D. Whether the recipient has received/read the letter

E. Changes and new traces occurring on letters over time

F. Other

Q14. Which of the following services would you like to experience in order to add interest and learn more about the story after the letter is sent?

A. Occasionally receive greetings from different postmen who are in charge of forwarding the letter to collect its travel story (e.g. reporting the progress of the letter, explaining the reason for the delay, send delivering blessings, etc.)

B. Collect the information and pictures of the post site along the way of the letter

C. Establish more interactions with the recipient/sender while waiting for the letter, and learn how the other party expects the letter to be delivered

D. Others [Details]

E. I don't need this experience
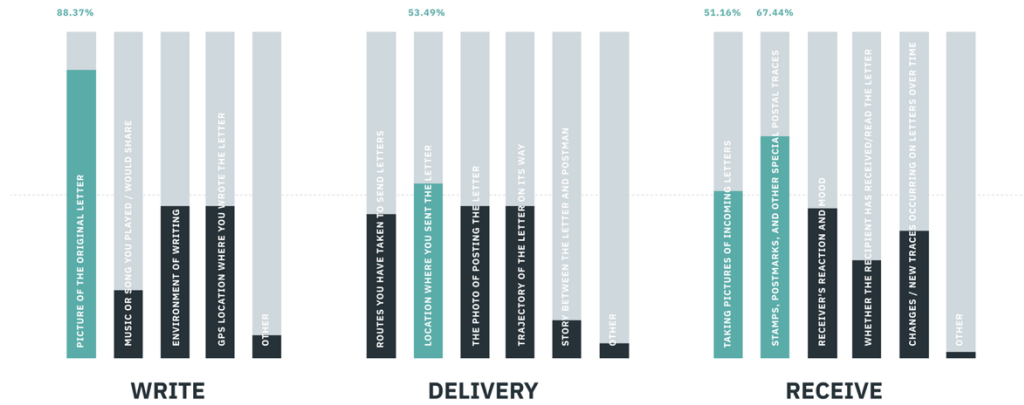
Figure 36 Visualization of the survey's result (4)

The last part is to research users' preference on letter's traces. To realize the concept of preserving and collect memories and stories about letters, it's important to figure out what elements deserves to be discovered and recorded. I divided the mailing process into three phases, write, deliver, and receive. Most of the potential traces concluded from the previous research are listed here to let the user choose. The result suggests that the picture of the letter both before it being sent and after being received are important to users. Besides, the postal traces such as stamps and postmarks are two other and the location where user sends the letter are two other major choices. So these elements will be considered as the primary features in my project.

Figure 37 Visualization of the survey's result (5)

And the last question is to understand user's opinion on some initial ideas about the App's functions. While the traces before are common elements in the postal experience, Q14 lists some aspects that are usually ignored by people. The result shows about 51% of the respondents wish to have the feature that they could occasionally receive greetings from different postmen to collect its travel story, while other options get lower votes. Therefore the choice A will be considered also as a meaningful feature in my design project.

Above all, the survey helps me to verify many of my hypothesis meanwhile offers me a clearer direction on user needs and my design concept, especially contributing on helping confirm the priority of the features to be designed in the App. The next chapter will introduce all the design work I conducted based on these research result.

5

DESIGN OUTCOME

DESIGN PROJECT

5. Design outcome

The results of the questionnaire reflect some typical attitudes and preferences of users towards the experience of writing, sending, and receiving letters. Combined with the conclusions from the previous desk research and digital ethnography, a clear insight of the target user and their needs could be summarized. Based on this, I proposed design opportunities and selected among them, refined the chosen idea, created the prototype, and did the test.

5.1 Research insight

The data from all the research suggest the target user are people who have the habit of letter writing and respect the value and unique meaning of snail mail. Specifically, the target user could be divided into two types according to their different target pen pal and postal habits. The first one is people who are keen to write to strangers or new friends. Postal communication allows them to meet new people and see new places, therefore, to collect more knowledge and understanding of the world. A typical persona Lyn is built as the picture below shows.

Figure 38 Persona - Lyn

Differently, the other group of target user tend to maintain connection with their old friends. They care and develop the deep affection, friendship or love with people who are important to them through letters. While the typical persona is Simon.
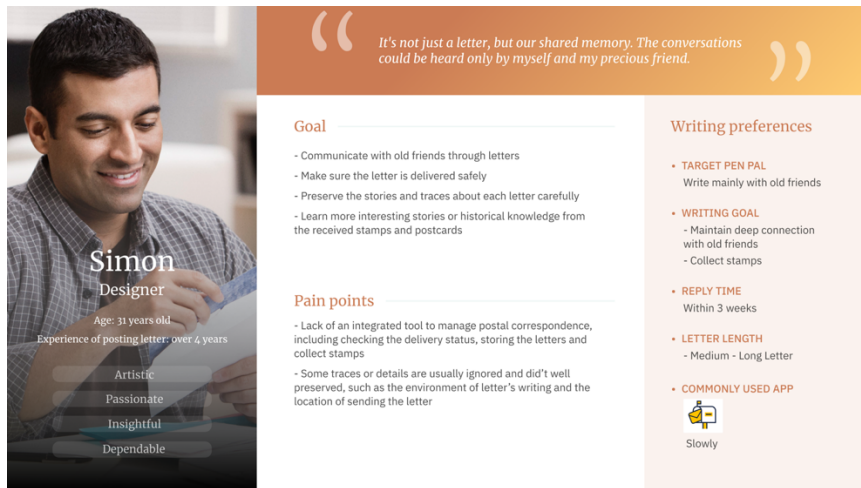
Figure 39 Persona - Simon

The two personas summarize the characters of the target users, and then I used Maslow's hierarchy of needs for further analysis. This model is proposed by the psychologist Maslow (1943). He ranked human needs according to the necessity of survival, and divided these needs into five layers, which are physiological, safety, love and belonging, esteem and self-actualization. Usually represented as a pyramid, the needs ascend from essential to less- or non-essential while simultaneously increasing in intellectual and cognitive demand, As Mcleod (2007) explained.

Figure 40 Maslow's Pyramid

Following this model, I listed the needs of this project's target users. Starting from the bottom, since this project is designed to fulfill user's mental needs instead of the physiological ones, so it's empty. Secondly, users' safety need is to ensure they can safely send or receive the letter, during which process they need to be able to check

letter's delivery status. Thirdly, users need to earn the feeling of love or belonging through two aspects. On the one hand, Feel being loved by the communication with their warm pen friends, postal staffs, and others. On the other hand, feel a sense of belonging from the App, where the sincerity of the letter is seen and valued. Fourthly, user require to feel a deep connection with others and the world through the letter archive. Therefore, they could achieve esteem and recognition from such collection. At last, the self-actualization is important and also hardest for the user. Through letter's conversation with others, users need to be mentally reshaped and keep growing on their consciousness construction.

5.2 Design opportunities

The data and evidence from the research phase expose many design opportunities. Based on the three main needs, I generated seven concepts as the map below displaying.
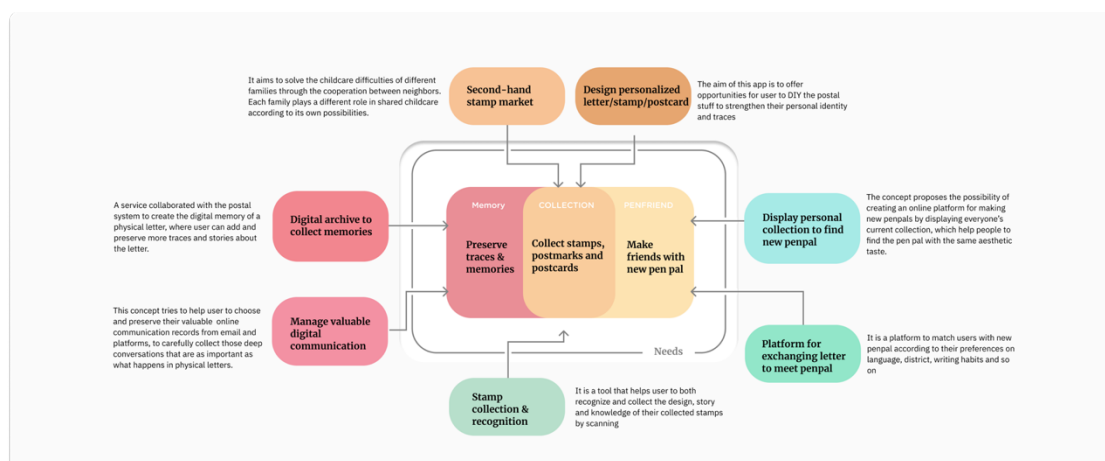
Figure 41 Design opportunities

a. The solutions about preserving traces and memories of letters

- Digital archive to collect memories: A service collaborated with the postal system to create the digital memory of a physical letter, where user can add and preserve more traces and stories about the letter.

- Manage valuable digital communication: This concept tries to help user to choose and preserve their valuable online communication records from email and platforms, to carefully collect those deep conversations that are as important as what happens in physical letters.

b. Collect stamps, postmarks, and postcards

- Second-hand stamp market: It aims to solve the childcare difficulties of different families through the cooperation between neighbors. Each family plays a different role in shared childcare according to its own possibilities.

- Design personalized letter/stamp/postcard: The aim of this app is to offer opportunities for user to DIY the postal stuff to strengthen their personal identity and traces.

- Stamp collection & recognition: It is a tool that helps user to both recognize and collect the design, story and knowledge of their collected stamps by scanning.

c. Make friends with new pen pal

- Display personal collection to find new pen pal: The concept proposes the possibility of creating an online platform for making new pen pals by displaying everyone's current collection, which help people to find the pen pal with the same aesthetic taste.

- Platform for exchanging letter to meet pen pal: It is a platform to match users with new pen pal according to their preferences on language, district, writing habits and so on.

After listed the design opportunities, I used Importance / Difficulty Matrix to plot the most promising concepts as the figure below displaying.
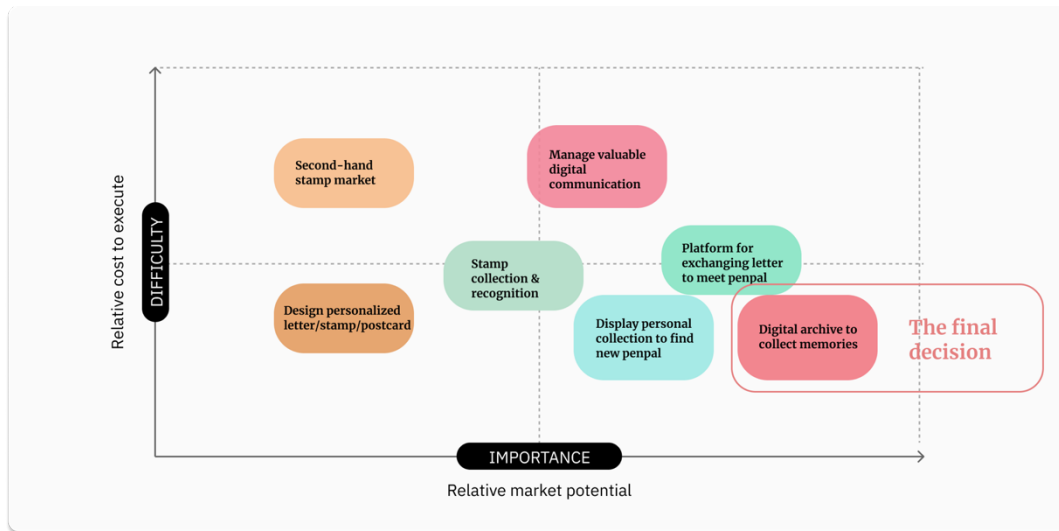
Figure 42 Importance / Difficulty Matrix

The matrix plots all the ideas based on the relative market potential and the relative cost to execute. While the former considers the aspect of novelty and meaning, the latter one concentrates on difficulties and cost on human and material resources

such as development, publicity, and promotion. After considering all the factors, the final chosen concept is the digital archive to collect memories.

5.3 Design brief of the final choice: what, who, why, and how

What

This project is about designing a mobile platform as digital archive to preserve and collect the traces and memories of postal letters. It concentrates on using multimedia tech to record not only the scanned pictures of a letter but offers an integrated way to aggregate all the stories and ignored traces related to physical letters, which includes the voice recording, short message, images, the journey or path of the letter under delivery, user's emotions, the knowledge and story behind a stamp and the reason for choosing it.

Who

The target user of this App is obviously the lovers and supporters of snail mail. They keep the habit of writing and posting handwritten letters and their correspondents are usually their close relatives and friends instead of strangers as new pen pal, living relatively far away from them geographically. The length of their letter is preferred as medium or long, and the most important thing is their sincere attitude towards the postal communication. They cherish the memories and stories of letters and will well design, preserve and collect the letter. These users obtain happiness and intimacy through the postal communication and will earn the feeling of accomplishment with their postal collections.

Why

The reason for this project is linked tightly with the needs and pain points of users concluded from the research before.

From the view of users' needs, they naturally cherish the physical letters and are fascinated by the intimacy and presence aroused by the strong personal traces on the letters. To earn deeper pleasure, they wish to know more about the labor cost on this letter, the story behind it, the traces and interaction between the writer and the letter. And for the writer, it's also commemorative to record these traces as mutual memories.

From the perspective of users' pain point, firstly, they lack a way or tool to ritually record, aggregate, and organize all the stories associated with letters for better review. Secondly, the traditional letters have indeed lost some interesting traces and stories

of letters due to the lack of multimedia technology and digital records. Thirdly, mailing letters are still essentially a form of communication. This kind of communication with others actually reflects our direct connection with the outside world, thereby helping us better understand ourselves and find our mental presence and position. The meaning implied by the collection of letters is not really seen, or consciously visualized. Therefore, building a digital platform is conducive to collecting and integrating relevant data, and expressing this sense of achievement and meaning to the individual.

How
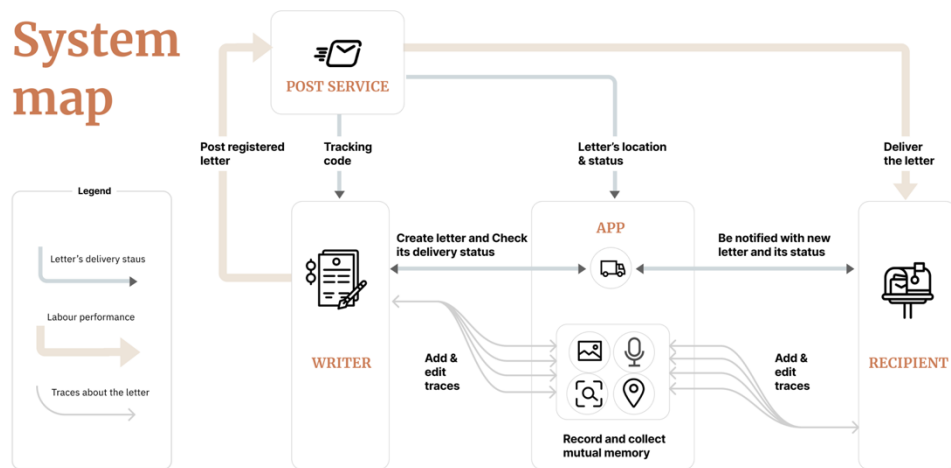
Figure 43 System map

The system map illustrates how this platform works. Basically, when user writes a new letter, he or she can create a corresponding space to preserve the letter with uploading the cover and content as pictures and share it with the recipient. Once the letter is posted and the user receive the tracking code from the post service, the delivery status of the letter will be available in this App for both the writer and recipient. Meanwhile, users can add and edit more traces related to the letter to build their mutual memories.

Accordingly, the user journey is designed as the figure belows shows, which divides user's journey into three stages: create archive, share memory, and accomplishment.

Figure 44 Customer journey map

And the service blueprint map illustrates more interactions from the frontstage and backstage perspective.
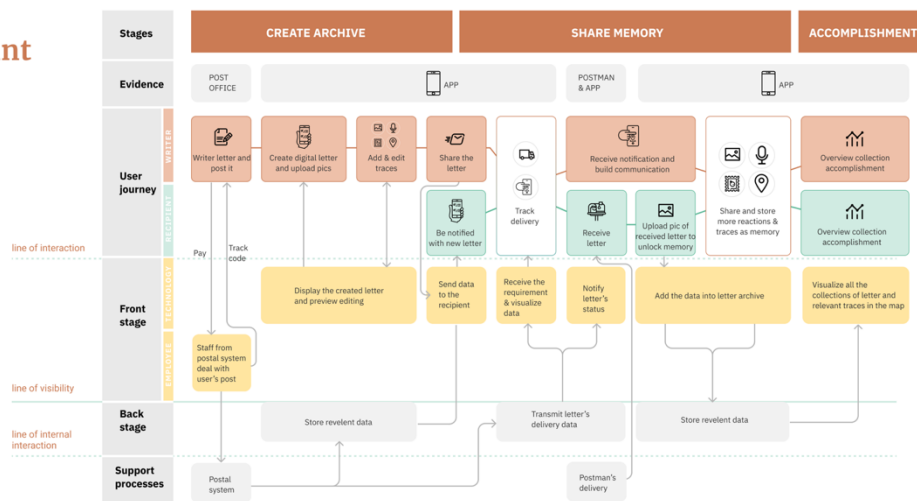
Figure 45 Service Blueprint map

5.4 Prototype

5.4.1 Information Architecture
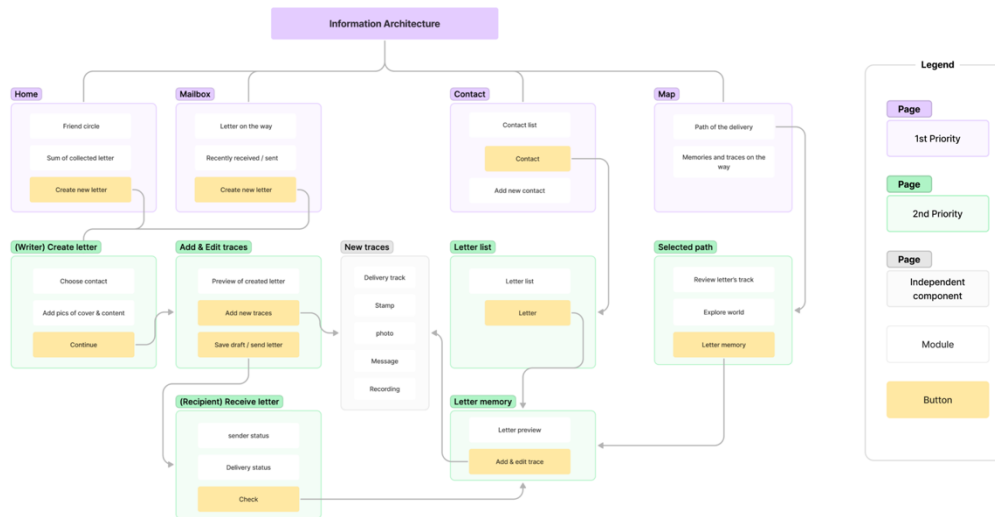
Based on the designed features, I made the map of information architecture, which explains the structure of the app. The part sectioned in purple background represents the first priority pages, including the home page, mailbox page, contact page and map page. The home page offers an overview of personal collection and the friend circle situation, while the mailbox page is used to update the latest message of communication, including letters on the way and recently received or sent letters. And the button of creating new letter will lead to the second priority pages, where the writer could create and share a new letter with his or her correspondent.

After the creation procedure, user could preview the created letter's memory, meanwhile adding more traces or editing it. The letter memory page could also be visited following the path of contact – letter list – letter memory. The module of letter's memory is the most important feature in this app, which contains all the important traces of users' letter. Considering of this, it's necessary to pay attention to this module's visualization. The user interface needs to be carefully designed to attract user's attention and display the App's attitude on caring these precious collections.

And the last main module is the map, which aims to display user's accomplishment from an overview perspective. It will merge all the letter's delivery path recorded and

stored in this platform as a single map, and display the traces and messages related to the specific letter.

5.4.2 Low-fidelity and high-fidelity prototype

After defining the information architecture, the prototype is developed through two phases. The low-fidelity prototype concentrates on explore the most suitable layout to express the idea meanwhile saving labor costs. Once the design is settled, the high-fidelity one could be developed more detailly.

Considering an essential module in the project is the interface of letter's memory, various versions were tried. The original idea was to design the entire page in the form of storylines and archives as inspiration. Considering that a letter is a fragment of many memories between correspondents, when users review a letter, they also need to be able to jump to adjacent pages of other letters, so the jump function was placed at the head and end of the storyline on the page. However, this layout takes up more space and the feature of adding traces must be sacrificed and folded into '+'. Also, the page hierarchy does not seem clear enough. The elements are messy, and user cannot identify who added the traces.
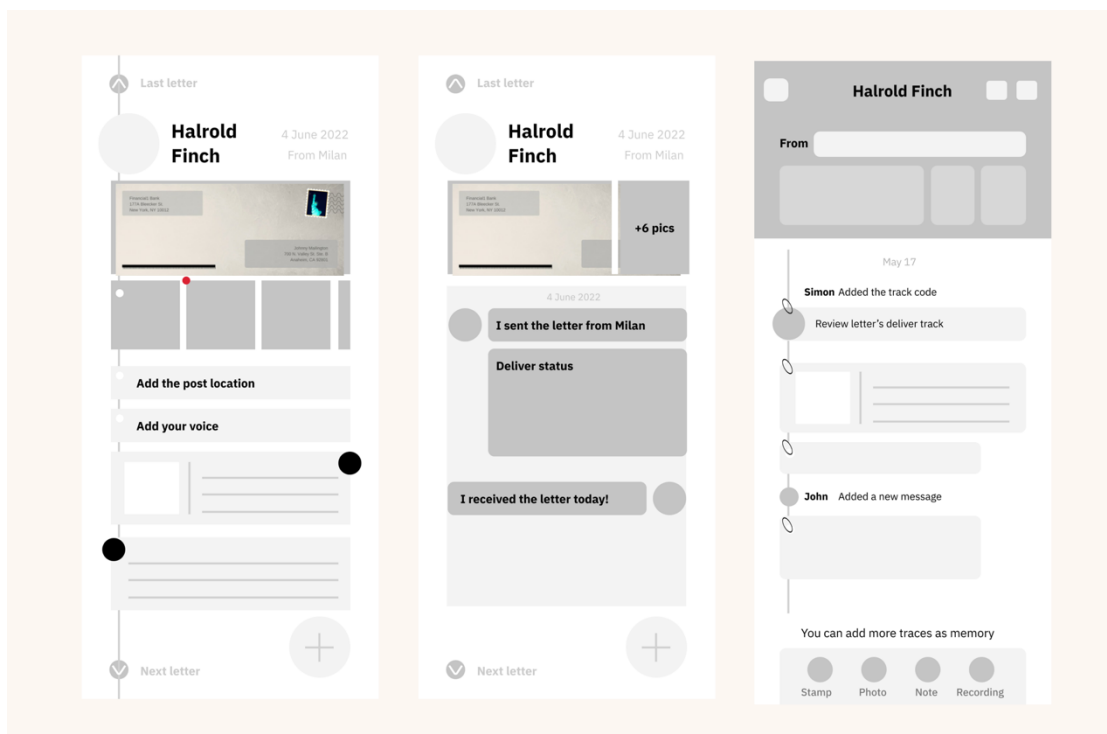
Figure 47 Changes on letter memory page (1)

So in the second design plan, I try to layer the page elements. The photo of the letter itself is the fixed content, folded to the top to save space. As another main module, the trace part is distinguished by background color and placed below. I considered to change the layout of this part, adapting the form of dialogue to clarify the publisher. But in this way, the visual feeling of this page is similar to the online chats App, which is contrary to the concept of the project, so the visual design of this part needs to be adjusted.

Thus, I Integrated the two parts of the letter basic information and the feature of jumping to other letters together and put them at the head of the page. The rest of the page is divided into the letter picture part and the letter trace part, referring to the visual format of the coil book.

The last change on this part is about how to place the feature of adding new traces. As the picture below shows, the first design plan limits the length of the traces part which leads to user's feeling of this part is finished and user couldn't scroll. The second one strengthens the feeling of simulating physical paper, but the adding function is hard to be understood and used. Above all, combining the pros and cons, the third plan was adapted finally.

Figure 48 Changes on letter memory page (2)

Similarly, all other parts of this App are also carefully considered, and the final prototype is summarized as below.

Create new letter archive & add traces

Receive and unlock letter

Letter archive

Collection map
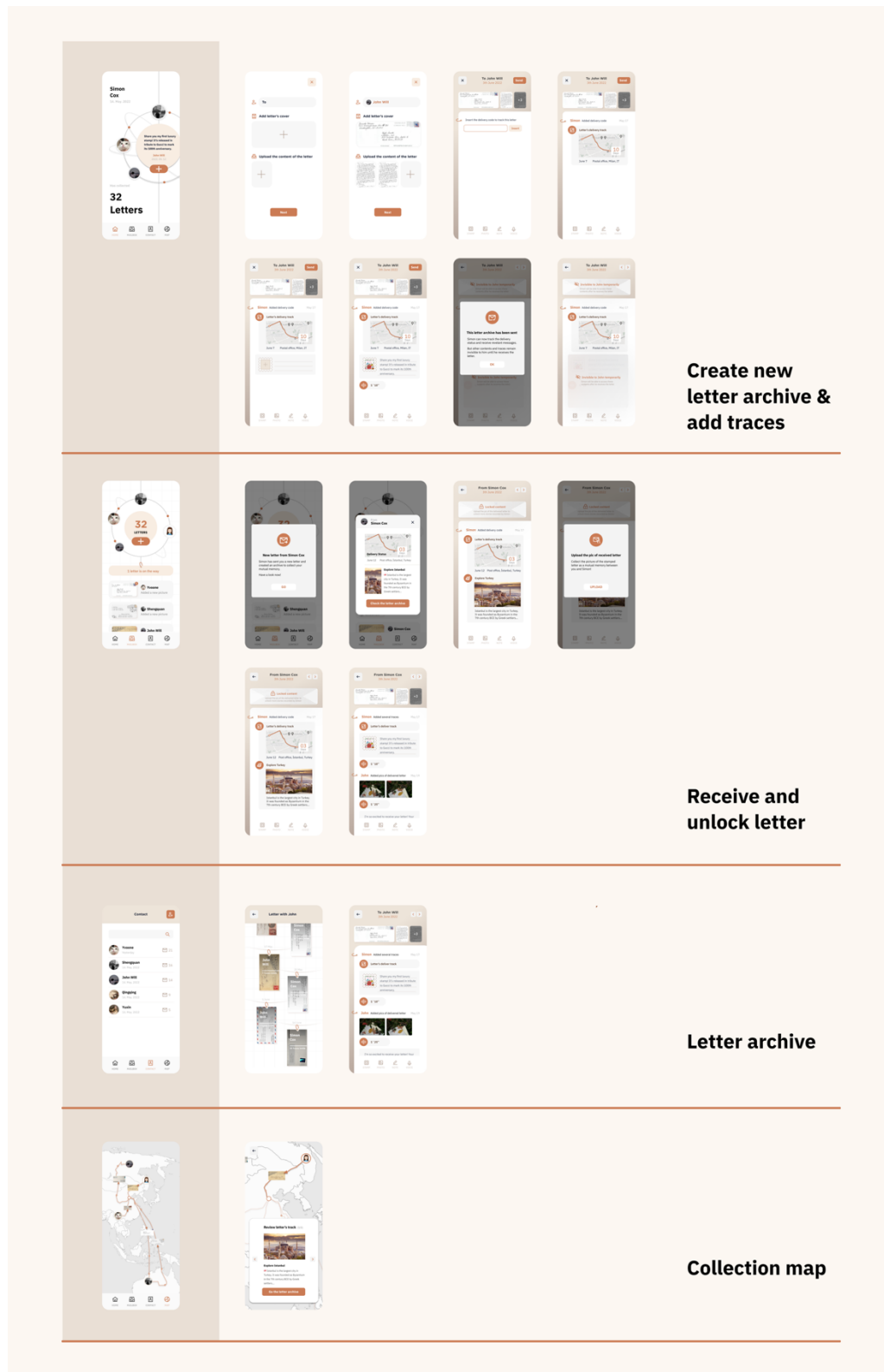
Figure 49 The structure of the prototype

Create new letter archive & add traces
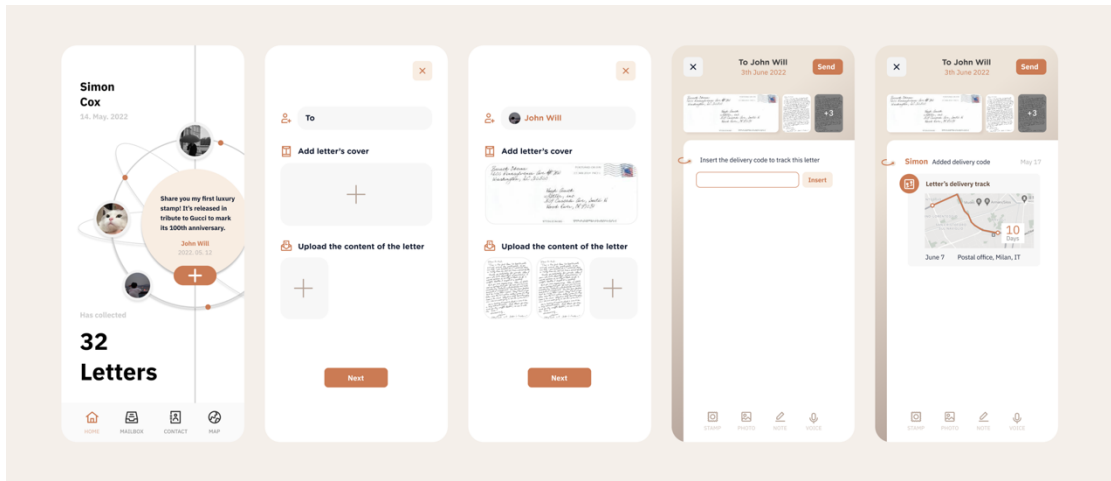
The first module is about the creation of a new archive and it starts from the home page. The home page displays user their current friend circle based on letter connection, which visualizes user's most close pen friends. Also, this page offers an overview of the letter collection status with its amount, meanwhile showing the snippets from letter's traces to help user review previous memories.

The Plus button guides user create a new archive for a letter, where user need to firstly select the correspondent and then add the cover and the contents of the letter. After such creation, user will reach the letter memory page, where indicates user to add the tracking code of the letter's delivery.
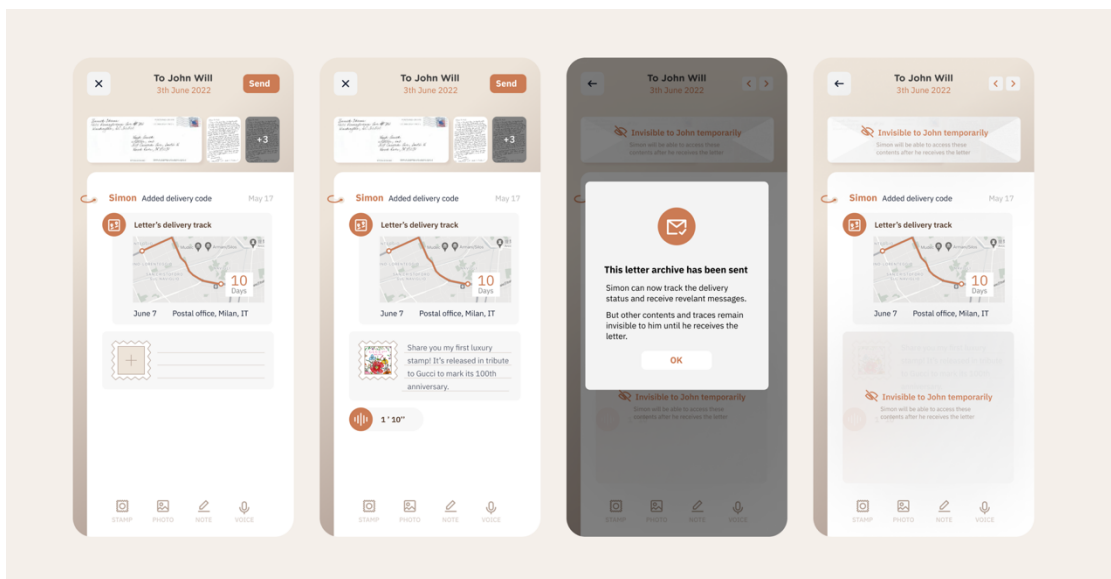
Apart from the initial remind of tracking, four other kinds of traces could be added to this letter's memory, including stamp, photo, note and voice. Once the writer finishes adding, this letter could be sent to the recipient. To maintain the recipient's curiosity, only the delivery track would be visible to him. Thus the interface will user a blur layer to hide those contents, remind both the correspondents that the recipient will be able to access these locked contents until receiving the letter.

Receive and unlock letter
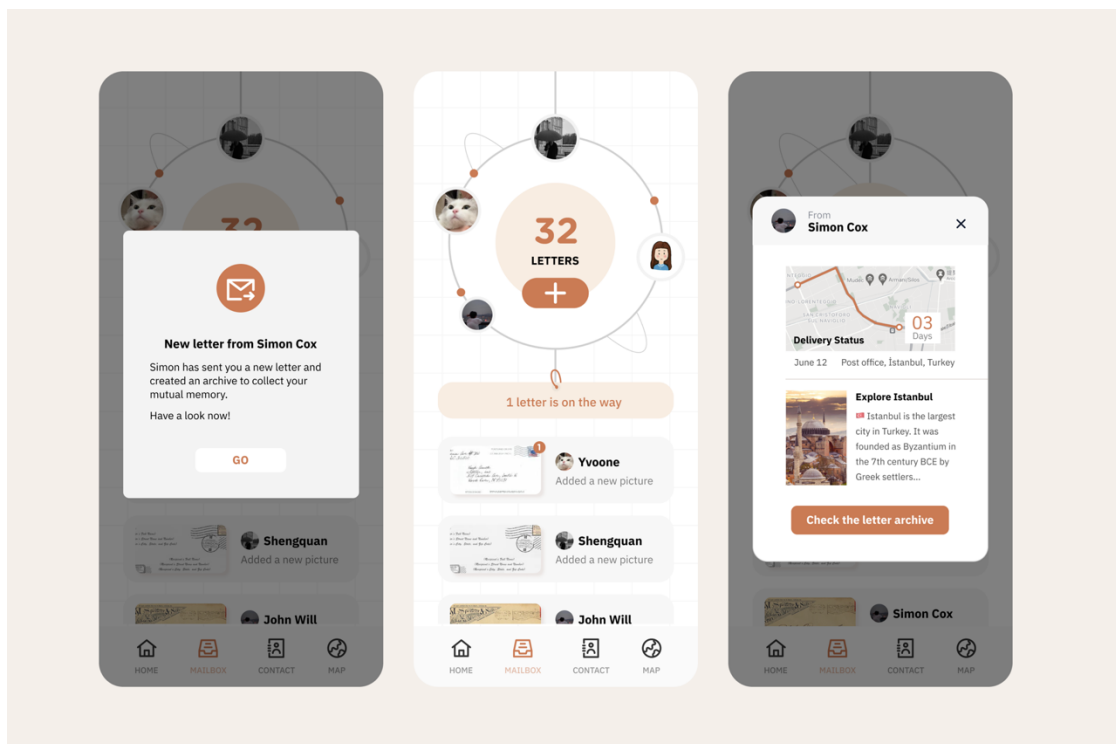
Figure 52 Be reminded of new letter

From the recipient's view, once the writer sent and share the letter archive with him, a Pop-ups will occur to remind user of this new letter. Also, the notification will occur and be fixed in the mailbox module, indicating that a letter is on the way. This module provides an easy way for user to keep an eye on the delivery status and to know when the letter will be delivered. Besides, to make the process of waiting more interesting, the App will push knowledge and stories about the city where the letter is staying. In this way, the letter could help user to explore the world and such path that the letter goes through would be more meaningful.
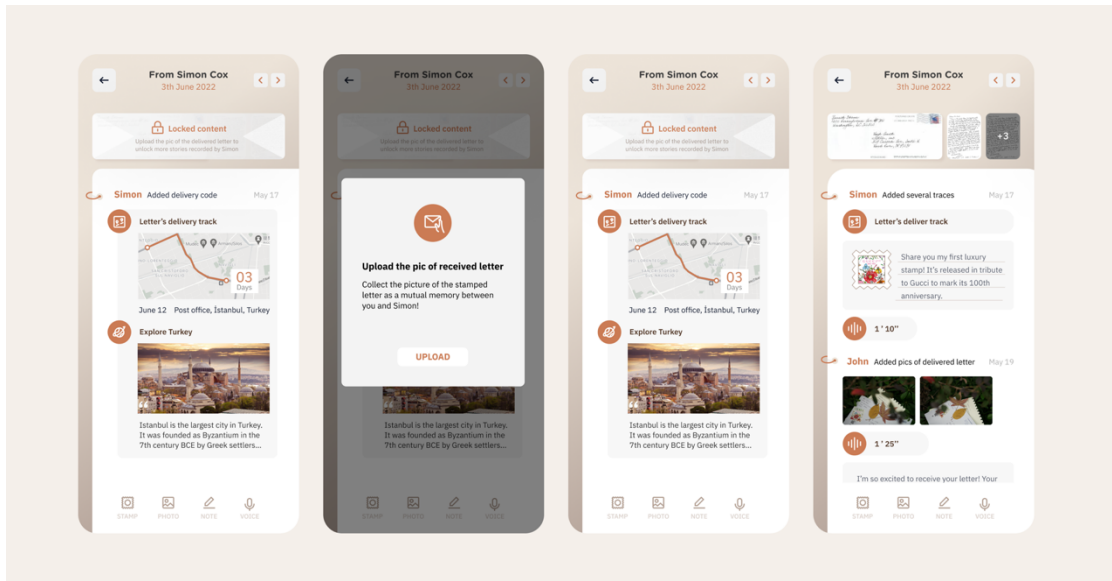
Figure 53 check and unlock letter memory

When the physical letter is delivered, the platform will remind the recipient to upload a picture of the received letter. The stamped letter would be collected into the archive and become a mutual memory between the two friends, while such an act also aims at developing the recipient's habit of preserving mutual memories. Once the picture is uploaded by the recipient, all the contents become visible to them and more traces are welcomed to be added.

Letter archive
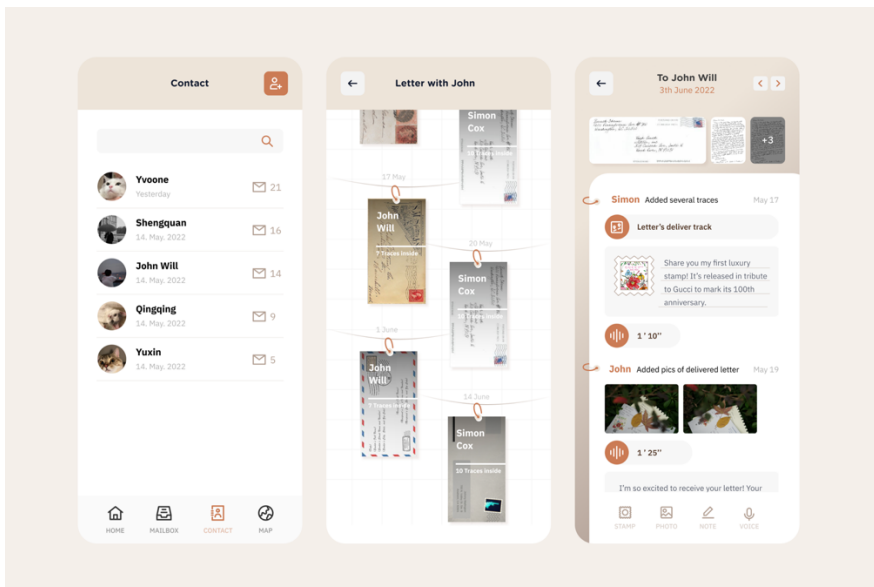
Figure 54 Contact, Letter archive and letter memory page

The letter archive module preserves all the sent or received letters. The contact pages list all the contacts that user has and the corresponding number of letters that they have posted. After selecting a contact, the posting history with this correspondent is accessible. To strengthen the sense of ceremony, this page simulates the form of hanging postcards on the wall.
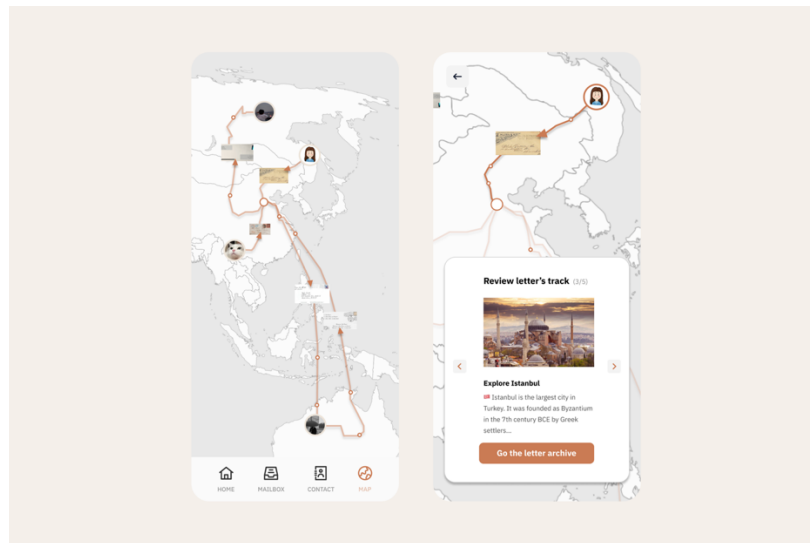
Collection map

The final module is the collection map. To help user better sense their presence on postal communication, the map collects all the delivery track of the letters and visualizes it. It offers a broader view to observe the places that all the letters have passed. When the user selects a path, the map will zoom in and focus on it. And the stories about the cities on the path will also pop up.

5.5 User test

Test plan

To evaluate the project, I did user test with three users to observe how users understand and interact with the App and collect their feedback and comments on this project. The test was based on the high-fidelity prototype in Figma, and it is done through the platform of Tencent meeting, where user could share their screen to display how they interact with the prototype.

The user test has two parts, completing tasks and interview. In the first stage, users are required to complete a series of tasks.

Task list

1 Create a new letter archive

    1.1 Add postal code to track the letter

    1.2 Add more traces as memory and share the archive with correspondent

2. Receive the new letter archive

    2.1 Check the received letter and monitor its delivery status

    2.2 Unlock the invisible contents after receiving the delivery

3. Review personal letter archives and collection map

After finishing this part of work, a semi-structured interview was done to understand users' thoughts and opinions about this project. The interview aims to acquire user's feedback on the following aspects.

Interview questions on concept

    - Is the concept understandable?

    - Interest raised by the concept. Is the concept innovative?

    - Is the concept meaningful for the users?

    - Is the concept feasible?

    - How do you comment the emotional experience of this App?

    - Share your feedback on creating letter archive and collecting traces

    - Share your feedback on the process of receiving and unlocking letters

    - Share your feedback on the way of visualizing the collections

Test result

The result of the test turns out to be satisfying. Basically, all the three users could complete the tasks, with only a few of them had doubt on receiving message on "explore the world" during the letter's delivery. The interviews also reflect the high evaluation of this concept by users, and their core feedback are collected as below.

Is the concept understandable?

Yes, it's easy for all the users to understand the aim and the structure of the App.

Interest raised by the concept. Is the concept innovative?

The concept is considered interesting and innovative, and the users agree that no similar service occurred on the market before so it's very new. What's more, two points make them impressive about this App.

First, the letter is electronically stored in this APP, which seems to be a memory tree, and therefore many neglected or missed moments about the letter with high emotional value could be captured and saved, such as adding the reason and story of choosing a stamp and so on. More additional information is bookmarked.

Second, during the process of creating a new archive and add traces, the recorded letter memory is not sent as an instant message but is set as a delayed message and needs to be unlocked by the recipient. This design increases the user's expectation and freshness of the letter, and delayed gratification strengthens the letter value.

Is the concept meaningful for the users?

This concept is meaningful to users in several ways:

First, the physical letter will dissipate, but the electronic content can be permanent online and it's easy to be reviewed at any time. Even if the physical letter is lost, the user can be less sad and get some comfort because of the collection of the electronic file.

Second, this APP strengthens the emotional communication between users through letters and retains recallable evidence for this. Snail mail itself is a very special and slow thing. This APP deepens the sense of ritual of this slow process, and the expectations of those who send and receive letters are therefore raised, and they can better appreciate the touching efforts of letters wandering across mountains and seas. The emotions affected by this letter may have been scattered in the instant message platforms in a fragmented form and were quickly forgotten, but with such an App, they could be preserved here.

Is the concept feasible?

Users generally think this concept is feasible, but users' worries are mainly in the two aspects of promotion and the idea about pushing "explore world" message during the delivery. On the one hand, the target users who have the habit of writing letters are relatively small, and it will be difficult to promote this APP to them precisely. On the other hand, it is difficult to execute the explore world part during the process of

mailing. When the shipping speed of the letter is too fast or too slow, the push frequency is hard to be set. And the pushed stories or information need to be filtered out in an effective way.

How do you comment the emotional experience of this App?

User interviews have received good feedback on the emotional experience of the APP, which is mainly reflected in three aspects.

1. This APP reinforces the concept of letters as gifts. The diverse information contained in the letter archive will make users look forward to more in the process of waiting for letters, and the feelings between friends will also deepen.

2. The APP aggregates many moments of high emotional value related to letters, and these moments are preserved in a more ritualistic way

3. Over time, when users accumulate more letters, they will feel a sense of accomplishment for their collection and letter track map. The personal presence is strengthened, and they would therefore feel connected with their friends and feel connected with the world.

Share your feedback on creating letter archive and collecting traces

User feedback highlights their need for a more personalized collection, which is reflected in:

1. When creating letters, they want to be allowed more freedom of personal creativity, so that the forms of letters can be varied and have a unique personal stamp. For example, the background of each letter can have different customization options. For contacts, users can consider setting the classification of kinship, exclusive Title, etc.;

2. In the process of sending letters, there can be more innovative activities. For example, the APP can cooperate with some special tourist attractions, such as setting up special letter check-in points on the top of Mount Fuji and the seaside of Venice to increase the fun.

Share your feedback on the process of receiving and unlocking letters

In the process of receiving and saving letters, this personalized demand is also obvious. An obvious feature is that users tend to project their own habits and powers of collecting and organizing in real life into the APP.

1. The letter collection list can add special labels to classify letters, such as emphasizing the relationship between incoming letters and replies, allowing users to classify letters

according to the period of mailing and the topic of the letter. When a letter carries too many fragmented memories, users can organize and manage information by collapsing content, marking special nodes based on special times or places, etc.

In addition, the multimedia communication forms allowed by the APP also make users look forward to a more novel sense of ritual. For example, when the recipient gets a letter reminder, the app can break through the simple graphic pop-up window and use the voice broadcast prepared by the writer to remind new letters; when unlocking the letter in the app, the app can follow the sequence of "envelope, letter content, and other traces" to display this process in a more immersive and simulated way; the fragmented stories related to these letters are not necessarily displayed only in the form of timelines, and can even be overlaid on the photos of the letter.

Share your feedback on the way of visualizing the collections

The user's overall opinion on the visualization of the collection is mainly reflected in the letter map. Because for two friends who have kept in touch for a long time, the mailing routes are likely to converge, and the significance of displaying the map is reduced at this time. Moreover, users communicating intra-city will not be able to obtain valuable pushes because the letters do not cross more cities. Therefore, it can be considered not only to display the city information in the geographical dimension, but also to add interesting stories such as news and festivals to help user better recall such journey.

Test conclusion

Above all, the user test offers a highly positive feedback on this project, which proves that the great opportunity of increasing the emotional experience of physical letters and the high demand on letter's digitalized collection. The interview also reflects a clear direction of its improving space, which is to:

1. Focus on the offering rights to realize the users' personalization and creativity on letters for the purpose of strengthening their personal identity and presence.

2. Focus on improving the app's visual aspect, especially on the sense of ritual in the display of letters to enhance the user's sense of achievement and respect

3. Based on the existing functions, strengthen the capture of special moments (In terms of time, the capture of special festivals and special news events; in terms of location, the cooperation in sending letters at special tourist attractions) to enhance the app's playability and increase the user's memory points for different letters.

Thus, more operations of organizing personal collections in real life can be used for reference and incorporated into the design of this app, so as to give users more complete and free control over the three aspects of creating traces, collecting traces and organizing traces and therefore offer them deeper emotional value.

5.6 Conclusion

The motivation of this research and design comes from a sincere wish to help people better sense the value of snail mail in such as fast-pace era. To answer the question of "How could digital tech help better convey & preserve the value of postal letters?", much effort was spent on the literature research phase from three aspects, including letter's history and development trend, its unique value on materiality, and the comparison between postal mails and digital communications.

The history of letter's democracy proves people's growing correspondence impulse, while such impulse become stronger and deeper manifesting on the higher demand on diverse and personalized letter. Accordingly, the materiality of letters realize such need and this unique feature allows the letter to carry personal traces and arouses intimacy and therefore makes letter collection meaningful. In comparison, the digital communication is popular for its instant nature, which however also leads to the mass production of shallower communication with less emotional value. But the positive aspect is that digital communication does expand the possibility of multimedia expressiveness. And such expressiveness could therefore be made use to realize the postal users' needs on personalized and diverse letter.

The literature research exposes this design direction as a new opportunity, and thus the design activities was conducted around this concept. According to the prototype and the feedback of user test, the project about the digital letter archive is very welcomed. It proves that the deeper and diverse connection with great emotional value is highly needed and treasured by people living in the fast-pace age. From the user's feedback, one of the meaningful aspects of this concept is its capture and collection of moving moments caused by the sincere letter correspondence. And such emotional value is magnified and perpetuated in a ceremonial manner and could be recalled conveniently in the phone.

Also, many great suggestions from the user interview directs a clearer way for the improvement of this project. Focus on the offering more rights to realize the users' personalization and creativity on letters would effectively strengthen their personal identity and presence. Improving the app's visual aspect, especially on the sense of

ritual in the display of letters will improve the user's sense of achievement and respect. What's more, strengthen the capture of special moments will enhance the app's playability and increase the user's memory points for different letters. These feedbacks will significantly contribute to success of realizing a meaningful letter archive and help people revisit and rebuild the value of deep communication in the impetuous modern society.

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INDEX OF FIGURES

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