Design For Communication

Weiying Chen
wc4582@rit.edu

Follow this and additional works at: https://scholarworks.rit.edu/theses

Recommended Citation

This Thesis is brought to you for free and open access by RIT Scholar Works. It has been accepted for inclusion in Theses by an authorized administrator of RIT Scholar Works. For more information, please contact ritscholarworks@rit.edu.
Design For Communication

By

Weiying Chen

A Thesis Submitted in Partial Fulfillment of the Requirement for the Degree of Master of Industrial Design

Department of Design
College of Art and Design

Rochester Institute of Technology
Rochester, NY
August 13, 2020
Committee Approval:

Alex Lobos
Graduate Director & Chief Thesis Advisor
August 13, 2020

Mindy Magyar
Associate Professor & Associate Thesis Advisor
August 13, 2020
Abstract

Increasingly numbers of younger generation have settled down their new homes away from parents after years of endeavor in bigger cities in China. They leave their parents for their works and take care of their own families. Elderly care becomes a crucial problem since filial piety is a tradition and a need in Chinese culture. Because of the implementation of “One child policy” in China in such a long time, elder parents only have one child in each family, which weights much more pressure of taking care of elder parents on the “only child”. Lack of smart phones use of elders and silent way to express love between youngers and elders also have reduced the opportunity of communication. This thesis will discuss the cause of the problem, and then focus on helping with improving the communication between the elder and the younger.

Keywords

er elder younger silent love, communication
Introduction

As China has been developing rapidly in decades, lots of people tend to leave their parents to the bigger cities for studying or working. After years of working, they have settled down in the big cities with spouses and children. Parents get older, elder care is necessary and immediately. In Chinese culture, filial piety is a tradition and a need. However, living away from each other becomes an impediment for the younger to take care of their parents. Unlike the elders, the younger accept new things quickly, like cell phones, tablets, etc. Cell phone can provide more and more services during different apps that become inseparable to them. But the elder generation would like to stay in their comfort zone that they are willing to live the way they are used to. The new technologies may help people with communicating with other easier, but communicate with the elderly parents is still a problem.

Cell phone to the elders is expensive and difficult to use. The small and sensitive touch screen are unfriendly to the elders. And the way to type message is not familiar to them that takes time for them to learn. Elders are easy to miss the phone calls when they have cell phones in the pockets, it is not the lifestyle they have been living in the past. Sometimes, parents have some little things to tell the younger, but they are not sure if it is the right time to call. The younger have their works and families to take care of. Or sometimes parents only want to know if the adult children are busy, if they eat regularly, if they sleep well. A quick message sending can solve the problem, but it is hard for the elderly parents.

Living away from each other makes the elderly parents and the younger being worried. The elderly parents have to live themselves independently. They have needs to go out for shopping or to the hospital sometimes. Because of the lower popularizing rate of driving cars among the elders in China, elders would take public transportation to get around. As they age, it
takes longer to get to the destination and come back. When they are out, the younger would be worried about if they are safe. And they want to know when their parents are home.
Is there a communication way to let the elders and their adult are both comfortable and easy to deal with?

Supporting research for background

The “only child policy”

As the situation in China, the population of the society gets older in the decades. “China’s population grew rapidly in the 1950s and 1960s, and by the 1970s it had increased by some 250 million since the founding of the People’s republic.” To control the growth of population, the government has issue a policy called “Family planning”. Because of the “Family planning” policy in China that effected from 1980s, nearly every family is allowed to only have one child, this policy has been running for 40 years. However, the rapidly shrink of younger generation cause the only child in every family needs to take care of parents him/herself. When the “only child” gets married to another “only child”, then they will have too much burden on them to not only have so many elders but also their new baby in one family. “With the rapidly aging population in China, many older people are considered to have an “empty nest” [1]. The empty nest families mean that elderly do not live with their children or do not have a child. In fact, one-child policy in China was considered one of the major catalysts contributing to the large number of empty nest elders.”

---

According to the journal article, “China’s Family Planning Policy: An Overview of its Past and Future” states “The aging of the population attendant upon the falling birth and death rates is moving to the top of the Chinese government’s agenda. In 1998, those older than 60 accounted for just 10 percent of the total population. This proportion is rising rapidly and is now similar to levels in Singapore, 10.1 percent (1997), and South Korea, 9.3 percent (1993). Between 1982 and 1998, the population aged 60 and older increased by more than 60 percent, rising from 76.6 to 124.4 million (see Table 4), making it the most rapidly growing age group. The rising older population is a less immediately pressing concern in itself for the Chinese authorities than is finding the resources to care for them. No state retirement pension scheme exists other than that for a small proportion of former urban state-enterprise employees. The lucky ones are cared for by their families; the rest must keep working to survive.” Aging population in China is facing problems that receive less care from the country and the family.

Filial piety

“The rapidly aging population is challenging traditional Chinese patterns of family-based elder care which emphasize filial piety. As an essential element in Chinese culture, the belief in filial piety can be dated to roughly around 1000 B.C. (Holzman 1998). It requires adult children to respect parents and dutifully provide both physical and emotional care for them as they age. For parents, raising children has been regarded as a way “to ensure that they will be cared for in old age” (Chou 2009, p. 589). For thousands of years, filial piety has been considered as a core cultural value and the most critical cultural force “holding together China’s system of familial

---

elder care” (Zhan et al. 2008, p. 545).” The close relationship between parents and children have influenced Chinese people thousand years.

**The History of Family in China**

“Family has long been a key component within Chinese society, and many aspects of Chinese life can be tied to honoring one’s parents or ancestors. In fact, the majority of the “five relationships” espoused by Confucius were directly centered on the family. Due to this focus on the family, it was common for the Chinese, even when fully grown with children of their own, to not only remain in or close to their hometown, but also have many, if not all, living generations of a family living under the same roof (四世同堂). Chinese who may have done business far from home, or may have been appointed to government posts far away, would normally have found time to return home on a regular basis, giving rise to the popular Chinese saying: “falling leaves returning to the root of the tree that sired them.”

The concept of family in China was so important that it was one of the few moral and ideological concepts to survive the decade-long turmoil and chaos of the Cultural Revolution relatively unscathed. While many Chinese elders lament the fact that young adults born in the 1980’s or later possess no clear moral compass or strong standards of behavior, no one in China has forgotten the importance of family.”

From those, to find a way of improving the communication between Chinese elderly parents and their adult children is significant. Chinese parents have been living with their children and grandchildren over thousand years, and they prefer to depend on the younger

---

generation according to the culture. Therefore, to build the close relationship between the elder and the younger is the key of elderly care in the emotional part.

**Solution development**

As I start to developing the solution of my design. There are some elements I would like to incorporate with.

**Silent love**

Compare with Western parents, Chinese parents tend to love and care their children by concerning about their daily life. “One of my parents’ favorite ice-breakers is, “So, have you eaten?” It doesn’t matter what time of day it is or which meal, specifically. Rather than asking each other how we are, we’d end up spending most of the time describing our dinner over the phone.”

“Like many Asian families, we’d become incredibly proficient at reading cryptic emotional signs. There may not be big hugs and open praise, but once in a while, mum would put an unexpected fried egg in our noodles or dad would try and make conversation by asking us to pronounce, then spell every street name he’s ever had trouble remembering. Those, as we’d try to explain to our friends, are their “affectionate” sides.”

**Lighting**

---

As I think of the silent love of Chinese parent, there is a phenomenon that happen often in the Chinese family. As the younger generation grow up to certain age, they would like to go out with friends at night. When they back home in the late night, the light of their parents’ bedroom is still light up all the time. Parents are always waiting for the children to come back. The light is the signal of someone is worried about you.

**Tangible interaction**

“Touchscreen devices have become increasingly popular. Yet they lack of tactile feedback and motor stability, making it difficult effectively typing on virtual keyboards. This is even worse for elderly users and their declining motor abilities, particularly hand tremor.” In my solution, I would like to come up with something that focus on the tangible interaction. Elder are used to learn how to use remote a lot, tangible control would be easy for them to interact with.

---

Concept Development

In the initial concept figure (1), I am focusing on that have the elder and younger be able to know if the other one is home safely without calling. The elder and the adult child will each have one lamp in their living room. There is a smart on each lamp that indicates the lighting from other’s living room. Connect the two homes through the lightings.

Lighting is something people will be aware of immediately when it’s on. People always recognize if one of the family member is home by seeing the lighting from his room is on or not. Lighting can be a language in home. See figure (2)(3)
Small mock-up testing

Both at home

One of them are home

Figure (2) LED Lighting testing

Different colors and frequencies indicate different messages

Figure (3) How people interact with different colors of lighting
Test

Test goal

Be able to know how people understand about different colors, frequency of lights, then to summarize them in a common knowledge. Figure (4)

Observe how they communicate with each other by lights

Test Users

10 People

Age 20 - 25

International Student

Live away from their parents

Most of their parents are calling them every day to make sure they are safe. Sometimes they feel it is unnecessary to have phone calls every day.

They are obvious for people.
Upset / Cool / Do not talk

Plant / Fresh / New life

Flash: busy, super intensive
Fade: soft, relax
Let the testers use different colors and frequencies of light to express the emotions.

Figure (4) 10 people involved in the test to experience how lighting influence people

**Emoji**

Emoji has been used widely in the social medias. People like to send emojis cause it could express the feelings or even a sentence by just one click. It’s informal and easy to use.

“Emojis, like the earlier emoticons, sometimes are aimed at helping readers to interpret all the kinds of language that linguist John Haiman categorizes as "un-plain speaking," including sarcasm, "simple politeness, hints, understatements, euphemisms, code, sententiousness, gobbledygook, posturing, bantering jocularity, affectation and ritual or phatic language." Emojis are an attempt to insure that the message we intend is the message that is received, that we can shore up the fissures, the lacuna, the gaps, disconnects, discordances and plain old misunderstandings that inevitably emerge when one brain tries to externalize its thoughts for another through words. Emojis inherit a long tradition of enlisting visuality to do so.”
“More of our dear readers recognize 😊 as a smiley face than readers would have recognized Pitman’s shorthand as "the," probably even in Pitman’s day. These readers, however, do not necessarily agree on its signification. The apparent iconicity of the 😊 is debatable. 😊 does not represent a word. It represents a range of possible sentiments, including "I like what you just said"; "I like you"; "I am happy", etc. Moreover, smiling itself is culturally dependent. The emoji is not insulated from the maddening or, some would say delightful soap-bar quality of all communication. Emoji Cro-Magnon might have intended the smiley first, foremost and ONLY to clarify the tone of a previous expression so that readers understood that the expression was not to be taken seriously, as in "I'm joking here," yet it has since been used to express a range of other sentiments, and may or may not be used to clarify the tone of a previous expression. The emoji 😊 may point us in the direction of lightheartedness, but even among speakers from similar cultures, irony and sarcasm are always possibilities. As ever, context is king.”

Emoji is also meaningful, which people are having common knowledge on facial expressions. To design a lighting language can be easy and meaningful to be used by the elders as well. Lighting gives people warm feeling and it is easy to be seen. Based on the graphic of figure (5), I have created a language of lighting that has simple and direct meanings as emojis.

---

Emoji to Lighting

Figure (5) Transfer emojis to lighting languages
The final design would be a table top lamp that stand on the table in both of the users’ living rooms. They are separated but also connected together. There three lights on each device. The top signal light is a sign of whether the other one is home or not. It is similar to the chat app that people are using right now that has green light on their names to tell if the person is online. The light that face to you will give you the space to set up the light you want to send out. It is more like a typing space on your phone. And then, when you change the position of the light, the other light will lighting up and be sent to the other person. It is sending out the message that you typed. When the other one receive the message, he is able to do the same thing to prepare a message for you. Some of the interactions of this design are similar to the chat app on people’s phones. The younger would have the conscious of how to use the device based on the similar
interactions they use every day. Also, the elder would be able to learn some of the interactions through the device but not with the touchscreens. See figure (6).

Storyboard

As it shows in the figure (7), when you come home and turn on the living room light, the device in your parent’s home would light up the signal light on the top to show that you are home. After your parent notice that you are home and safe, they could start “talking” to you by adjust the controller with different modes on. At the time that parent sends out the light by change the position of the device, you would receive it that shows on your wall. And then, you would have to do the same thing to prepare a message, and to send out.
Tangible Control

According to figure (8), the control would be part of the device. A. When people are replying a funny message, they always type “haha” as “hahahaha” to emphasize the happy feeling. So when people use this device to express happy or joyful, they would repeating push the control to send orange light. B. The angry and upset mode would be turning the control to the opposite way. The device would show the red light to the other one. C. The work mode would be a switch that tell the other one you are working or busy right now, which is showing the white. D. The sad mode is lighting up with blue light. E. To send a hug / kiss would be sliding the control and the device would light up with pink light. F. The relax mode is showing other yellow light.

Moreover, at first, the meanings of different colors of light on this device would be set the same. In order to keep the clean and simple form of the device, the function of the control may be difficult to remember for first time users. Therefore, it would come with stickers on the
control for instruction and guide. See figure (9). By the time of learning and exploring of the users, they would be able to change the meanings of the colors of the lights.

Figure (9) Instruction stickers for first time Lightalk device users

Figure (10) Prototypes of Lightalk devices
Features

Both of the younger and the elder would be able to know if the other one is home safely by seeing the device. There is no need to make phone call for this.

It is not common for Chinese people to express their love to parents or adult children by saying “I love you”, kiss or hug. Start from the light to express love may help them with it.

The device has some similar function as the chat app that people are using now. The “online” signal, the “sending” function would have the elders get to know some of the habits.

It is easy for the elder to access tangible interactions. No need to deal with the touch screen any more.

Figure (11) Users are using prototypes of Lightalk devices
Reference


