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Optimizing women's Morning Experience:

Design of an interactive cosmetics' organizer

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**Abstract:** Nowadays, wearing proper makeup is proved to be a powerful tool which can help women get benefit in their workplace. However, many employee women face a problem about making everything perfect done in the rush morning time, especially wearing makeup, which can result in a lot of negative effects not only in personal health but also in the family relationship. Suffering from poor morning experience might mass their beginning of the day and consequently ruining the whole day. Due to the boring and complex cosmetics organizers, the problem came to be more severe for them and make the makeup process neither effective nor enjoyable. This project aiming at optimizing their morning experience and offering a positive psychological suggestion when using the interactive cosmetics organizer. The organizer is designed to bring these women easier, more effective and delightful makeup experience which helps them to come over the stressed morning and to be well-prepared for a new day.

The paper firstly evaluates that how the products affect the makeup process in the morning as well as analyzing users emotion activities throughout the whole process. And then it demonstrates the design process by figuring out how to create a comfortable environment and interaction between the product and users. The paper also addresses how emotional design and experience design works in this project which aimed at upgrading women workers' makeup process and their morning experience and finally benefits their life.

**Keywords:** Cosmetics, emotional design, experience design, interactive, release stress.
Introduction

Wearing makeup is not a priority for fashion people or celebrities in our Time. Instead, it comes to everyone's daily life and brings its magic to people. Clients consider women who wear proper makeup is more reliable and confident. Besides, the data shows that women who wear makeup usually have the higher income than those who don't. Women now are more and more likely to regard applying makeup will help them to beautify their look as well as to build up self-confidence and benefit them in the workplace.

However, grooming themselves well in the busy morning time is not such an easy thing. Employed women usually have limited grooming time in the morning, especially employed mothers. With plenty of things to do in a short amount of time, pressure build-up might negative their morning routine, not to mention the makeup process.

Makeup is considered as and it should be a delicate, enjoyable process, the stressed mood, poor designed cosmetics will make this process unsatisfactory while ruining the morning experience. Every woman should have a comfortable, well prepared morning that leaves them with a great mood.

This project is designed for employed women who have makeup requirement. It is trying to help them to reduce the stress when applying makeup thus creating a better morning experience. This design developed an interactive cosmetics organizer for users which is no longer a boxy grid boring storage shelves shape. It offers multiple ways to access and storage cosmetics goods along with different reactions according to users’ actions. These reactions are well designed based on Tai-chi and Meditation yoga theory, which will send out some positive signals that can help users to concentrate and enjoy putting on makeup —the beauty buildup process, who supposed to be so. The organizer is also designed to faster the process by leading users to apply makeup in scientific ways so that they will save time in the rush morning.
1. Problem Statement

The stressful environment and the poorly organized cosmetics storage will cause women’s makeup process to be inefficient and chaotic. How can we help women workers to make their skincare and makeup process more efficient and well-organized in order to promote morning makeup experience as well as creating a prepared beginning of the day for them?

2. Research

2.1 Research on women’s grooming time

In research by Cash and Cash (1982), satisfaction with facial attractiveness is positively correlated with cosmetics use, which reflects a connection between make-up use. Therefore, makeup gives a more positive facial image and feeling of self-satisfaction and confidence. Many research focus on the benefit that cosmetics play on their salary. There is no research done about how women perceive the makeup process, whether is stressful or not and whether this improve their quality of life or not..There is also a relationship between makeup and other activities. For example, Women need to make a decision— to gain more sleeping time by loosing application rime or to sacrifice sleeping time and get up early to apply makeup. This probably make them feel a lot of tension and put themselves in a nerves stage at the beginning of the day. During my early research, I found out that women usually sacrifice other activity times to satisfy the time needed for makeup. The most serious sacrifice is the sleeping time, followed by household activities in the morning, socializing, relaxing and leisure time like communicating with other family members. It happens almost in every women’s life. If these reductions in positive family activities would cumulate, it will finally bring about family problems and affect women’s health. This might also result in a sense of unconfident and affect their whole day work due to the unsatisfied compromised makeup. This problem is more severe to employed mothers.

From this point, we can see the importance of an efficient makeup activities. What if we can create a relaxing, efficient makeup activity for them? I believe this will benefit women by saving more sleeping and leisure time to enhance their health and to help them to be well-prepared for work and have a happier attitude, also benefit to the whole family relationship building by devoting themselves into family relationship.

the New Women Survey conducted in Britain found that UK women spend 52 minutes, US women spend 55 minutes on average on cosmetics usage[1]. In Ya-Ning Lee ‘s paper—MAKE-UP TIME: A STUDY OF MORNING GROOMING TIME IN THE U.S. , she estimate the median morning grooming time for the employed women on
workdays and split them into two subgroups: employed women with high grooming time in the morning (HIG), employed women with low grooming time in the morning (LOG). The HIG group finances that additional 33 minutes by spending 15 minutes less on sleep, 14 minutes less on household activities, 8.5 minutes less on socializing, relaxing and leisure, 8.4 minutes less on caring for and helping household members. These findings suggests that the HIG group is likely to gain additional grooming time by first reducing sleep, followed by reductions in household activities in the morning, e.g. washing breakfast plates, then socializing, relaxing and leisure time in the morning, e.g. talking with family members, or reading the newspaper. And this, in a long term, might hurt whether their health or family relationship. So it does help if we can make this process better and than help them to live a better life.

2.2 The rushed morning experience of female workers

The time people spent in wearing makeup in different facial areas directly shows how they value their makeup effects. Eye area is regarded as the most important part that really influence the whole makeup. Women will be more cautious and serious to these area. They will focus on the details and have higher requirement to it [2]. Women in different position will spent different time to wear makeup. For example, employed women will spend more time than those homemakers as they are more serious to their look. They also have various makeup requirements because of their work requirement and age difference[3].

The situation that women feel stressed experiencing a busy morning turned to be true from some of my interviews. Several women complained that they usually have a rush morning dealing with houseworks and their makeup activities, which might drove them crazy sometimes. They feel jealous that if men need 10 minutes to be prepared for work, they need additional 1 hour or more, which force them to get up early to settle everything down and avoid others yelling” hurry up we are going to be late! hurry up!!”. Another case shows up in my interview that every time you want to wear makeup quicker, you take more time eventually as your mind is in tension and this might cause a simple action wrong, you might need to redraw your eyeliner or spend unexpected time to clean up the mascara dropped on your face. This might result in a sense of unconfident and affect their whole day work due to the unsatisfied compromised makeup.

To get a directly sense of women rush in the morning, a surprised thing that I happen to see in the internet might help. Someone saw a women was using her mascara at the same time of driving. The car keep moving slowly in the morning traffic flow and she was staring at the rearview mirror. This is a dramatic evidence that how much stress that women burden in terms of organizing everything including wearing makeup.
A lot of articles that you can find in the internet that teaching people the tips that you can make a quick makeup in the morning to rescue your sleeping time. It slowly turned out to be a fact that women need to get up much more easier than man does to squeeze out some time to finish the makeup which be proved as an important factor of attractiveness and it related to the income.

Compared to men, women are more likely to get morning madness, especially employed mothers. From my interview, there is a working mother who lost her husband in an accident so she raises her two lovely 3 years old kids by herself. I can tell that she is overloaded because of the housework, her job, and her kids education. This is more sever in the morning. She has to get up at 5am, prepares breakfast for kids, go to the supermarket to get daily food supply. She usually comes back at 7, waking up her kids, taking care of them, feeding them and making them ready to the school. She only get 15 to 20mins to groom herself, wearing makeup quickly and at 8:15, she must leave her house to work. She points out makeup is vital for her, a working mother who should support the family and make every work beautiful. And she noticed that, every morning, when she get the point to makeup, she is almost worn out, mentally and physically.

### 2.3 Benchmarking

Based on the product in the market, the most cosmetic storages are multilevel boxes with drawers and grids (See Fig.1-1). users only have one direction access to the things which is from the front. This makes the interaction simply and baldness. For those storage boxes, the most obvious problem is that the storage grids are usually small, which cause inconvenience when you want to take something out or put something back. What’s worse is, these products are not helpful to makeup process because they are not follow the user action mode. They will even cost more time when wearing makeup to get everything prepared.
In terms of materials, most cosmetic storage use plastic (mostly acrylic) which is transparent and hard. As the storage usually contains a lot of cosmetics, the transparent will make the mass inside obvious. These storages usually has specific size of drawers and grids which means it can only hold the most general shape cosmetics. However, there are plenty of cosmetic things have their own design for their brand, which can not fit in these grids. For example, the “Tom Ford” lipstick has the same size compared with “YSL” lipsticks. The only difference between these two is Tom Ford lipsticks have sharper corner than YSL, which make them would never fit in the grids “designed” for lipsticks like YSL does. (See Fig.1-2)

3. Design goals

3.1 Accelerate makeup process and save time.

The directly wish is to fasten women’s makeup process in the rush morning. The design aiming at offering more organized and scientific area for cosmetic storage which will help to make the applying process more efficient. Users saving their precious time compared to those who use traditional cosmetics storage box.

3.2 Change the way people interact with these products

As the multi access to the storage and its organic shape, the product is designed to create interesting interaction with users. Instead of using boxy storage and repeating the boring movement, the design develops different interaction movement with user and make the process full of joy and ease.

3.3 Bring users better morning experience, release their morning tension.

Based on those two goals above, the design has another goal which is deeper meaning at the spiritual level. The product intends to reduce women’s stress by interacting with the product and helping them focus on the delicate beauty building process. It express a kind of positive psychological suggestion which can help them relax and better prepare themselves for a perfect day.

4. Methodology

1. In the ideation stage, I used different materials to explore the possibility or the appearance of this design. Firstly using the cardboard to develop 2D version. After evaluated the first round prototype, I added the soft material, like aluminum foil paper into the prototype to find more potential looks and turned it into 3D mockups.
I also combined software modeling with mockups. I used modeling software like Fusion 360 and Rhino to develop quick models roughly. Once got the general idea of the appearance of the design, I turned to aluminum foil paper and card board to make a physical one. Measuring proper dimensions and dividing scientific sections is much easier to be done in the physical models. As soon as I got the right proportion, I turned back to software and make changes based on my physical mockups.

2. During the testing, I used variety of methods to get feedback and evaluation of the testing models. I gave the same model to different users who have totally different cosmetic collections to test capacity and adaptability. Also, for testing every round prototypes, I gave them to same user groups to evaluate the time consuming and the level of stress, feelings.

5. Design Progress

5.1 Inspiration

5.1.1 “PAUSE” APP

I got my inspiration partly from an APP I saw, which called PAUSE, a new mobile relaxation and meditation experience for a calmer state of mind. This app got it idea from Tai Chi and mindfulness theory. PAUSE brings the act of ‘focused attention’ to the mobile screen. With a grounding in cognitive psychology and physiology, PAUSE uses a patent-pending technique to activate the restoration process and the relaxation response.

The screen detects deliberate, focused finger movement – creating meaningful feedback to hold the user’s attention. This simple, powerful exchange triggers the body’s ‘rest and digest’ response, allowing a user to regain focus and release stress in minutes. Using the slow, continuous movements of Tai Chi to anchor attention onto our phone and away from our negative thought – making the portable devices a tool for relaxation.[5]

From this app, I realized that there are two totally different path to bring people peace. One is to create delight feeling directly by using the product or through the interaction it create between users and product. This requires the action users respond to the product should make user happy, relax.

Another method to help users relax and feel happy is to defeat the negative thoughts, instead of building positive ones. Like what PAUSE is doing, it doesn’t create positive experience directly, but it will help you to forget the bad ones, so that you come back to a relax status again.

This is like a midpoint that is the the final goal. Users who want to arrive the midpoint, they can either go from the beginning of the line or the end.
This is a virtual thought in emotion design. Both the Addition and the subtraction can get to the point that
designers want to be, while various directions need to have various solutions.

5.1.2 Yoga

Yoga is regarded as a group of physical, mental, and spiritual practices or disciplines which originated
in ancient India. It has been studied and may be recommended to promote relaxation, reduce stress and improve
some medical conditions such as premenstrual syndrome[6] Even though Yoga is not an exercise only for women, it
contains a lot of positive meanings for women. Yoga advocates self control, inner peace and balance which are the
very right things that this design project wants to present to the users.

Yoga using slow action and smooth music to help people calm down. Yoga exercise is not as fierce as lots of
other sports like racing sport events or ball games, it requires slow, smooth and stable movement which need highly
concentrated mind and patience. This is the reason why a lot of people will choose it as a relax activity to do when
they are in tension, physical or mentally.

An important part in Yoga is to find the balance, which is also a main mental feeling that this project wants to
create for users. The balance idea almost run through every yoga schools. The idea of balance means more than that
body being in equilibrium, instead, it pursues more inner peace and calmness. This is very similar that this design
project want to propose to users — not to be physically slow down, but mentally. Users are expected keep the proper
pace of applying makeup, but find the balance and peace in their heart which can help them to deal with their work
and life better.

Besides, the visual impact is considered to be a very powerful tool to give hint in psychology. The graceful
stretched body curve would give a direct sense of confident and beauty.
5.3 Ideation and Testing

5.3.1 Original ideas and testing

Referring to the idea of balance, the seesaw jumped into my mind firstly. The first round of ideation started from simulating seesaw (See Fig.1-3). The storage will swing in reaction of users’ action, like taking things out or putting them back. The angle created by swing is according to the weight change happened in the storage. Users looking at the moving storage while they applying makeup, interactions occur throughout out the whole process. The storage will find its balance in the end which can spread this balance to users and calm them down.

However, during the test, the result showed that it is hard to control the pace of swing if the storage looks like a seesaw somehow. This might even increase users’ tension instead of reducing it.

Another problem showed in the testing is that the interaction are limited from the front. Users can only access the storage from the front, which can not satisfy my desire of creating a very open area for users to interact with. The storage did not look well from the side as well.

5.3.2 Second stage Idea developed
I started to move to more extent and more three-dimensional ideas which allow users to access it from any angle. It is all-round open to users which gives them more possibility to play with it.

I used aluminum foil paper and cardboard to mockup the second round ideation. The main idea is to create a mountain view with fluent curves and at the same time, it creates sections which are well functional (See Fig.1-4-1). I kept the bottom round shape and left the center of gravity in the middle of it. The design makes the storage works like a “Daruma” that can never tip off (See Fig.1-4-2).

5.3.3 Developed Ideation through 3D Software

After that I turned into 3D software to refine the shape and use the 3d printer to print them out and test their capacity and users satisfaction (See Fig.1-5).

5.3.4 Develop and extend to plan 2

During the user interview, a lot of women worker wish to have a storage which has more operability so that they can decide the storage sections based on what they have. According to the user research, over half of women
workers who participated in the research will buy new cosmetics every month which lead to a consequence that their
daily cosmetic collection changes a lot every month. These users need more room to adjust the storage area by
themselves to match their purchase habits.

I started from a round base with slots in a regular arrangement (See Fig.1-6). I used stiff felt as testing material
and wrapped it to create sections. Some wood sticks are glued to the felt in order to keep it in shape.

In the test, the felt turned out not to be the perfect material if you want the it to be smooth and fluent in the
corner when you bend it. So I turned to use EVA foam which is soft and good surface tensity.

In order to find a proper way to connect the wall to the base, I test couple connections and grade their
operability from easy to hard according to users feedback.
6. Final Design and Analysis

6.1 Overview

There are two final solutions in this design project for two different group of users. According to the research, users are divided into two groups. One is those who have small amount of cosmetics and they are not a fan for buying new ones. Such users typically have very high usage rates for each of the existing products which make their cosmetic collection more stable and fixed. Another group of users are totally living in an opposite way — they have a huge collection of similar products and they are always in a mood to buy new products. In this case, their collection for everyday work use is more random than the other group does. Because of this, their cosmetic storage need more flexibility to adapt to their high frequency of changing products.

The design should be able to give them different storage plans which can satisfy their various need.

Even though these two plans are different in the way of achieving desired functions, they have something in common — they both based on the thought of offering people peace and relax by creating interactions and break the traditional boring motion mode compared to using the old boxy storages.

Compared to the traditional storages, these two solutions greatly reduce the time of finding things, taking things out and putting back as they are 360 degree accessible and everything in your vision range.

6.2 Design Details

6.2.1 Plan One — for women workers who have limited cosmetics and not change them frequently

Plan one is a solid storage which has organic shape with a rolling bottom design. It has four main sections, one for long tools like brushes and pen look cosmetic like brow pencil etc., another three are for normal boxes shape or plate shape cosmetics (See Fig.1-7).
The whole design uses the continually curve to build its shape and smoothly connects with the flat store area avoiding any sharp corners. Besides, the fluent curve change separate different areas naturally, as well as creating barriers preventing cosmetics from falling down during usage.

The rolling bottom make the design more interesting. When users turning the storage, it not just turn but also roll to different angle according to the movement. But finally it will go back to a balanced position which suggest users to find their own balance and relax. The interaction between users and product reduce their morning tension quietly, which are easier for user to accept than just announce relax aloud.

6.2.3 Plan Two — for women workers who change their collection frequently.

The final design plan 2 gives user a lot of room to operate (See Fig.1-8). It offers users a round base with curve fence and regular arranged slots, a long piece of foam band with adjustable sticks and couple of short band with adjustable sticks. Users can wrap the band into the shape and insert the sticks to the proper slots that matches their cosmetic collections needs and create small sections by inserting short bands (See Fig.1-9). The adjustable sticks can help users to finish the setup step as it can self-adjust to the proper position.

The sticks attach to the band when users receive the product. Each stick is able to move a certain distance in order to fits the different wholes freely. The seam that allow sticks to move is just a simply cut which is almost invisible. Each seam is 2mm long and this is the room for stick to move. This also make the setting has ability to self adjust, which can help users to arrange the bands much easier.

The curved band together with the fence of the base can create a scene of mountains rising and falling, from far to near. As I researched above, mountain views can bring people of sense of vast, relax and peace. The whole design avoid having any sharpe corners which visually helped to ease users stress.
The material also cooperate with the appearance to create a soft and comfortable feeling. In traditional storages, sharp sound occurs when the cosmetic things touch the plastic every time you put something back to it. The Eva foam solved this problems as well thanks to its ability to absorb the sound. It will reduce the sound when cosmetics touch each other.

6.3 Color Choosing

Colors can not only be seen, but also be felt. Every color elicits a different and unique emotional response in the viewer. Even the same color, the different vibrancy will make huge difference. For example, light green and dark green invokes totally different emotion that light green is more energetic while dark green is more graceful and calm.

As my desire it to help users calming down, colors which might be aggressive or having warning meaning light bright red, light orange are not good choices here.

Yellow is often associated with happiness especially lighter shades who play on the happiness aspects, reminding users of summer and the sun. It creates an energetic vibe that can encourage people, and is instantly recognizable.

Green is considered as the most balanced of colors, playing a role of bridge between stimulating, warm colors and calming, cool colors. Greens somehow, represent nature which can bring people a nature and comfortable feeling. Also, green is doing well in standing out, but more softly than the warmer colors.

Blue usually means calm and serenity, and its calming effects make it friendly. Light blue is the color of water and the sky, it brings refreshing and free feelings. It can also be an energetic color while retaining calm. Darker blues are more sombre and safe.

Because most people interpret pink as feminine, the color is popular for targeting female users. It is also traditionally used with love and romantic themes.[7]

According to these, I designed several different color plan for users to choose. As the users may have totally different characters which have various requires, using different colors can offer them different feelings to match those requires.

For example, users who are easy to be nerves might use the blue one that can help them to calm dow; users who are Low self-esteem might use the yellow to make them energetic and confident; users who have obvious feminine characters might use the pink one and users who is active might use the green one which can bring them closer to the nature world.
Each design plan has 3 color schemes which allow people to choose according to their need and personal preference. (See Fig.1-10).

6.4 User Feedback

I gave the two designs to users to test its function and users’ satisfaction. They can chose either one based on their need. Most testers announced that they were surprised as they never thought a makeup storage can look like this, not still, not boxy, so that they are very happy to take a try.
After set up, they are required to document their makeup time and their inner activities. Compared to traditional makeup storage with drawers, 30% of users save 5-8 minutes if using my design, over 50% of users save 3-5 minutes. Generally speaking, these two design are succeed in faster users’ makeup speed (See Fig.1-11).

As for the emotion activities, most of testers marked a happier and more relax level in comparison to those who use the old design ones. They said the soft shape and the soft sound reduce their nerves more or less, and the not still storage make the whole makeup process alive, feels like having a conversation with the products (See Fig.1-12).

They are asked to score their mood from 1 (terrible) to 10 (wonderful) after they finish their makeup, and it turned out that testers using the new design storage will mark 2-4 score higher than using traditional boxy storages.

The dates shows that using this design will not only fasten the process, but also bring users better experience and higher satisfaction with the process. Users began to enjoy the makeup process as well as to set themselves free from the morning stress. The active interaction between products and users seems to be successful bring them some delight feelings and as the satisfaction for the outcome is higher, users slowly become more confident day by day. This address the purpose has been achieved in this design project, female employs morning experience are optimized through the more efficient process and higher satisfaction which is not only for the product but also for themselves.
7. Design Impact

7.1 The influence of emotional design

Design is not just about making things beautiful but a lot more how it make us feel, how it influence us, experience etc. Emotions affects us before our rational and cognitive processes start working. Before we start thinking we already have an image in our mind. On an average day we experience a wide range of emotions. Every second that we experience or think, our emotion response happens. People feel disappointment when they have to get up early, feel happy when they see their loved ones, feel angry when the train they are traveling on stops without forewarning, or feel frustrated when they struggle to open a jar.

Emotion design is very unique in each case as human’s feeling is complicated. In my case, people are putting in a setting that they are nerves and stressed. Because of this, design an environment or create an atmosphere might not satisfy our desire to have a strong connection to people as people in tension are so easy to ignore the environment. So, starting from their inner part and help themselves to create the target feeling by themselves, might works much better than doing that from outside world. This is the reason I chose my design breakthrough point to be their hearts, giving them positive psychological hint. And it turns out to work well.

7.2 Design understand people and help people

By doing this project, I found out that women workers’ stress in the workplace and family is much more serious than I expected. Even the idea of equality between the sexes has already been around for years, a lot of women still suffered from the feeling of inferior which force them to push themselves too hard to work and to please their family. Through this project, I realized that changing the whole environment to build a fair society is not enough, the more important thing is to build women’s self confidence from the inside of their heart.

A lot of details which affect people’s life quality are ignored by people. What designers can do is to find these problems that people did not realized yet. In this design project, in the beginning, people may think it is very normal to be tight and busy in the morning, the storage should be stayed still and boxy. But when this project going deeper and deeper, users start to realized that having an interesting, interactive, relaxed morning, enjoying the delicate makeup applying process, is a wonderful and beautiful thing which brings them a fresh, happy and confident day.
8. Conclusions

To develop the design, I will work on upgrade the appearance and materials. In hoping of make the design fits for most brands’ cosmetic products, the appearance, size and the section need to be optimized as well so that the storage would have better applicability.

However, the greater meaning this project inspire me is to explore more possible product that can help people having better daily experience and in a long term, benefit their mental health. The project will benefit the working women, how can I spread the idea “care people from the inside out” into other product and benefit every women, even men, children, and elders.

I believe that we can do much more than just giving people better environment, and industrial designers, can do much more than designing a functional product.
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