Redesign Ming Furniture

Wenjing Qi
wq1116@rit.edu

Follow this and additional works at: http://scholarworks.rit.edu/theses
R·I·T

Redesign Ming Furniture

by

Wenjing Qi

A Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of
Fine Arts in Industrial Design

School of Design
College of Imaging Arts & Sciences

Rochester Institute of Technology
Rochester, NY
May 1, 2017
Committee Approval:

Alex Lobos  Date
Advisor / Committee Member

Mindy Magyar  Date
Thesis Advisor / Committee Member
ABSTRACT

Ming-style Furniture is a type of traditional furniture, mainly developed between 15th – 17th century in China. It owns lots of positive consideration in furniture design, such as the human factor’s consideration, the appropriate proportion, ergonomic design and so on. However, as the time gone by, some elements had been outdated, and meaningless for the modern users. If there are no changes on this type furniture, it might be only existing on furniture history books, couldn’t be used by modern people widely. From another side, this furniture has strong Chinese cultural elements and style, which means it would be hard to be accepted by people who don’t familiar with the traditional Chinese culture. Thus, I would redesign it with modern-style design consciousness.

KEYWORDS: Ming-style Furniture, furniture, redesign, style
1. INTRODUCTION

Ming-style Furniture is a type of traditional furniture, mainly developed between 15th – 17th century in China. It has the positive points, which is worth exploring, and valuable today, such as the appropriate proportion and ergonomic design, using tenon-joint structure. The structure ensures the stability of the furniture, the temperature and moisture cause the wood to expand or contract, and the tenon-joint structure absorbs these changes without deforming the furniture.

However, as the time gone by, the old furniture has become outdated. It’s hard for modern people to accept it, because it’s hard to attract people with a historical design, and also hard to be accepted by people who are not familiar with Chinese culture. To prevent the style from appearing only in history, I want to redesign it, to make it more popular around the world.

Compared to other kinds of furniture, Ming Furniture has its own unique character. For example, the North-European design is famous for its simplicity; Japanese design is famous for integrating and showing the concept of Zen. However, Ming furniture hasn’t developed mature enough in the modern world. Thus, I would like to redesign it, to make it more acceptable to modern people, while being popular in the furniture area around the world.

To decide which elements would remain or throw away, I would do some research based on a number of audiences. For some elements that show the specialty of the furniture, I would keep it, such as the tenon-joint structure. In contrast, I would discard some points that don’t fit modern people, like using the straight and square lines to represent the rigid society instead of curves.

The aim of the project is to modernize the Ming Furniture, to match the modern furniture design standard better, and then make it be more popular on the modern market around the world.

2. ANALYZE ON DIFFERENT ELEMENTS OF MING FURNITURE

Ming furniture was designed and developed mainly in the 15th-17th century in China, influenced by the society, politics, and people’s need at that time. Analyze these influential elements would be helpful to decide, which parts in the furniture should be preserved, while which parts should be discarded.

The mainstream design style of an era would be influenced by the society at that time, from another side, the design would reflect the character of the politics and society of that era. The Ming-Style Furniture was developed mainly from 15th to 17th century, some elements of the furniture showed the characteristics at that time, but not fit the people’s needs today.
For example, the official hat chair (Figure 1) is a typing chair in the Ming-style furniture system, the form of the top of chair is coming from a kind of official hat (Figure 2), which is derived from an official position in Song dynasty and stood for a higher social status at that time. Thus, this element of the chair is used to show the status of the people who sit on the chair. This was a kind of element, which reflected the class character at that time, not now. As the feudal society had been collapsed, and the policy and society had been changed a lot, this kind of elements are symbolic meaningless for nowadays’ people, so I think this kind of elements could be changed, it could be modified depending on the other need in the modern world.

However, there are some elements based on the people’s need that still useful for the modern people, these are the elements I would remain it. For example, the round-armed-chair (Figure 3) owns the round-armed part, which could let people lean back and relax, the people also could put the arms on it to feel more comfortable. These elements were based on the human factor consideration, which keeps using for the modern people, so I would remain it.

The elements I would consider the aspects of materials, structure, form, and function. These four aspects I would consider them separate, to see whether I should modify it depend on the modern people’s need.
2.1 CONSIDERATION ON MATERIALS

The main material of the Ming Furniture is wood. Based on the condition at that time, wood was the best choice. Compared to the bamboo, stone, metal, wood was from nature, which means it would be easier to be acquired. Furthermore, wood was easier to be shaped and manufactured, and wood grew up almost everywhere, it didn’t have the geographical limitation.

However, as the technology developed, we have more choices on the furniture materials’ selection now, such as the plastic, fabric, leather, glass and so on. We could select the right materials to depend on the people’s need. For example, if we want to let people feel more comfortable, we could consider fabric; if we want to design a chair that looks more modernism, we could use the acrylic. Thus, the materials have not limited the wood now, we have better choice depending on the needs.

2.2 CONSIDERATION ON STRUCTURE

The traditional structure is mortise and tenon joint (Figure 4). This structure has several advantages. Firstly, it makes the furniture easier to be assembled and disassembled, which means it would be easier to be transported. Secondly, if we combine the furniture with a nail or glue, then after a hundred years, the nails might be rust, and the glue might not work as before, but with the tenon and joint structure, it could be used for hundred of years without any damage. Timothy Dahl said, “There's a reason the mortise and tenon joint has been used for thousands of years -- it can be carved using basic woodworking tools and it'll last for ages.” Thirdly, the wood would expand or contract based on the temperature and the moisture, the mortise and tenon joint could hold this change without deforming the furniture. Fourthly, it would lower the price to repair. If there’s a chair leg damaged, then disassemble the furniture and replace the damaged leg would be effective. There’s no need to discard the whole chair, and the furniture could be used as a new one. It is lower the cost and artificial work.
Thus, with the wood material, I would choose the mortise and tenon joint structure. If I use some other materials, I would choose another effective and useful manufactured way.

2.3 CONSIDERATION ON FORM AND FUNCTION

On the form and function, I would consider more on the people’s need. As the time changes, the mode of life has also been changed a lot. Thus, I would change the form and function based on the living style of modern people. For example, the traditional writing desk is very long (Figure 4). The reason is the traditional paper is a kind of paper named Xuan Paper, which was made with a long dimension, it resulted in the paint and write work the, traditional people made, was very long (Figure 5). Thus, it needs a long desk for its normal work.

However, the modern people usually write on a smaller paper or use a computer to finish most reading and writing. This means that the modern people don’t need such a long desk anymore, so based on the user’s need, I would shorten the size of the desk to fit the people’s actually needed.

3. SURVEYS ON THE MODERN PEOPLE

I make the surveys for two reasons. Firstly, I would like to redesign the Ming Furniture, to let it exist in the normal market, so I need to make a survey on what the people really need, whether from the function or the style. Secondly, I wouldn’t let the redesigned furniture exist only in the Chinese market, I want to redesign it for the people around the world. As the traditional Ming Furniture has lots of symbolical meanings inside, which would be meaningless
for the people who don’t familiar with the Chinese culture, so I make a survey on which symbols the people are more familiar with and interested in.

As I started at chairs, I select three most representative chairs in the Ming Furniture to make the survey. I choose the people from design major and ordinary people both to make this survey because the designers would consider more on the reasonable design aspects, offer more professional ideas. While the ordinary people would consider more on what they actually need, offer more directly ideas. Thus, I choose both of them.

![Figure 6: Chair Samples & Survey Record](image)

The three chairs I chose are used on different occasions, have different dimensions and own its specialties (Figure 6). I got the different information from different people, some of them could be used for most of the people, and some of them were unique. For example, lots of people think that the round-armed part offers a place to let the people put the arms on it, and lean back, which would let the sitting person feel relax and comfortable. That’s why they choose this chair. There’s one person impressed me, he noticed the sitting area of this chair is larger than the other two, which could let him sit down more unrestrained, because he is fat, so he cared more on this. Based more than 50 surveys, I choose the round-armed chair and official hat chair to redesign.

![Figure 7: Chinese Symbol Survey](image)

Moreover, I make another survey (Figure 7). Because I’m not sure which Chinese symbols are more popular around the world, so avoid using unfamiliar and confused Chinese symbol in the furniture, I make a survey on the familiarity of the Chinese symbol. The most familiar symbols are a drum, Tai-chi, and corn. Some of the people know the umbrella and bamboo, but the reason they familiar them is they could see these stuff in their livings,
they don’t familiar the Chinese behind them actually, so I didn’t choose these two, even they got the higher numbers.

4. TESTING ON THE CHAIRS

I test the chair mainly on the dimensions, to test the comfort level of the chair.

The first one is official-hat chair (Figure 8), I design the seating area larger than the people’s need when people sit on the chair, the chair’s seating height is 450mm, so people couldn’t seat there, and lean the back. The aim is to design for the public occasions, where people should look more formal actually. With this consideration, the central part of the back wouldn’t offer the function to let people feel comfortable, so I get rid of the central part. And the seating area is 510*550mm.

The second is round-armed chair (Figure 9), I design this chair with a seating area fit people perfectly, in a 460*380mm, and the round-armed part is perfect fit the people’s arm area with several angle test. The height of the back part would fit the people’s back need comfortably. Therefore, this chair, I consider the human factor more and could offer more comfortable need to people. As the central part of the back offer a support for the people’s back, I increase the width of it to let it more comfortable, and the height of it is along with the people’s back bone, so it won’t let people feel hurt when the bones conflict the back parts.

5. REDESIGN THE CHAIRS

5.1 SIMPLIFY THE MING FURNITURE

I redesign the chair with two directions.

The first direction is to simplify the traditional Ming Furniture, simplify the outlines, the decorative details and the symbolic parts, to make it simpler than the previous furniture, and design it in a modernism style. I simplify it step
by step, to see which one is better to match the requirement I need, which is simplified enough, but still have a unique character.

5.1.1 APPLIED ON THE ROUND-ARMED CHAIR

The first chair is the round-armed chair. In the surveys, the audiences care more about the human factor aspects of this chair, for example, the round back which support the people’s back to lean, the armed part which could place the people’s arm on it, the size of the sitting space could let a fat person feel unrestrained and comfortable. With holding these, I simplify the furniture without losing these functions. Figure 10 is the step to simplify this chair, with holding the seating’s function. I change the sitting area’s materials from two to one, which makes it looks more simple and integrated. Besides, I simplify the round-armed part and legs, to minimize it step by step.

![Figure 10: simplify the round-armed chair](image)

Furthermore, in the modern days, the wood is not the only choice to make a chair anymore. I try to use acrylic to make it. With the acrylic materials, it would be one part for the whole chair. The acrylic would let the chairs look more modern, compared to the wood.

5.1.2 APPLIED ON THE OFFICIAL HAT CHAIR

The second chair is the official hat chair (Figure 11), as the top of the chair has some status meaning at the traditional time, which has been meaningless in the modern days, I choose to discard this part. However, this part also could be a specialty for the whole chair, because the official hat chair use more straight lines, making in a serious and respectful way, no curve lines in the outline and the top part is the only part to show the life of a chair, therefore, I keep it in the latter steps.

![Figure 11: official hat chair](image)
There are some other Ming Furniture I selected to modernize it with the same way, for example, the long writing desk and the incense burner table (Figure 12). In the writing table process, I just get rid of the decorative parts of the desk and keep the previous dimension. Because in this desk, there are no drawers to put books or other things inside, so I keep this dimension, which could let the users put books on one side of the desk, and use another side. This would let the users pick up books more direct and convenient, without impacting the normal desk use.

With the incense burner table, I get rid of the detailed decorative part, too. Previously, this table was used for put incense burner. As the times gone by, people began to put vase, porcelain, and other decorative stuff on it. Therefore, as this is a table for supporting decorative stuff, the table shouldn’t be too attractive, the simplest is the most proper for this table.

5.2 INTEGRATED TRADITIONAL CHINESE DESIGN ELEMENTS INTO FURNITURE

The second direction is integrating the traditional Chinese elements into redesigned furniture.

5.2.1 COMBINE WITH MUSICAL INSTRUMENT

The first element I choose is the musical instrument because there’s a word saying: “Music without borders.” Music could transfer the emotion to the audience, even if the audience doesn’t understand the music’s language, they could feel the right emotion the musician want to express, because of no matter the language, country, and religion, as a person, we have the common emotion to something. For example, we feel sad to the earthquake, no matter where it is; we feel happy when we do some helpful things for parents and friends. Therefore, music has the power to let people regardless of the borders. The design has the same power, we use the products produced by designers from
different countries, no matter where the designers come from, and what’s his belief. We could feel relax in a comfortable chair, feel backaches if we seat on a harder chair without human factor’s consideration for a long time. Thus, I want to integrate the musical instrument with the furniture.

I choose four groups, each group I use some details to show the musical specialty of it. And for the whole furniture, I keep it clean and simple. I choose a chair, a stool, a desk and a bed for a set, and choose for musical instruments (Figure 13). In the bed furniture, I make it have the actual musical functions. This is a kind of traditional percussion instrument, in the bed redesign, I simplify the musical instrument, too. Keeping the function of it, then when the people lean on the bed, if they feel boring, they could play with the musical instrument and have fun.

![Figure 13 (a): musical instrument integrated into Ming Furniture](image)

![Figure 13 (b): musical instrument integrated into Ming Furniture](image)

5.2.1 COMBINE WITH BAMBOO

![Picture of furniture with bamboo](image)
For the second element, I choose is bamboo, because the bamboo is a kind of plant everyone knows, and it has the special meaning in Chinese culture. The bamboo has bamboo joint which helps the bamboo to grow higher and higher, however, the bamboo needs to stopping growing higher for the joint grow, thus, there's a word saying: “More haste, worse speed.” It means sometimes people should stop to saving power, for stepping forward longer. I use this element to combine with shelf (Figure 14). With the bamboo joint of the stick, it would be helpful for preventing the stuff on it slipping down the ground.

6. EVALUATION FROM THE CUSTOMERS

As I designed two different directions on the redesign Ming furniture, and there are different kinds of furniture. I have no idea on which one I would choose, and which one I should give up on further working. Thus, I take a survey of the customers to get some ideas and inspirations.

Figure 15: the round-armed chair

For the round-armed chair (Figure 15), different people choose the “right” one based on different reasons. For example, Rosmery chose the second one because of the central cotton sitting area, which might let her feel comfortable. She also chose the fourth one, because of the simple shape and outline. For another person named Luke, he chose the fourth one, because he thought it looks modern and would fit him space better. However, there are still some people choose the most traditional one, like Luc, he chose the first and second one, because he thought the round-armed part offered a better rest compared the third and fourth one. When I asked him to choose one from the first and second, he chose the first one, because he reckoned the first one has a wider back which would be more comfortable compared to the second one.

Figure 16: the official-hat chair
For the official-hat chair (Figure 16), I also got the meaningful information from the customers. For example, a person named Camiua chose the fifth one, because she thought the curved arm part would be comfortable to let the arm rest, besides this, she liked the nice shape of it. Another person also chose the fifth one but based on the different reason. A man named Jeff told me that he was confused on the top part, although I told him where it came from and the meaning of the shape, he still thought confused, and he thought the top part was more traditional, so he chose the fifth one. Furthermore, there was another person named Maynor Gonzalez offered a new perspective on these chairs, he chose the first and second one because he felt royal from these two chairs, and he thought the first one inclined to the male, the second one inclined to the female.

Figure 17: the long writing desk and the incense burner table

For the desk and incense burner table (Figure 17), someone gives me the useful suggestions on how to improve it, also someone has the different ideas based on the different needs. For example, with the writing table, a girl named Rosmery thought it was simple and beautiful, however, for her need, it's better to own the storage space. I thought if I add the drawers, it would influence the uniform of the desk, then she showed me an example named Vanity Console Dressing Table produced by IKEA, this table could be opened the storage space from top part, she suggested me that I could design limited space on the desk to own some storage space. As the desk is very long, so I think this is a useful idea to fulfill the storage function without impacting the normal use. For the incense burner table, I told the customers this is used for placing some vase, ceramic, and other decorated objects. The main function of this furniture is more inclined to decoration, instead of actual living need. Devin is a person who grows up in NYC, and born in China when he was 4 years old, he moved to NYC, so he knows some Chinese cultural. With the incense burner table, he liked the second one, but when I ask which one he would buy, he chose the third one, because he thought the second one still had strong Chinese style, which would impact the home's uniform space. Thus, from a buyer's perspective, he preferred the third one.

For the musical instrument furniture (Figure 18), different people give the different ideas most based on the feelings compared to the function consideration. For example, a man named Pete chose the drum stool because he thought it would be easily moved and would be used the most times. He thought he wouldn’t need the desk one, because it's long and narrow, for placing the decorated stuff, he would use it. For the bed, I think I could give up on further working on it, Pete suggested me to separate the instrument and bed, he liked the shape of the instrument, and he
thought it could be hung on the wall as a decoration, and the bed would need the side board, which would let the bed similar to the normal bed. Also, someone thought it wouldn’t be comfortable and hard to uniform the space around. Thus, I would give up this one.

For the bamboo shelf (Figure 19), a man named Vinicius thought this one would be nice furniture for decoration, he would like to put the objects on it and he would still see the wall after side. Another person liked this because he liked the shape of the top part, it looked like architecture for him, and the bottom part could storage stuff.

From the surveys, I got lots of useful and meaning ideas and inspirations, some people chose the different one based on the different needs, for example, with the incense burner table, someone chose the second one because they thought the bottom board could storage something, as she owned a limited space living room, however, the other one would choose the third because of the shape, regardless of the storage stuff. As different people have the different need, based on this survey, I would improve my design in the future based on the market condition.

7. CONCLUSION

I choose this topic because I want to explore more possibilities on the traditional Ming Furniture. This is a kind of traditional design, and it considers aspects on the human factor, the construction, the materials, the form, and function. It was a mature furniture system in the past. There are a lot of positive aspects, but in nowadays, it always
comes out on the auctions, not the usual market and the usual people’s home. This is because it’s a kind of traditional furniture, some consideration based on the condition at that time couldn’t fit the modern world. The people who don’t familiar with the Chinese culture would be hard to understand this furniture. From another side, as most of the people from other countries don’t familiar with it, so it’s hard to prevail around the world. Then the result is, this furniture could only show on the auction for the people who understand and like it.

However, from my perspective, there are a lot of elements could be meaningful till today, and I think it could be used and prevail with a more modern and concise style, that’s why I want to redesign it.

I would redesign it with two directions, making it more concise and simple, to match the modern aesthetic standard better, to let people who even don’t know more about the traditional Chinese history and background, they would still like it.
REFERENCE


