

## A Study on the Sensibility Elements of Furniture Material

Sung Hee Cha<sup>1</sup> and Ki Choi<sup>†2</sup>

### ABSTRACT

Increasing consumers' individuality and their desire of revelation, owing to accumulation of economic wealth, are making furniture designs more differentiated and various in its method and theme. Trends of contemporary furniture designs are changing from pursuing the functional efficiency of mere usage of their product in the past to satisfying the desire of consumers with full consideration of their emotional aspects, that is, the design that helps consumers communicate with products. In these trends, it is necessary to analyze the emotional factor of consumers for the examination of their emotional desire and apply its analysis to the furniture design.

**Key words:** Furniture design, sensitivity element, sensibility ergonomics, image technology.

### INTRODUCTION

#### *Purpose and background of the study*

Today furniture design became more distinctive and more diversified, due to the development of manufacture technique and consumers' accumulation of riches. Consequently, modern furniture freed from the characteristic of old furniture, function and easy to use. In short, consumers preferred personalized furniture, which was able to express own egos by distinguishing themselves. Thus, furniture design became more diversified.

An important factor of past furniture design, technical part, which is easy to use were almost solved, due to manufacture technique's rapid progress. Therefore, following current trends of consumers' growing needs for individuality revelation, sensitivity design implied furniture, which satisfies consumers' sensitivity takes spotlight nowadays.

Because of influence of industrialization, the market is full of low price and good quality goods. Furthermore, consumers' quality first approach is getting out of place.

Furniture design is rising not as manufacturer friendly design but as a communication tool between consumer and goods, which meets consumers' needs by fulfilling users' convenience and considering consumers' sensitivity at maximum level.

Consumers' budget – first mind has changed to consumers' quality – first mind and eventually the era of character – first comes.

According to analyzing the trend of furniture design by production side, the furniture design

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1) Ph.D. Candidate from Chung-Ang Univ, Part-time lecturer.

2) Department of Interior & Furniture Design, College of Design, Kangwon National University, Samcheok 245-711, Republic of Korea.

† Corresponding author: Ki Choi (Email: woodpeople@kangwon.ac.kr).

is changing to 'Small quantity batch production' from 'Mass production' as an agent, which connects the past, the present and the future.

Furniture design contains non linguistic sensitivity, which includes the sense of sight, auditory sense, the sense of smell and the sense of touch among the five senses. For these understanding and receptivity of the sensitivity, we need to understand and analyze not only consumers' 'Reason operation' but also 'Sensitivity operation'. Interaction between consumer and furniture must not be put value on simple technical operation of consumers' usage of furniture. In the context, furniture design needs to keep the change to the design, which includes sensitivity element closely for furniture consumes' sensibility experiences in its mind.

Therefore, this study would like to grasp the character of furniture material as well as research and analyze consumers' sensitivity elements. Then it would like to present where the future furniture design needs to go.

## **RANGE AND METHODS OF THE STUDY**

This study is to analyze sensitivity elements by checking elements, such as the feel of a material, pattern and color, among furniture's design elements, which is shown at '2008 I Saloni'.

We will carefully study how sensitivity element, which takes critical part in furniture design, was implied and what changes have taken place.

Sensitivity phenomenon, which occurred when people use goods in real life, can not be grasped as a convenience. Besides, sensitivity phenomenon is not sustained by intractable process's sensitivity, which was taken from the beginning by peculiarity of outlook.

Thus, Firstly, we study furniture material and consumers' standards for choosing goods through bibliographies, former studies, Web sites and references.

Secondly, we make study elements of consumers' needs for sensitivity by the feel of a material, pattern and color, which is shown by furniture's sensitivity approach.

Lastly, based on sensitivity changes theory of furniture material, we present the way of future furniture design progress for furniture's sensitivity elements.

## **ANALYSIS OF SENSIBLE DESIGN ELEMENTS OF FURNITURE MATERIAL**

### *Change of furniture material*

Growth of industry brought a considerable change to furniture material.

In the past, Korean furniture was made of natural wood, due to relatively rich source of woods in the country. Cutting, adhesion and the surface painting works were made by hand. Wood has good durability and delicate work is available. Furthermore, Wood's splendid pattern has good value as a decoration, which doesn't need extra works. However, industrialization adapted furniture production for mass- production. Consequently, increasing demand of wood caused shortage of wood supply. Finally, imported wood was increasing for meeting increasing demand. Nowadays, 90 % of wood supply is done by imports.<sup>3)</sup>

Natural wood has shortcoming, even though it is seasoned properly. However, modern furniture material is made by minimizing such a shortcoming.

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<sup>3)</sup> Kang Shin-Woo. 2003. Modern furniture design. p115

Consumers are well aware of wood's beautiful pattern and warm and soft feeling. Therefore, veneer and synthetic wood, which are able to keep the feeling of wood by minimizing swelling and shrinking, are developed for furniture production. In the other hand, some furniture entirely applied metallic material, which was used to be subsidiary material and decorative purpose, for emphasizing cold and hard feeling, contrast with previous material, wood. Besides, organic compounds based furniture is also made by heating and pressing various synthetic resins in the state of flux, which become high molecular substances.

These synthetic resins are plastic. It has advantage of cutting goods' cost by easy mass – production, though facility investment cost is high, due to the properties of material. Plastic is easy to change its chemical composition and ability. So not only heating manufacturing by varying intensity, elasticity, ductility and plasticity temperature but also producing polished and colorful production is available.

In addition, dyeing leather, glass, earth and stone are also used as furniture material. As mentioned above, though various furniture materials are developed and used, traditional material, wood still takes big role, due to merits in itself.

#### *Change of consumers' taste and choice*

Contemporary consumers are living in the world, which is filled with various goods, due to economically being richer and technological progress. Richness made consumers have sensitivity value, which allowed consumers to choose good quality product among overflowing products as well as having a high standard of living. Consumers want to express themselves and show their originality by buying and owning the goods which have their own way and differentiation. And sensitivity value helps consumers to do it. This tendency is shown especially from young consumer group. They usually lead the trend.

New products release arouses early consumers to buy, though the cost is high. Once they own the products, consumers' interest is strong, due to the satisfaction of owning it, which others do not possess. However, when mass production allows consumers to be able to hold the product in common, the satisfaction of owning falls dramatically as well as the preference for the goods. After all, limitation of products stimulates the desire of comparative advantage, which represents the desire of having better quality and higher performance products than others. Consequently, consumers try to apply products' functionality and practicality to their real life. Consumers' material prosperity stimulates not products' basic functional side and convenience but desire of mental richness, which means consumers want and choose the product which satisfies their desire and sensitivity.

## **ANALYSIS OF SENSIBILITY ELEMENTS OF FURNITURE MATERIAL**

### *Sensibility elements of furniture material*

#### *The feel of a material*

The feel of a material means distinctive feeling of each material. The techniques of surface treatment vary the feeling of materials.

- Wood – As natural material, wood has beautiful pattern and visually warm and tender feeling. Wood seems hard or light, depends on strength, which is varied by sorts of trees.

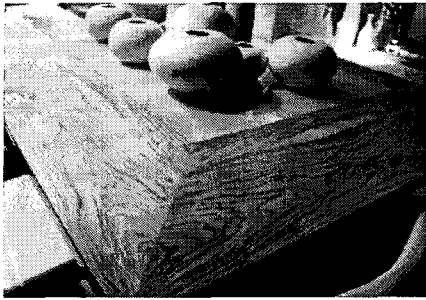


Fig.1. 'I Saloni 2008'-Aster.

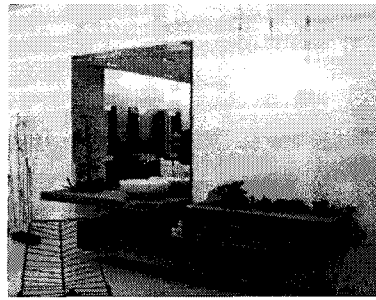


Fig.2. 'I Saloni 2008'-Arlex.

• Metal – The hard feeling of metallic material makes metal be used for office fixtures, desk, chair, cabinet and so on. Metal, which is solid and durable, is also used for works. Though metal was used to be looked away from home use, recently, it is used for contrasting with other materials and empathizing. Metal material has gloss and the feeling of cold and strong.

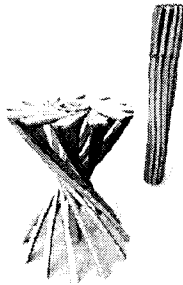


Fig.3. 'I Saloni 2008'-Giovannetti.

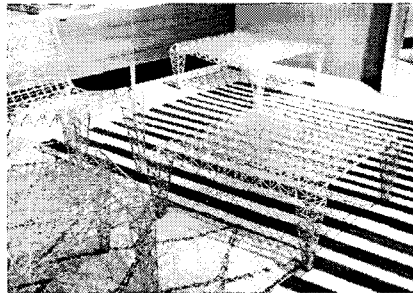


Fig.4. 'I Saloni 2008'-FERLER.

• Plastic – Because plastic is light weight, solid and easy to mold curved surface, it is widely used. Foamed resin allows producing either hard or soft goods by adjusting solidity. Besides, adapting elasticity makes plastic express either soft feeling or warm feeling. Depends on color, brightness, saturation and gloss, the feeling is varied.<sup>4)</sup>

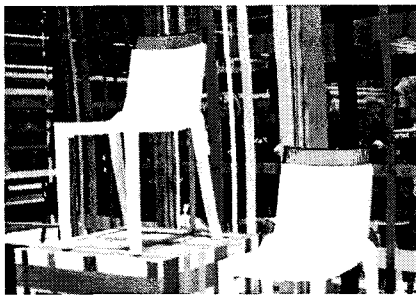


Fig.5. 'I Saloni 2008'-Vertigo-Moroso.



Fig.6. 'I Saloni 2008'-Hi Cut-Kartell.

<sup>4)</sup> <http://www.naver.com>

- Leather – In the past, leather was mainly used for sundries, such as bags, shoes and wallets. Recently, it is also used for furniture and decorative goods like couches and furniture cover. Leather's thick tissue and solid surface needs tanning for using as goods. Reptilian leather's unique pattern and texture causes different quality of various materials. It is usually more polished and more luxurious than general leather.

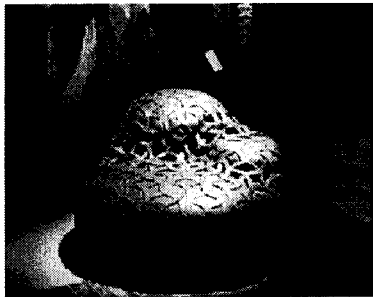


Fig.7. 'I Saloni 2008'-Flap-edra.

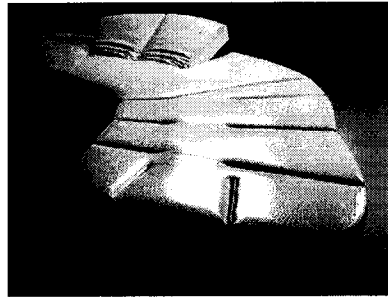


Fig.8. 'I Saloni 2008'-Trico-Arlex.

- Glass – The glass is transparent and polished. The grafting with metal and wood is tries by various ways. Sand blast technique for surface makes glass translucent deadening material, which has soft feeling.

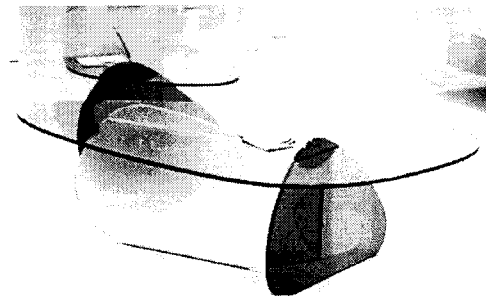


Fig.9. 'I Saloni 2008'-Tonelli.

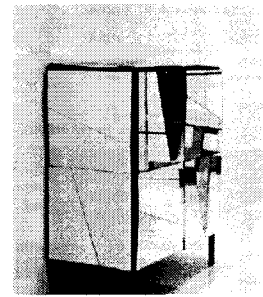


Fig.10. 'I Saloni 2008'-Tonelli.

### *Pattern*

Pattern is the way of expression, such as repeat of fixed form, style and type. The feeling is mainly differed by line.

- Straight line Straight line is upright, hard and it also has concise shape with infinite dynamics and masculine feeling. The sea line has secure, calmness and quiet feeling. But repeat use of it could cause monotonous. The vertical line means dignity and authority and it is reminded of nobility, rising and formal feeling. The 45 degree tangent has feeling of cold and strain of an advance. Meanwhile, 135 degree tangent has indolence and steady feeling.<sup>5)</sup>
- Curved line Curved line has free, refined and feminine feeling. A free curved line is attractive but chaotic.

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<sup>5)</sup> Min Kyung-Woo. 1995. Understanding of design. p178

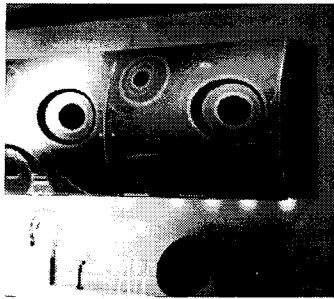


Fig.11. 'I Saloni 2008'-Aster.



Fig.12. 'I Saloni 2008'-ArtiFort.



Fig.13. 'I Saloni 2008'-Missoni.



Fig.14. 'I Saloni 2008'-edra.

*Color*

Furniture's color has different impression of color and nature by implied color. And sensitivity character is decided by entire image. A reaction of color needs neither imagination nor thought. But it is naturally felt by color. It automatically stimulates our sensitivity. Especially, the primary color and unmixed color have clear character.

Color is divided by cold color and warm color. This classification is based on human sensitivity, rather than physical factor. Color's cool and warm feeling appears with temperature. Cold color has coolness, coldness, freshness, tension, strain and anxiousness. In addition to those emotional feelings, size seems shrunken and the surface seems hard. Those colors are called constricted color. And especially low brightness color has contractility. In the contrast, warm color has warmness, tenderness, psychological stability and comfort feeling. Furthermore, it makes things look bigger. High brightness color has good expansibility and it is called expansive color. Yellowish green, green, purple and violet have changeable feelings, according to neighborhood colors. Observer's subject, depends on the condition of circumstances would differ the color, which mentioned above.

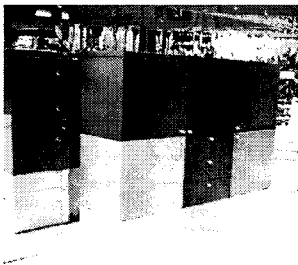


Fig.15. 'I Saloni 2008'- Paesaggi Italiani-edra.

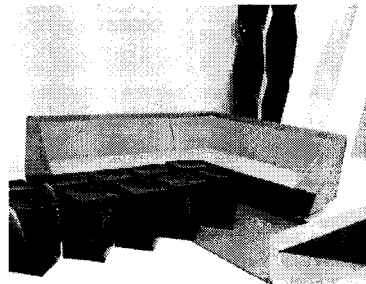


Fig.16. 'I Saloni 2008'- PARRI.

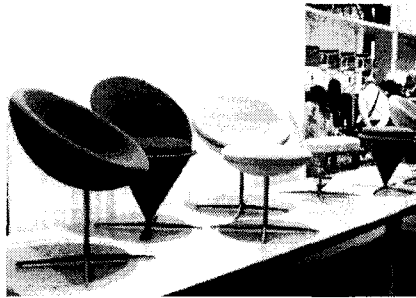


Fig.17. 'I Saloni 2008'-Cone-Vitra.

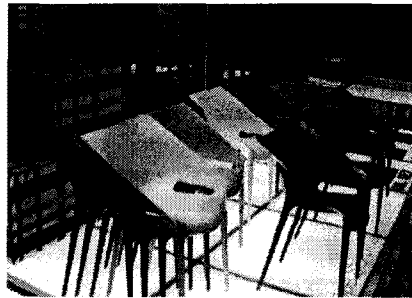


Fig.18. 'I Saloni 2008'- DR. YES-Kartell.

### ***Interrelation between furniture material and sensibility elements***

Sensitivity element, which consumers have in real life, can not satisfy with functionality and practicality. And psychological elements, which consumers have when they encounter products at first sight, can not last as sensitivity elements. So to speak, sensitivity elements are differed by extremely private and subjective elements, such as consumers' knowledge, experiences, culture and circumstance.

Furniture user has the first sensitivity stimulation by furniture's exterior when he encounters product. The feeling of a material, color, pattern and circumstance affect the first sensitivity stimulation considerably.

Consumers are secondly stimulated. They feel the feeling by touching products, auditory sense by knocking products and look for smelling elements by smelling products. Among such sensitivity elements, sensitively stimulated feeling of material, pattern and color are groped as new expressions. And it needs to be considered and decided from production planning step with correspondent with the shape for stimulating consumers' desire of sensitivity.

In general, formerly unwelcome and unused materials are utilized as sound materials nowadays. While the era of heavily dependence on wood as furniture material has gone, unprocessed stone, rubber, cement, wood can be nice materials. The increase of preference of furniture, which uses various materials, shows sensitivity elements changes with the era as well as change of consumers' consciousness. Finally, as an important factor of changing designs, material diversification, along with diverse visual elements (feeling, pattern and color) will detonate not only diversification of furniture image but also consumers' spiritual sense and change of life environment.

## **CONCLUSIONS**

Modern consumers are able to meet plentiful and various furniture products, which are developed by the progress of technique. Improvement of the standard of living, which is caused by richness, brought seeking of the differentiation of life style. The differentiation of life style means sensitivity factor, which is brought by using products, which is away from functionality and practicality. Consciousness like 'My own possession' and 'My own', those are different from the

others, is main reason of stimulating sensitivity. And it detonated the diversification of furniture product as mentioned the above.

At last, the word "Sensitivity" becomes an inevitable element, which has to be considered for furniture manufacture and design.

Therefore, there are several changes occur to today furniture design. Freed from existing monotonous image, design pattern changes to liberal and creative way by using seldom used finishing materials, such as metal, concrete and waste articles. It showed well in '2008 I Saloni' today furniture design's characteristic is creating naturalistic but structural and artificial but organic curves line by not using one material but using various and segmented materials.

To show different feelings, varies surface treatments, though using same material. Otherwise, to empathize contrast feeling uses various materials in combination. Those characters, which accentuate materials' neutrality, stimulate consumers' interest.

Regarding colors, the production intends to have more comfortable feelings by blending strong primary colors or implying white, sepia tone to cotton fabrics and natural materials. Furthermore, by printing geometrical pattern and oriental pattern to those implies materials, more mysticism is empathized.

Thus, sensitivity elements will take a bigger role for future furniture design. And to meet this time's needs, we need to revitalize special field, which studies sensitivity elements, and study it. To meet consumers' needs, we need to introduce not general design concept, aesthetic element, which pursuits visual and formative delight, but human sensitivity elements. Under current and future trend, which weighs on user friendly designs by recognizing users importantly, consumers' sensitivity elements will be placed as an important factor, which determines development of furniture design.

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