Research on the Application of Fun Experience in Plush Toy Design*

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Abstract—In today's information age, with the increasing material and cultural needs of science and technology, economy and people, the development trend of industrial design has gradually shifted from practical and convenient to the design direction of seeking novelty and individuality. In the major aspect of industrial design, toy design also occupies a very important position, which not only affects the next generation, but also gradually develops from the field of children to the field of teenagers and even adults.

Keywords: plush toys, interaction, humanity

I. INTRODUCTION

The status of plush toy design in China is facing a very serious challenge. As a major manufacturer of toys, production is not the main aspect for China to gain a foothold in today's highly competitive international toy market. Design has become the number one enemy of sustainable development in the field of domestic innovation. Plush toys also have their own characteristics in the whole kingdom of toys, not only because it is deeply loved by the majority of consumer groups, but also with the extension of the surrounding commercial products, the sale of plane products has a great relationship.

II. THE MEANING OF TOY DEVELOPMENT

A. The concept of toy design

Whether with animals, dolls or cartoon characters as the theme of the plush toy products have attracted the attention of people of all ages, love. Put aside its practical value to look, regard beautiful adornment only also holds a certain share in the market. Nowadays, people's material life is getting better and better, and the pursuit of beauty is increasingly reflected. They are no longer satisfied with the practicality of products, but pay more attention to the design beauty of their appearance and modeling, which is also where designers need to invest a lot of time to study deeply. How to ensure the practical value of the product at the same time, through the in-depth design of the appearance modeling, to obtain more profit space has become a problem.

B. The importance of good design

Since the 1980 s, is the international cartoon product development period. During this period, the contents, norms and forms of various cartoon industries were developed completely, and great progress was made in art and technology. That is, during this period, cartoon and its surrounding toy products gradually began to appear and developed at a fast speed, becoming the mainstream of cartoon industry chain.

In China, still lags behind the development of cartoon plush toys design, and those abroad has identified, more interesting and innovative designs, by contrast, China's modern cartoon toy design is relatively late start, not only that, cartoon plush toys design talent is very lack, cultivating talents of professional plush toys design schools are much rarer.

On the contrary, the more society develops, the more we want to return to a more real, free and worthwhile form of existence. "Play" also has a very important value and meaning in modern life, it can not only bring us happiness, but also can create high return value, so many modern enterprises and individuals are built on the basis of play and fun [1].

On the other hand, if we live in a space where we can have fun in our spare time, we will be more positive about the pressure that comes from life.

III. PURPOSE OF TOY DESIGN

Firstly, this paper analyzes the domestic and foreign markets of contemporary cartoon plush toys to study how to design contemporary cartoon plush toys. Compared with some excellent cartoon plush toy product design works abroad, how can domestic designers create more dynamic and creative toy products? Domestic cartoon plush toys lack of real creative thinking, creative modeling and attractive modeling design; Facing this a series of problems, compared to have plagued the designers and consumers a number of years, for the cartoon toy product designers, it is time to overturn the traditional design concept, create more unique, novelty toys products, to have close contact with the design aesthetics, design, psychology, etc.

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The theory basis of in-depth research and discussion, combined with his clever conception, reasonable design more products with rich imagination.

A. The culture connection

The word toy means an instrument used to play with. The English word for toy is “toy”, “plaything”. Because of this, for many years people have been under the impression that the role of toys is only to please children. In other words, people always think that toys are dispensable in life and have no direct connection with people's daily life.

Toy is not only a kind of goods used for entertainment, and it can reflect the history and culture of a country or even a specific nation from its own design, revealing its unique side full of true emotion. Throughout the history of human civilization, toys have also left a page in the long history of mankind. As far back as the neolithic age, primitive human toys appeared in China, such as stone balls, pottery, pottery whistle and so on. It can be said that when human beings entered the history of civilization, the prototype of toys also took shape [2]. For example, Shanxi's cloth tiger is the representative of Chinese folk cloth toys, such as the toy in "Fig. 1".

![Fig. 1. Chinese traditional toy.](image)

Nowadays, toys have integrated entertainment, leisure, science and technology, education, fitness and auxiliary therapy, giving new connotation to their original concept of pure play [3]. Toys in the past life is not what can be called rare thing in the world, it is only used for people to enjoy and entertainment gadgets, and small objects, but its development history and the history of human civilization as old, never had a gap, compared with the other lost civilization, the history of toys is so tenacious vitality, has a long history, a perennial with human's material and cultural life and there is almost parallel tracks. This alone tells us that toys are worth paying attention to and creating.

B. Market prospect

In front of all kinds of new, beautiful, clever, traditional and interesting toys that have never been seen before or attract people's attention, people of all ages will find their innocence like a child. Innocence will never come again, which is why we cherish and miss it.

It can be seen that when most people love toys, they regard them as an individual with a certain life meaning and as a form of existence like a friend, rather than as simple toys themselves. With the progress of science and technology, people's work and life pressure is increasing, and the pace of life is gradually speeding up. For some office workers, toys sometimes act as an object to vent in their life, bringing them joy while helping them get rid of trouble and vent pressure.

In today's society, everything focuses on entertainment and enjoyment, which is a new way of life and more acceptable to the public. With the development of new things, some of the older things with the advance of time quietly disappeared. The slowly disappearing toy culture is exactly what people really need to learn and learn and inherit. Just as the development of toys in China has a long history, colorful stories and vivid images are worth thinking about and learning [4].

With the changes of times, the development of history, the progress of science and technology, and the precipitation of thousands of years of culture, toys have completely changed in form and function, which can be called a revolution. People have also begun to generate new ideas on the definition of toys. Plush toys also highlighted their importance and creativity in this revolution. More and more people started to enter this field, exploring new and more attractive ideas in the world of plush toys, and also looking for new technologies to support the whole design [5]. Technology will be replaced by newer and more advanced technology with the passage of time, and toys will also be eliminated by the trend, but it is undeniable that the beautiful memories it brings to people are indelible by time and technology.

C. Interactive design

Unique personal creativity added to the design of plush toys will also be reflected in this design, mainly to cater to the interaction between people and toys to make a certain design, not just as a beautiful decorative product [6]. Combined with the design ideas of color and materials, a series of factors affecting the design of plush toys summarized above are integrated into the design of plush toys.

Here, put forward the following design principles:
- clear and distinct design theme;
- the positive effects of enhanced color and emotional needs;
- attach importance to the interaction between people and toys;
- unified the design scheme into a series of product designs.

The influence of color on human emotions and needs, including satisfaction, pleasure, joy and so on, is a positive influence. The positive impact will expand people's thinking to a certain extent, enhance people's ability to act, and also
enhance people's endurance ability to overcome various
difficulties and pressures in life.

These positive factors are added into the design in order
to provide players with effective psychological comfort and
positive guidance in the process of entertainment, such as
freshness, sense of interest, sense of achievement, sense of
belonging, pride and so on. In the design of plush toys, we
should use a variety of design factors to strengthen positive
emotions, such as color, shape and touch, and try to reduce
the negative impact of those adverse factors, because we are
playing with toys at the same time, but also a process of
feeling life. Therefore, enhancing the positive influence of
color and emotional needs, to explore how to design happy
and cheerful plush toys, in the whole design process is very
important.

D. Interesting design

Toys are intended to emphasize their "play"
characteristics, so the interaction between toys and people is
the most basic element in toy design. From the previous
discussion, it can be seen that "play" is not only play and
games, but also the behavior and actions at different levels,
such as appreciation and play habit. All these actions need to
be interactive with the player to bring pleasure to the user.
The richness of "play" not only determines the richness of
toy types, but also determines the richness of players' toy
experience. Only in the constant change, can let a person
have a sustained sense of freshness, interest will be more and
more intense.

E. Serialized design

In plush toy design also should notice to use the brand
effect and the unification of design to strengthen the
emotional connection between the buyer and this will cause
the user to form a good emotional memories, and can guide
the user to the preference to the emotional and the product
properties are similar to other peripheral products, eventually
inspire user trust and dependence of the brand, forming a
loyal consumer form, this is a very good virtuous circle.

So, when carries on the plush toy design, consider to this
potential value of the brand, to improve the quality of the
toys consciously, to use the brand to increase the value of
toys, ultimately lay the foundation for the brand formation,
buyers usually don't buy toys around aimlessly, tend to be
drawn to a particular brand or category.

IV. CONCLUSION

Cartoon plush toys design based on the main decisive
factors involve: the further research of material, modeling,
padding, color, combination of aesthetics, design, psychology, etc. On the basis of the theory of understanding
and study [28], cartoon plush toys as design object, toys and
interactive experience of integration in the whole toy design,
by means of the knowledge of the theory of design and color
again to explore the emotional needs of the consumers and
how to let the consumer through the plush toys for good
mental and physical satisfaction. Come to the following
conclusion:

- From the perspective of the current situation of the
development, these days, toys are no longer just a
kind of to entertainment, recreation, it can from its
design reflects a country and of a specific national
history, cultural background, reveals its unique side
full of true feelings, also for designers interpret and
express the inner world the true.

- The selection of color and material is a key factor for
the success of a plush toy design. From the
perspective of different consumers, people at different
ages have a full understanding of their taste and
psychology for color, and then through targeted and
reasonable color design, people's physiological and
psychological needs for color can be satisfied.

- Several principles of interactive design should be
introduced into the design of plush toys: clear and
distinct design theme; the positive effects and
emotional needs of enhanced color; Attach
importance to the interaction between people and toys;
Unified and branded scheme.

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