The Design Thinking In the Background of Big Data

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Abstract. Modern society is in an era of information explosion. Many scientists have pointed out that we have experienced a rapid expansion of information, the situation can be compared with the big bang. Under such a background, Design industry will have an unprecedented innovation revolution. Big data era is the inevitable trend of the development of information society. We must follow the trend of the times and make quick adjustments and follow up in the technology, system and value idea. Only in this way, can we get rid of the heteronomy vulnerable position in the next new round of international competition and grasp the direction of development.

Keywords: Big data; Design; Creative thinking.

1. Introduction

We live in an era of data explosion. Let's look at an example that in the context of 2009 H1N1, Google's search terms process 450000000 different data models, through predicting and comparing with the actual influenza cases recorded in 2007, 2008, the United States CDC, and the use of a specific mathematical model to predict what areas will be the outbreak of influenza, the results of the correlation coefficient of 97%. According to the traditional information return process, the new influenza virus will have delay of a week or two weeks .For the rapid spread of the disease, information lag for two weeks is fatal. And Google through the massive data analysis to get the scope of the flu, and provide a more efficient prediction tool for the world. Farecast is a typical example of success on big data applications in the field of business. The company founded by the - Oren Etzioni, it uses ticket sales data to predict the future price of a ticket, designed to help users predictions in the purchase of air tickets, and make the credibility of the ticket price trend forecast out for consumers to diligently. Farecast system's prediction the accuracy is up to 75% uses nearly one hundred thousand million price records, making passenger who use of fare forecasting tool for the purchase of air tickets, saving $50 per ticket. And so much data processing left the big data technology will not be able.

It is also because of us in an unprecedented information era, people have so much data, which provides us with the use of big data analysis and processing means to create new value. Perhaps some people think that the era of big data has not come yet. In fact, big data technology has be penetrated, it is applied in the filtering of spam, Sina Weibo technology platform, Google translation and input text automatic error correction.

The prediction is the core of large data, it is in similar views with the outbreak of "Balabaen". In fact, people have used to grasp the data for a variety of analysis from the past, so as to predict the economy and other aspects. Just into the big data era that the speed of data explosion grasp is in the growth, so the analysis of data point's method has become the key to the release of large data. This is more instructive to the current society.

2. User research will become easy, and it can achieve the overall user feedback.

In such an era background, the data acquisition of consumer will more easily. Before we design a product such as furniture, we will find a lot of potential consumers to sample, including many kinds of sampling, such as ergonomics, human body parts of the size model, weight, pressure, and so on. We will find a lot of people in the production before the crowd, as much as possible to collect data, so that the average value will be more closed, so as to adapt to more consumers. But in the big data era, the acquisition of each consumer's data is possible, the sample is equal to the overall user, this is a big data era highlights a feature, sample = overall, such as the feedback system of Apple's mobile phone, each single consumer can return to their own use of information to help develop manufacturers

to modify their own products, so that the better understanding of consumer is demand. Once the ICSID makes the industrial design as the following definition: on the mass production of industrial products, the designer with training, technical knowledge, experience, visual and psychological experience to give the product material, structure, structure, shape, color, surface processing, decoration with new quality and specifications. Here, the designer of the "training, technical knowledge, experience, visual and psychological experience", as a decisive factor that in the quality of the product can be given. But this is a big data era, which will be completely subversive. Consumers use the data will tell you what kind of products they need, they are users of the product that can be improved in those areas, there is no function never to use, there is no function still not satisfied, these problems are in the collection of user data and resolved easily. This will change the existing design concept and push the industrial design to another level.

3. Private custom will be easy to achieve and Substantial popularity

I have discussed this problem with my friends, before the advent of industrial mass production, if you want to wear a new dress, the only option is to tailor shop.

Tailor will make the right clothes according to the figure of a person. But the result is that the clothes is very expensive. At the same time, productivity is low, not everyone can wear new clothes. The advent of the era of industrialization, the problem is solved. Clothes are no longer tailored, instead of the appearance of different sizes. The same clothes appeared in the M, L, XL, XXL, S and other sizes for people to choose. Machine production instead of manual production, clothes can be large quantities of market, enrich our commodity society. But it comes with a number of problems, for example, clothes are not necessarily appropriate. In the hands of the industrial age, clothes are tailored to the size of each person. We can know that 170 of the height of the people, some people have a long arm, some of the arm is a bit thick, it will be differences each individual. The tailor can be adjusted according to each different body, but it can't be achieved in the era of big industrial production. We can only choose the clothes to wear the size of XL, so it is possible that my dress length, but the cuff is tight, or just the clothes cuffs, shoulder width is not enough. This is the emergence of the era of socialized mass production. The current solution is to produce different versions to suit different people. But in the era of big data, personal use of data collection and feedback becomes very simple, which will cause the change of the mode of production. Private customized personalized products will likely occur. Seven billion people in the world have customized 70 different clothes. This will not be the clothes to buy back because the size is not appropriate and waste may.

4. Design trends are easier to predict

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The essence of big data is to predict. No matter the question "Is it going to rain tomorrow?" or "This summer is a very popular purple?", what the big data can do is forecast. We can know something from the cases described in the book. Forecast and actual results are very close after data analysis by the engineer. Engineers are to make accurate judgments. Many times we are concerned with the reason of the results. Cause and effect relationship has become the most fundamental problem in scientific research. This situation will be changed in big data era. Data analysis can directly tell us the results and the reason of result is often not important. Giving an example, we can give a hypothesis that streamlined vehicle sales will be better in the next year. According to our previous ideas, we will need to understand the "why the next year, a good model for sale", because we are trying to find out the cause and effect relationship. The use of such relationship to predict the year after Is it right? Will have the same results, or consumers prefer SUV. We try to grasp the cause and effect relationship. But in the big data Era, if we can get good sales in the next year by the massive data analysis such as MVP sales are good, the reason led to this will be not important. This will change our way of thinking. We will not be entangled in the cause of the problem, we jump out of things and get results directly. By this way, we have a more accurate grasp of the popular trend in the design world.

5. Conclusion

Thinking about big data is a double-edged sword. It will not only bring convenience, but also produce a series of problems. As in the previous discussion. The core of the data age is forecast. Such a prediction can be close to reality, whether it is the weather or the trend. This makes the world's creative defect. We can easily improve a product, but it is difficult to create a product which will change the world. Take the MP3 as an example, before the invention of MP3, no one would believe that a lot of people would need to enjoy the music in their daily life. Even thinking about that enjoy music in sports. There is also nobody look good like a board like products will be popular in the world. Before the birth of this creative product, people think that there is no such requirement in an arbitrary manner .Creating people's needs is the highest standard of design. This will be difficult in the big data Era, before the birth of a new product, you don't have to do with it. Another disadvantage of the data era is the increase in production costs which is very easy to understand. When each of the requirements are added to the product to improve. The production will be increased and the profit will be reduced. At such a rapid arrival of the era of big data, we still have a lot of knowledge to learn and there are many technologies need to be studied. In the design of the company's planning, it is also necessary to take into account the big data for the future development of the company's opportunities and challenges. For companies with large amounts of data, we need to consider how many digital data and which can be used to analyze and deal with the value of large data. For example, the current domestic Sina, Tencent, Taobao, etc, have mastered a large number of users of data information. These data are the business value of an enterprise in the big data era. Our industry should have such a forward-looking awareness, is to use a better method of collecting and using data. Here is a very good example, the luxuries delivery order furniture company which the factory is located in Foshan. It will make all furniture for data processing, when customers need to buy furniture, the designer will come with field measurements. Designers according to the measurement data analysis and comparison, select the style of the customer's favorite furniture. This is the direction of the development of the design industry in the era of big data. Big data era is the inevitable trend of the development of information society, we must follow the trend of the time. We should make sure that we can make quick adjustments and follow up in time on the technology, system, value idea. Only in this way, we can get rid of the heteronomy vulnerable position in the next new round of international competition and grasp the direction of development.

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