
The Inherited Traditional Culture of Automobile Molding DNA Design Research

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Abstract

Design of automobile modeling DNA is the core that makes enterprises establish a good and unique brand image to win on market. This paper described the definition and meaning of production DNA, also discussed the composition of production DNA and researched the design ideas of production DNA from both macro and micro aspects. Finally, it recommended would research the traditional culture into the past, present and future of three periods, explored the idea of traditional culture that the automobile modeling DNA inherited under these three periods and analyzed with the red flag car as an example. This research provided a guideline to help automotive corporations to implement brand strategies, and helped to design autos with Chinese elements, sense of the times and fashion trends and can perform the modern mental outlook of Chinese people.

Keyword: *automobile modeling design, automotive products family-based, DNA of product, inherit traditional culture.*

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1. The Concept and the Signification of Production DNA

DNA stands for Deoxyribonucleic Acid, which belongs to biological category, the professional name is Deoxyribonucleic Acid, it is the main chemical composition of the chromosomes, it is also the material basis of biological gene composition at the same time, sometimes to be called "Genetic Particle". Via semiconservative replication, DNA completes the extension of similarity and innovative between parents and children, so that it guarantees continuous development of all kinds of species, and meantime it ensures uninterrupted evolution of the colored species on Earth to be a colorful biosphere.

These are the reasons why putting the definition of DNA before starting to explain about production design. Corporation R&D products should also like organisms, the genetic information of products is also stored in the production DNA, which are with family characteristics, each generation compared to the previous generation of products, would continue with the semiconservative replication, would have similarity, inheritance and a number of innovations.

Production DNA is the unchanged soul of enterprise, different generation product features of enterprise would happen some minor changes, but the core of the things would not change, and its molding also would not change, such as Mercedes-Benz, BMW, Audi, Nokia, Apple and other famous enterprises, regardless of how many times it is replaced, the molding of their products are always in continuous innovation to maintain a certain inheritance, the methods used may vary but the principle is the same, people always can tell many brands products easily even they do not see any signs. The "principle" is the enterprise product image, it is established gradually through inherited by various elements, changes and carry forwards. While, these elements are production DNA, which shows that, production DNA is the strong weapon for enterprises to participate in international competition, it also has a key significance for enterprises to form their own style, establishes and continues the brands and corporation images, creates a consumer culture and develops consumers brand loyalty. [1]

2. Component of Production DNA

Enterprises will establish production DNA gradually in the development of new products, which is actually to be integrated with corporate culture so that to form visual identification features of unique enterprise products, generally the expert field used to do the research with dividing the production DNA into two aspects of dominant factors and recessive factors [2].

The dominant factors of production DNA are similar with the DNA in the biological world, namely, the external image of the product. The external image of the product is including both external and internal part of the identification features—the external identification features of products are including line, shape, color, material, texture and structure etc. while the internal identification features of the products are including operating interface, operation mode, mode and quality etc.

The recessive factors of production DNA are similar with the recessive factors of DNA in the biological world. It is the profound level content, which is reflecting its character traits. The corporation own history and culture, the connotation of brand, the manufacturing techniques, technical features and some other unique factors are the composition of the recessive factors of production DNA.

It is necessary to converge the dominant and recessive factors of production DNA when developing and designing new products, which means that, identifying characteristics of the product should be merged into corporation culture, with corporation culture as its core, by means of converting from industrial design methods to identifying characteristics of products.

3. The Design of Production DNA

The most important element of researching production DNA when developing and designing new products is that research on production DNA extraction, which has the immeasurable significance for both products design and enterprise product brand planning. Production DNA extraction should be explained from two aspects of macro and micro. [3], [4]

From the macro perspective, starting from corporate culture, brand features, visual identification feature and etc, corporations will extract the appropriate recessive factors of themselves peculiar development of production DNA, using into guiding development and design of production DNA. The corporate culture is formed with the need of its survival and progress in a certain environment. It is also the organizational culture that is formed gradually during engage in the economic activities. It plays a lead role in the entire project and has a significant impact on corporate image, design concept and product image. [5], [6] The formation process of the corporate culture illustrated that it has corporate culture heterogeneity, different corporations have the unique culture due to their differences in facing the operating environment, development history, philosophy, vision and other factors. The every product of corporations contains their culture, what production DNA conveys is revealing corporation deep culture heritage through their styles, the right design strategy can make the design of production DNA meet the business development, to identify the unique DNA in its corporate culture, so that making distinct differences among corporate products, therefore to form the style and features of their products.

From the micro perspective, starting from the standpoint of product semiotics and semantics, finding out various elements of dominant factors of production DNA, after repeated conclusion, put these appropriate and the elements which can represent corporate features to apply into each generation of the product family. Per element of the composition of the product can be used as the elements of the production DNA, the point is to find out the core of the same visual elements as production DNA, letting different combination code apply to each generation of product during product development. From the consumers' visual, auditory, tactile and olfactory etc., via the common treatment of shape to shape carved details, hue, contrast, grade rendering design of elements, to form a unique product, no duplicated artistry, unity, stage and coherence of the other products, making people feel strong "familization" on visual.

4. Signification of Automobile Molding DNA Design Inherits Traditional Culture

For right this time, automobile companies in the technical differences are getting smaller and smaller, product homogeneity is more and more serious, unique and outstanding product

image is the window of corporation publicize, the differences of product creation is the important aspect that corporations' brand strategies implementations. As a continuation of the unique biological family maintains relies on its DNA, different models of new product design would gain by the same standard components of the feature genes through inheritance and variation quickly. Automobile molding DNA is also the product information of family genetic values, it also plays the vital role among the continuation of brand style and carries forward. The major companies all over the world have been carrying the product DNA research, some successful companies have been out of its own way, such as Benz, BMW and Audi etc.

Nowadays, we are living in a rapidly changing, high-speed development of the knowledge economic area, from which, the core is the knowledge innovation, technological innovation and cultural leadership.[7] The more car design is with unique cultural connotation and high-tech, the more we will have exchanges and internationalism, and the higher the value is. Thus, automobile molding DNA design is more and more important to the traditional cultural inheritance. However, how to inherit the tradition? In my opinion, that not means focus on the representation, simply to apply or imitation, but to do the deep research on traditional values, culture and thought, ethical concepts, way of thinking and aesthetic appeal etc. in order to inherit and carry forward the traditional culture in the design.

5. Research on Automobile Molding DNA Inherit Traditional Culture

5.1. Study of Past Traditional Culture

Now, as long as mention about inherit tradition culture, some people will directly apply the dragon, phoenix, panda, Tai Chi and the drama mask to the products, is like the Chinese culture is dragon, phoenix, panda, Tai Chi and drama mask only, but is this kind of design can be called the inherit tradition culture and Chinese characteristics? We can say this is not a creative design and it does not mean anything, or can say they are going to retro road. When we are talking about "traditional culture", we always look for culture trail and achievement along the river of history, therefore, investigate and research philosophy, religion, science, technology, education, literature and arts, and also the point of value at that time, aesthetic taste, way of thinking and customs etc. of each period of history. For example, philosophy of "heaven and human are one", original ancient art of "flamboyant", Yanzhou Qing bronzes art "fierce beauty", the concept of "axial culture", the living habits of "there is no house without court" etc. [8],[9]These are the composition of Chinese traditional culture, which is also the important aspect that can tell from the other countries and nations. Only through the profound understanding of them, can people absorb the essence, and can combine with the point of value from people today, their way of thinking and aesthetic taste, extract the DNA elements, it can be considered as the real inheritors of the traditional culture, also can create the unique and excellent brand image, and the design can reflect the local culture.

The red flag car company design is a good example, the shape of DNA is by the fan-shape of the radiator grille, lantern-shaped taillights, mahogany interior, Fujian varnish "red treasure sand" panel, composed of Hangzhou moire brocade fabric of seats and door panels, strive to highlight the characteristics of nation characteristics, it is the deep-rooted understanding of the traditional culture, refining and refactoring. Chinese first Dongfeng brand car, lights are with ethnic style of lantern shape; Later, Red Flag car is the ambassador car inherited Palace lantern-style taillights, fan-shaped water tank mask, bumpers are using with clouds kind of the Palace of drawing the pattern (See figure 1, 2); as is showed in figure 3, the Red Flag car's top concept car HQD, the body molding DNA design inherited the first generation of the Red Flag car high front to low rear ship body, integrate the meaning of traditional Chinese architectural culture "nine beam and eighteen column" into the grille design. This extraction and construction of DNA elements grasped unique artistic spirit and philosophy which the other ethnics do not own, which are commendable.

5.2. Keep the Present Traditional Culture

The traditional culture in today means culture achievement, which is precipitated, saved and inherited from those who have an important value, a tenacious vitality during generated and eliminated constantly, rather than transient, failed to precipitate, save and inherit a culture that can only be described as a historical culture.



Figure 1. The red flag car



Figure 2. The red flag car



Figure 3. The Red Flag concept car HQD

This tells us Chinese traditional culture is that appear in history, and has an important influence many of today's cultural ideology, values, way of thinking, aesthetic taste philosophy, ethics, works of art and other cultural achievements, such as architecture, furniture, sculpture, industrial art, folk art, Tang, Song, Chinese painting, etc. Zehou Li wrote in the book, the Path of Beauty, "

Freezing in the classical works of various Chinese ethnic aesthetic taste, artistic style, but why people still love the feeling that coincide with their hobbies today? [10] These outstanding cultural achievements have a resonance, which is difficult to tear apart, close relationship with the modern people's cultural ideas, values, way of thinking and aesthetic taste. Therefore, the DNA design should be established on the basis of a good understanding of the excellent traditional culture, summaries modern culture ideas, values, way of thinking and aesthetic taste.

Figure 4 and 5 show that Red Flag CA-770, which is very popular among many countries, it has a strong national temperament, every side of the car body is of the ridge, with obvious concavity, and the inspiring is coming from subtle, forceful and powerful line angle of Ming's furniture, besides, there is the essence of Chinese traditional craft of painted pottery culture, ceramics, bronzes and jade etc. This highlighted from the normal national characteristics, reflected the national mental outlook.



Figure 4. The Red Flag car CA-770



Figure 5. The Red Flag car CA-770

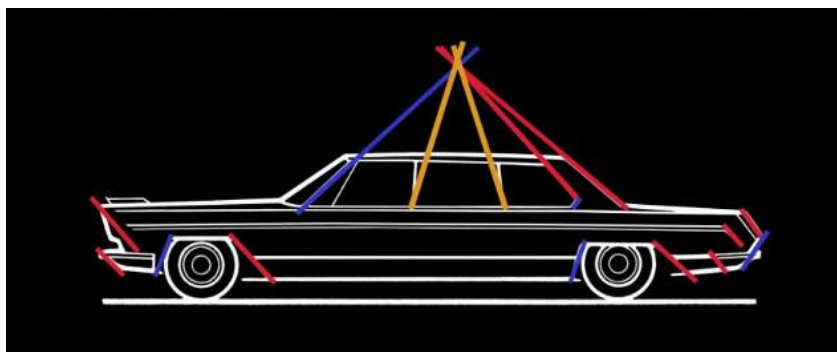


Figure 6. The Red Flag car CA-770

In the overall shape of the vehicle, as shown in Figure 6, in the original design, column A, B, C, D, extend upward to the same point, forming a stable composition, at the same time, lines echo with each other to create a dashing forward trend. It will still has a strong dynamic even under the condition of rest, to perform as high morale and upright momentum. These designs of the factor of DNA style keep the traditional national spirit well, and are good organized combination of modern cultural ideology and the point of value, which is much worth learning.

5.3. Guide the Future of Traditional Culture

Culture is a before and after inheritance, it would be endless flow of time. Yesterday's culture involved into today's culture, likewise, today's culture will continue to develop into tomorrow's. That is the genes constitute our traditional culture is an inherited continuation, it will exist in the past, today and may also tomorrow. So, the traditional culture is an open culture in the future, and will exist ancient culture books, folk art, arts and crafts etc. It contains ethics, attitude to life, value systems, way of thinking, which was formed in the past, influence right now, and who can say it will not have impact in the future? Today's architecture, literary and artistic works are influencing modern people, after today people learn, think, choose and use, will accumulate and precipitate, who can say that will not update the principal part of the new culture in the future? This shows, for the modern people, traditional culture is not only generated in the past or to be the historical culture, but is a stream of life, which connects the past, today and future. For the car design, in addition to meet the functional needs, but also meet the emotional needs, to make people enjoy the unique culture connotation, it is not only a comfort and beautiful products, but also a vivid work of art. As a product of an era of culture materialized, automobiles have a great impact on the later aesthetic taste, lifestyle and values, so the design of automobile molding DNA should inherit Chinese culture traditions, construct and develop new modern culture, to keep the culture trends and to guide the direction of culture development through the rethink of Chinese traditional culture. In other words, not only to research modern people's aesthetic taste, lifestyle and value to become a modern Chinese people, to keep the Chinese special automobile molding, but also to guide the next few years or decades of artistic interest, value, way of thinking and aesthetic taste, to create a avant-garde works endowed with a rich traditional culture through bold idea of DNA design.

As shown in figure 7 and 8, is upcoming production of Red Flag L9, the design of the shape of DNA inherited a number of elements of the previous generation products, such as straight waterfall-style front air grille, tubular fenders, round headlights, eyelashes like inlets, tall and straight lines of the triumph of momentum, and the huge size of coordination shaped domineering appearance. Nine in Chinese traditional culture has a meaning of "anode supreme", and root strip hub design, type of 9 tagging etc is all derived from this. The design of these DNA elements not only inherited traditional blend of modern aesthetic taste to make the whole automobile to be elegant luxury and make it have great fashion taste, but also the aesthetic plays a guiding role on the shape of future generations at the same time.



Figure 7. The Red Flag car L9



Figure 8. The Red Flag car L9

5.4. Absorb nutrients from two forms of traditional culture

Traditional culture is a spiritual culture, regardless of what kind of culture we understand it. It always exists in two forms. The first one is objectified culture pattern, mainly point that objective culture pattern of history books, heritage, literary and artistic works. Another one is that the main shape of the culture pattern, mainly meaning such as culture psychology, lifestyle, customs, values and aesthetic taste etc. [11] These two pattern of cultures are influencing each other, kind of texts, artifacts, works of art and other forms of culture are always in constant impact, shaping people's subjective spiritual culture; likewise, this kind perform as the main cultural patterns of cultural psychology, values, aesthetic taste, also constantly re-interpret, explains, deconstruction objectified cultural patterns. Because the culture always exists as two types, so during the design of automobile molding DNA, regardless of what kind of culture pattern we understand, we should pay attention on both patterns, don't be partial charge, we should take different ways and should keep comprehensive understanding when learning, thinking, comprehend and rethink Chinese traditional culture.

6. Conclusion

In the automobile molding, the inheritance of DNA design to the traditional culture is not a superficial understanding of the traditional culture, meaning not a simple imitation apply for the "shape", but the Chinese nation for thousands of years of history of civilization left a colorful cultural treasures, the essence of the "God" reasonably integrated into the DNA design, only the creative design has the vitality, and if there is no "god", the design will be phased out, we can divide Chinese tradition culture into three periods, we are going to study fully and deeply, refining reinterpretation, combined with modern trends, advanced technology, and then give it a new life, a new flavor, is good for better design of automobile molding DNA inherited traditional culture, and also good for excellent design, with strong ethnic characteristics and rich cultural connotations, and good for automobile design goes ahead of the times.

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