



# Exploring the Value of Design Thinking Through the Phenomenon of Multidimensionality in Graphic Design

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**Abstract:** The multidimensionalisation of graphic design expressions, with its diverse and multi-spatial expressions incorporating modern technology, promotes a closer connection between design and business, driving innovation in brand expressions, and triggering society to think about design when it accumulates a certain amount of commercial interest in return. The article explores the connotation and value of design thinking through the current phenomenon of multidimensionality in graphic design, and uses this as an entry point to explore the role of design thinking as a driver of innovation, and to guide society to consider the possibilities of implementing innovation through design thinking.

**Keywords:** graphic design multidimensionality, design thinking, business, branding, innovation

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## Introduction

From the Chinese design community talking about design value to the realisation of social aspects of design-driven needs a certain process, in this process the creation of commercial value is the main driving force for the realisation of design value. Currently, graphic design multidimensionality is one of the commercial means of communicating corporate value through visual design, and has received attention from the design community, enterprises and society for its short-term commercial value and social benefits, prompting each subject to think more deeply about the value of design-driven. This paper explores the value and importance of design thinking from the connotation of design thinking and the role of design thinking in corporate branding.

## 1. The underlying logic of design thinking is embedded

Design thinking can be understood as an open-ended set of human-based problem-solving logic. Scholars have often studied design thinking in a way that integrates social, commercial, visual, cultural and technological thinking, i.e. thinking about the whole process of design with design values in mind. In this process the links between design, people and human life systems are also explored, and the importance of design is constantly explained and argued for, in a way that emphasises design thinking in an attempt to achieve a future in which design thinking is no longer deliberately emphasised, in the hope that design and innovation will become a natural thing that does not need to be stressed, that existence is design, i.e. in an attempt to build an ecological chain that can consciously make use of design thinking system. Design thinking here is not simply visual design, but a set of targeted problem-solving methods that make the most of the human factor, a set of practical strategies that integrate cultural, technological, commercial, public good, aesthetic and other logics and are more precise and effective than 'general methods'; it can be understood as It can be understood as a practical act that brings out the subjective nature of people with clear needs and motivations, in order to achieve targeted innovation and sustainability in companies, industries and social systems as a whole, i.e. to ultimately tell the human story through design. The importance of design thinking for innovation is well illustrated by the four levels of innovation: management innovation, strategic innovation, product service innovation and operational innovation, as proposed in Gary Hamel's book *The Future of Management*[1].

## 2. Design thinking performance in the phenomenon of multidimensionality in graphic design

### 2.1 Representation of design thinking in the multidimensionality of graphic design

Visual design is a way of communicating with people, using visual expression as the main way to provoke thought and make audiences behave in a substantive way, including logos and other visual designs for daily operations. In the development of graphic design from paper to digital media, its visual language and presentation are constantly changing and innovating. However, this change in design expression is never isolated, but is often a manifestation of the change in

productivity and a new state of civilisation of the times.

Before consumers can judge whether a product is competitively novel based on its functionality, they first encounter its visual form. Therefore, innovation researchers and product managers need to be aware of the impact that visual design can have in communicating the novelty of a product[2]. Under the influence of digital technology, in order to communicate their brands more effectively, companies are constantly updating the visual expression of their brands to adapt to the changing consumer habits of the market, as shown by the fact that the design language of the logo, which is the main communication symbol of the brand, tends to be modern, flat and digital, and the communication method of the logo tends to be dynamic and three-dimensional. At the same time, in the whole brand communication design system, the visual language and communication methods of the daily operation graphic design, which is the output of the brand image, also show the same trend, thus showing the multi-dimensional expression of the language of graphic design, and also showing the double charm of the combination of visual design and science and technology.

## **2.2 The context in which design thinking operates in the multidimensionalisation of graphic design**

### **2.2.1 Driven by consumer demand**

Consumer centricity has been identified as the key to unlocking new sources of competitive advantage[3]. Results are inspired by questions, from the professional design world to everyday life, and there is no greater purpose for design than to create a more desirable life for people, a subtle aesthetic and thinking shift shaped by a change in the living environment. As the aesthetic and consumption structure changes, the proportion of spiritual consumption of culture and art grows rapidly, and the consumption habits of the public turn to be more concerned with the spiritual enjoyment of people themselves, art and design is consciously or unconsciously linked to the realisation of economic benefits, playing its own value from different angles.

From the actual case, the brand logo as a symbol is an intuitive visual representation of a brand, is the core element of brand communication, its goal is to effectively communicate the brand concept in multiple scenarios, some research shows that the commercial value of the enterprise is positively correlated with the image value conveyed by the brand logo. In contrast, the design of daily operations uses fixed scenarios and is more efficient in attracting audiences, causing them to think and consolidating the brand image in a short time. In addition, the brand logo conveys the functional value of the product to the audience through the design language and communication language, while integrating the brand concept, value concept and aesthetics into it, and the audience who accepts the design language and communication language identifies with the value of the brand, thus promoting the brand to establish a solid emotional connection with the audience, which is the key to brand development. In terms of operational design, on the one hand, operational design serves the brand, but on the other hand, it also drives and builds the brand. Just as visual design is about building connections, everyday graphic operation design, in terms of superficial visual communication, builds the connection between the product and the brand, giving the product a brand concept; in essence, operation design builds the connection between the brand and the consumer, communicating the brand concept in a way that is pleasing to the audience, allowing them to connect and empathise with the brand, while familiarity with the brand and its performance will give consumers more confidence[4], which in turn drives business benefits. But brand building is not simply a matter of innovating a logo; rather, it is part of a coherent brand strategy that needs to be supported by active management and brand building[5].

### **2.2.2 Changes in the communication requirements of graphic design based on digital virtual technology**

The interaction between technology and the consumer market is a constant in the evolution of consumer demand. Digital virtual technology is like a dose of stimulant into the daily life and entertainment of the public, with hot topics such as vr, metaverse, digital art, nft, etc. driving the public's consumption enthusiasm and building a crossover parallel between virtual space and real space, the audience in such virtual space is more focused on the emphasis on sensual experience and sensory stimulation, when various factors in society actively intervene in the aesthetic field. A new aesthetic approach is created and carries a strong vitality and influence to bring about a change in the aesthetics of the times to varying degrees, while aesthetic preferences influence the performance of design and guide the aesthetic perception of society through the most topical media technologies of the moment, such as the multidimensional presentation of visual design. The development of science and technology and the use of tools have closely influenced human habits and aesthetic tendencies, from the use of processed stones by ancient apes to hunt animals and use their skins and bones as decoration to the invention of the modern streamlined aeroplane, which has led to the popularity of streamlined home appliances. This demand is now manifested in the market for such physical, mental and aesthetic perceptions under the influence of digital virtual reality technology on a daily basis, which may lead to an upgrade of the business model, which can be interpreted as a result of user-driven design.

However, even the most important technology is only a means to an end, not the essence of it. Under the influence of virtual reality technology, consumers have developed a reliance on visual perception and immersion has become the basis

for their acceptance of the design communication, with immersion becoming a key factor in determining whether a design works and adds value to the brand design. It can be argued that scientific developments have expanded the interaction between consumers and brands and established new ways of thinking about brand design and communication, one of which is multidimensional expression. The multidimensionalisation of graphic design language is designed to make things perceptible, to interact with people's lives, to stimulate the senses and aesthetics, and the value of different dimensional elements is not only in the transmission of information, but also in bringing a more powerful sense of participation to the audience, which in turn leads to the development of the industry and further innovation in the way design is presented. The multidimensionality of graphic design is also a product of the development characteristics of the digital age, of the systemic ecology of digital scenes, digital markets and digital platforms, and it is a product of the systemic ecology that is in tune with consumer demand, together with fashion consumption, smart consumption, shared consumption and experience consumption, or in a visually guided way that helps the above types of consumption to expand their influence and persuasion, thus on a larger scale A cross-collision of print and communication, marketing, three-dimensional interactive design and art design has occurred. Ogle once said, "Once two rarely touched points of view in the creative space are connected, they begin to make new interpretations of each other on their own, thus producing an effect where the whole is greater than the sum of its parts." The benefits of the formation of multidimensional forms of expression in graphic design for corporate value are presented in this way. Facebook, for example, has changed its name to Meta in a bid to rebrand itself, using the metaverse as a backdrop for the launch of a dynamic logo expression that seamlessly moves between 2D and 3D space and includes subsidiaries, distinguishing itself from the former Facebook on the one hand, and explaining the new direction of the company to the public in this way, reflecting the value of logo design for brands.

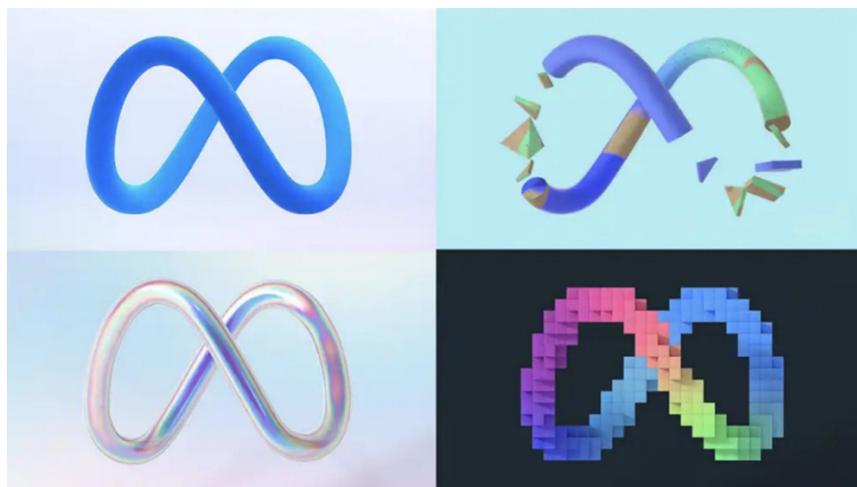


Figure 1. Meta's new logo

In the dual context of virtual and real visual communication, the technological network as the underlying technological logic has changed the link between communication relations and their effectiveness, and design thinking has come into play to explore ways in which the visual language can be made more effective, and to respond to and guide the subjects of visual communication to seek aesthetics in the current context in a positive and innovative manner. The current logic of design thinking has allowed the modernist ideal to evolve from a specific form of thinking or a single latitude of interest to a set of constructive logics based on certain technical means, which involve the relationship between man and man and how he lives with the outside world, which means that this set of ideal logics is constructed to correspond to a more abstract ideal goal.

### 3. The significance of design thinking

#### 3.1 Design thinking reflects the state of development of social civilisation

Innovation is the process of thinking, the 'fusion' and 'merging' of disciplines that leads to inspiration and innovation. Design thinking has its own set of frameworks, functions, operational features and support services, and Kris and Le's visual language theory extends Hanley's language theory to include all visual modes and builds a grammatical analysis of visual language with 'reproductive meaning', 'interactive meaning' and 'structural meaning' as its core. They argue that just as the grammar of words determines how words are used to form sentences and sentences to form pages, the grammar of visuals describes how the people and things portrayed are composed into visual descriptions of a specific level of complexity.

Graphic design multidimensionality as an innovative form of visual language, in which the flat and three-dimensional form a sense of contrast, a sense of conflict, this performance through the designer to present a conflict, contradiction, relationship reshaping, the intersection of multiple relationships, forming a complex system of relationships, through the design of thinking, through this system of relationships and structural meaning to solve what the problem to guide the audience to examine and think. The relationship between flat and three-dimensional elements is examined in the context of the multi-dimensional representation of graphic design, the symbolic nature of one work within another, the mutual implantation and intersection of the two, thus orienting the audience to this relationship through form, provoking how to view the logic of the overall problem, how to form an internal logical relationship, how to express the relationship between objective existence and design, the relationship with technology, the relationship with society, and the relationship between design and technology. The relationship between design and technology, between society and technology, and the relationship between design and technology, further provokes thinking about design and social civilisation. This relationship is also expressed through the designer between the real world and the virtual digital world, the relationship between graphic design and the consumer market, and to a certain extent also shows the innovative possibilities that the process of technological development brings to companies.

In 2015, the World Professional Design Organisation defined industrial design as "a process that drives design, builds strategic solutions for successful business, and leads to a better quality of life through innovative products, systems, services and experiences". and leading to a better quality of life through innovative products, systems, services and experiences". This can be understood as the process by which design thinking comes into play. Initially unconscious design thinking has led to a multi-dimensional trend in graphic design, which is defined in this paper as an unconscious and systematic brand marketing strategy. In the actual process of designing with the actual user experience as the centre, highlighting the systematic advantages of brand design with diversified visual expressions, highlighting the power of design, driving brand value with design value, and promoting a closer connection between design and business with such diversified expressions that integrate technology, helping innovation in brand expressions, and bringing into play the value of user experience-centred design-driven, also It also shows the overall technological environment of public life in a small way, as people's consumption habits and aesthetics are largely influenced by the current technological environment, with an inherent logical connection, showing how social civilisation is composed and integrated in its development process.

### **3.2 Design thinking drives social innovation**

Phills et al. argue that social innovation has been proven to have a positive impact on the development of society through the creation of sustainable solutions. Social innovation is a process of continuous change, and design activities start from a problem perspective, using design thinking research methods to discover the nature of the problem, and design thinking can be turned into a set of underlying thinking logic, which society then uses as a logical way of solving problems, applying design thinking to solve real and complex realities that are constantly changing, involving design in the whole process of social development This allows design to participate in the whole process of social development in order to effectively initiate social innovation solutions. The UK Young Foundation sees social innovation as the process of consciously exploring and meeting social needs to create new and harmonious social relationships. At present, given that the value of domestic innovation is mainly expressed in the commercial value of its results, design thinking functions mainly through corporate innovation to realise social value with the aim of achieving commercial and corporate value, and commercial innovation to promote social innovation and create both social and economic value. It can be argued that achieving social innovation is an important goal in the construction of design thinking, and that design interventions can provide an inexhaustible impetus for the improvement and sustainability of social innovation. As Tim Brown suggests, design thinking is a powerful tool for problem solving.

In the context of the current environment, today's social problems in China are still relatively prominent and social, cultural and economic development is still uneven, a deficiency that also happens to provide the ground for the exploration of social innovation, giving it more than enough space to practice the value of design thinking in order to demonstrate its value to business, society and humanity. The highest reward for adopting a design thinking approach is not necessarily the identification of solutions, but the innovation of ways for people to collaborate to secure and implement new possibilities for new ideas to emerge. [6]

## **4. Conclusion**

The key to design thinking lies in how to flexibly construct the relationships that exist, building a certain kind of logical thinking by bridging society, science, technology and art to solve problems as the ultimate goal while realising its own value. The phenomenon of multidimensionality in graphic design is a preliminary unconscious system of design thinking to adapt

to current market habits in order to achieve innovation in commercial expression and expand economic benefits. When the commercial returns reach a certain accumulation, it will trigger the subject's active and conscious thinking and gradually develop a logical way of thinking about the underlying design, forming a virtuous cycle of design thinking. The current design thinking through the construction of interdisciplinary breakthroughs and integration to innovation, while contributing to the realisation of commercial value to achieve the initial display of design value, in the process of actively building an innovative society to play a design power.

At present, China's policies are actively guiding technological innovation and independent design-driven brand innovation. In this process, the role of design thinking should be given full play, with the user as the guide to creating innovation, so that design thinking can gradually participate in the development and construction of various areas of society.

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