A Study of the Design Semantics Understanding & Design Process & Application in Design Practices

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Abstract

The purpose of this study is to explore the approach of how to extract the user assessment keywords from well-known websites by carrying out grounded research and utilising typical design items as research samples. This article explores the use of narrative design in cultural and creative products using narrative design as its starting point. The application relevance of narrative design in cultural and creative products is discussed first, followed by the application principles and methods of narrative design in cultural and creative products. It is envisaged that the use of narrative design would make the provision of cultural and creative products easier and could elicit resonance between consumers and specific cultures, as well as research ideas and design methodologies for unique cultural and creative product theories.

Keywords: Narrative Study Design; Design Language; Design Theory.

1. Introduction

Design semantics is a method of developing a visual language in design works in order to provide them with an instantly identifiable set of primarily visual (and occasionally tactile or auditory) clues that become the designer's tools for communicating through their design works. It can help to reflect function and underlying cultural associations [1].

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Despite extensive discussion about design symbols, there are still numerous issues with their application, and their expression is inadequate. The fundamental issue is that designers do not understand the semantic properties of design symbols and pursue excessive design globalization [2].

Furthermore, in order to attract customers, some designers purposefully create unique and eye-catching results that contradict traditional cultural ideas and aesthetic standards [3]. This requires further thought. How can design be identified precisely? What is the underlying structure? What is the structural link between the form, content, and internal mechanism of this cognitive structure? Thus, this paper is to systematic review articles related with design semantics in order to apply more inventive design performance while also developing and communicating diverse forms of design, such as national cultural aspects of design. This paper also aims to provide reader a better understanding of the narrative study of design language & process in design practices.

2. Literature Review

2.1. Narrative in Design Development & Applied Research

Narratology is the approach and process of writing literary works, and it has its roots in the realm of literature. It was afterwards appropriated by the field of design. It's typically utilized in architecture and urban planning, but it's evolved into narrative design thinking throughout time. Theme design, product semantics, cultural symbols, script advice, and so on are all related topics. They've evolved into new design theories and approaches at the same time. The evolution of human knowledge of design narrative has spanned spontaneity, consciousness, and autonomy. That is, there has been a spontaneous pursuit of narrative since the dawn of human self-design consciousness to express the original understanding and perception of itself, nature, and society. Design, in the context of today's consumerism society, illustrates people's individual search of narrative.

Narrative is a tool that requires time as the main line, connects various shifting scene variables in an organized manner, and can cover the entire situation. The objective of the design is to identify and satisfy the demands of the target audience in a certain setting. To begin with, the narrative arranges the events on the time axis in chronological order, and it also employs the narrative to identify issues and inconsistencies; Second, the story provides a summary of the design concept's underlying topic, making it more detailed and intelligible. Finally, a stunning design coupled with a logical and organic narrative. The design process aims to transform the production of "items" into the performance of "things." At its essence, the objective is to acquire both the life experience and emotional experience included in the narrative. When it comes to modern individuals, having a "narrative" is more significant than having more "goods" once their basic material wants are met. It represents not only the shift in human views of material items and the rise in total demand, but also the more comprehensive development of human ways by which they might exhibit their value.

2.2. Analysis of Design Element

Numerous practical studies on the topic of design narratology have focused mostly on architecture and visual communication design, which are related topics. In addition, they presented their study findings on design narrative strategy, narrative expression, narrative logic, and narrative aesthetics. This was one of their activities.

Their arguments centre mostly on boosting the emotional contact that design provides. We can get both an intellectual grasp and a profound experience of the subject matter of design by gaining this understanding through perceptual experience. Even though the structural form of design narrative logic (series type, parallel type, collage type) is proposed, it is still expressed based on the logical clues of time and story in literature and movies. This holds true regardless of whether the series, parallel, or collage type is offered. Why not conduct additional professional study by analysing the progression and logical features of the narrative process within the context of design theory?

In his book Designing design, Kenya Hara presents not only his personal design philosophy but also an overview of design aspects. According to him, design requires integration, colour, shape, texture, material, rhythm, space, motion, point, line, and so on. These distinct methods are integrated to create the design carrier. Simultaneously, he placed greater emphasis on design, focusing not just on how to innovate and recombine the physical properties of things, but also on people, their senses, consuming patterns, memories, and emotions. People have a general perception that the physical properties of items are carriers.

Reference [4] presented three categorizations that survey the what, where and why of narratives in design. It also proposes a typology that classifies the occurrences of narratives in designed products and the design process. They agreed that concept of narrative is still fuzzy and open to interpretations, due to its use and meaning in different disciplines. Thus, they reviewed how narratives are used in the design process and artefacts, and why designers might want to use narrative in their work. Their framework aims to be a starting point for developing a methodology of narrative use in design which could be used by designers and researchers.

Reference [5] addresses the question of how and to what extent 'products can tell a story', while [6] investigates the significance of storytelling in the process of engineering design. Reference [7] argued that narratives and storytelling are useful concepts in the process of designing better user experiences. The increasing interest that design scholars have shown in storytelling can be attributed to a few different factors. To begin, narratives play an important part in the way we perceive the world around us. Narratives are "vehicles" that we use to condense and remember experiences [8], narratives "organise not just memory, but the whole of human experience", and narratives are essential to our comprehension of time and events that take place over a period of time [9]. As a result, one could say that the majority of memorable or engaging product experiences are the result of the user cognitively structuring the encounter in the shape of a narrative.

2.3. Grounded Theory

Design and design experience activities have phenomenological qualities that are readily apparent. Some scholars in the United States and overseas have utilised grounded theory to conduct an initial analysis of design's meaning. Reference [10] apply the grounded theory coding approach to develop the theoretical model of "product design - product personality - design clue - product image," which shows the connotation of product design in the context of the management scenario. In other relevant domains, Reference [11] used grounded theory to determine that the key category of tourist items and their experience is "seeking and experiencing

happiness"; they then developed a narrative to replicate the entire experience process of tourism behaviour. Other researchers investigate the placement and shaping of urban image based on grounded theory and present the narrative, fundamental concepts, and overall image forming approach for urban image shaping. Other researchers use grounded theory as the primary method in their research on brand expansion and its influencing factors, and conclude that the theoretical research content has significant implications for the rapid growth of businesses. In general, grounded theory is widely employed in the field of cultural innovation; nevertheless, it is still preliminary and tentative in the research and application of design theory, particularly design connotation, and has not been explored extensively and in depth.

3. Methods

3.1. Inclusion criterion

Only research that pertained to the narrative design and the product art design were taken into consideration during this phase. Literature reviews on more specialized themes, such as web user interface design and interior design, were not included in this particular study. We included studies in areas of art design such as drawing, painting, sculpting, working with clay, printmaking (both commercial and non-commercial), textile design, and composition. Studies of the English language were the only ones we included. To assess whether or whether the seventy-five papers were pertinent to the topic of our investigation, we read the abstracts of the studies. Independently and simultaneously, the two researchers analyzed each of the submissions. The reviewers spoke through their differences of opinion and came to a consensus on how to move forward. A total of 53 studies were deemed to be relevant, and the papers from those studies were obtained in their entirety for the purpose of conducting a quality assessment.

3.2. Literature identification

In this study, papers were located using Connectedpaper, Google Scholar, and Web of Science. Connected Publications is a tool that displays a visual graph of papers pertinent to the study field. To study the most recent research on information retrieval and synthesis in the digital era, we limit the publication date to 2018 to 2022. (articles published in the last five years). We began by scanning these databases for Connected articles having the phrases "Narrative study of design." There are 32 identified documents in all. We exclude papers pertinent to the design of the product. After using keywords such as "Analysis of Design Element" and "Narrative in Design Development & Applied Research," a total of 221 potentially relevant articles were found. Following a topic screening, 45 papers pertinent to the literature review methodology were discovered. We uncovered a total of 54 possible research topics from three sources, seven of which were duplicates that were subsequently removed.

4. Discussion & Results

This paper examined contemporary design theory and research cases, discussing the model of design process, the model of design delivery, the acceptance and evaluation of design-by-design users, and the philosophical aspects of design. These articles have inspired and supplemented our subsequent research immensely. These articles will serve as a source of inspiration and application for the construction of this study's research model,

in order to achieve the desired results. It is more stringent and exhaustive. In addition, the analysis and modelling techniques employed in these articles inspired my research, which can make it more scientific and exhaustive during the research and analysis process.

Through the analysis presented above, we are able to draw the preliminary conclusion of our study, which is "design connotation and stratification." Next, we will define and examine this essential word in detail.

In terms of research theory, we first adopt linguistics, semiotics, and the most advanced academic theories of humanities as the cognitive platform of design, reexamine the relationship between design and human, and consider the status and role of "relationship" and "meaning" in the innovation of design. Design is not only a breakthrough in the use of function and form, nor should it only consider the physical and physiological functions of human beings; it should also consider the meaning of human beings — the context of society, culture, and history.

In contemporary design issues, it is not only the use of function or form, but also the creation of more meaningful design, the establishment of new circumstances, or the provision of semantic models to explain the design. Finding the connotation elements behind the design and establishing their relationship model is the focus and direction of my research.

In the aforementioned literature reviews, the methods of using concise formulas to express research elements and establish a design process model are worthy of study and reference, as well as being a very clear method of theoretical expression.

The article "Tramcar Modeling Design Based on Extension Semantic Analysis" is going to be the primary emphasis of the section that is about to follow. An investigation into the development of semantics in design is the primary focus of this article. Additionally, the author proposes a knowledge model that is based on a graphical semantic cognition process. Both of these goals are accomplished by concentrating on a particular aspect of tramcar modelling design. On the basis of such an analytical method, information that is difficult to explain in a standard manner, such as the characteristics of a style, is changed into symbolic conclusions that can be summarised and summed up. This information includes the characteristics of a style. Following this, the summary conclusions collected are analysed, spoken about, and then eventually concluded upon.

In the beginning of this essay, the author made a suggestion called extension semantics as a way to briefly summarise the design semantics of trams. According to the author's ideas, the purpose of the extension semantics that are used in this article is to generate the extension innovation method in atomic extension science. This method is a technique that is used to transform the symbolic characteristics of things into quantitative characteristics, in terms of design thinking orientation and quantification, in order to serve the purpose of scientific evaluation. The extension innovation method in atomic extension science is a technique that is used to transform the symbolic characteristics of things into quantitative characteristics, in terms of design thinking orientation and quantification.

After that, the author does an analysis of the process of designing the body of the tram and, making use of the

extensional semantics line of thinking, derives the design flow formula for the entire process of designing the body (Figure 1)
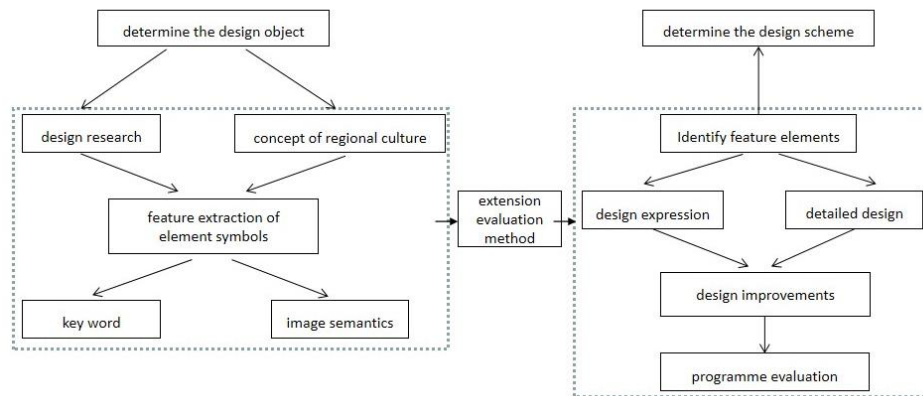

Figure 1: Design process of tram body shape based on extension semantics in the article

5. Conclusion

This paper focuses on the search for and review of pertinent earlier literature, during which the essential theories, claims, and frameworks are examined at length to support the major emphasis of this investigation. Using design semiotics and design narratology as a method of thought, this study analyses and evaluates the comprehensive design procedure. This study also analyses and assesses the factors that influence the results. We analyse and combine each component in this work by employing a variety of approaches and tools, completing a literature study and citing pertinent sources, and developing preliminary conclusions and analysis.

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