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Extraction of Non-Representational Traces and Its Formal Implications in Art Design

Ding Hao[1,a], Lv Bing[1,b,*]

[1]*Jiangsu University, 301 Xiangshan Street, Jingkou District, Zhenjiang City, Jiangsu Province, China*
a. 1146625149@qq.com, b. 7578522@qq.com
**corresponding author*

Abstract: The increasing development of the art design industry and the elevation of material living standards have expanded public aesthetic cognition beyond mere concrete forms, progressively embracing artistic diversity. This evolution has sparked profound contemplation on the connotations and forms of extracted non-representational symbols in art design. Focusing on non-representational symbols, this paper initially delineates the concept and design relationships of these symbols. It subsequently analyzes the process of discovery, extraction, and generation of non-representational symbols, elucidating, through specific cases in art design, two states of symbol existence — "dynamic" and "static" — and explores their formal implications.

Keywords: Non-representational, Symbol, Form, Art Design

1. Introduction

Entities are mutable, evolving, and traceable, their traces reflecting inherent characteristics of one or multiple similar substances. Research reveals symbols' widespread application in fields like art design. This paper delves deeper into the paths of symbol extraction and the diversified expressions of commonality and individuality in symbols, thereby providing diverse practical pathways for artistic design development.

2. Formal Semantics in Design

Design involves premeditated planning and processes for creative activities. Art design, a subsequent development, recreates and transforms beauty from the objective material world, constituting human activities of expression and transformation. Both design and art design fall within the realm of art, serving as intentional, meaningful forms.[1] Form, to a certain extent, comprises pure, visual design rules, thus embodying a certain profound formal semantic in design.

2.1. Definition of Non-representational

Non-representational, in contrast to representational, embodies non-reproducible manifestations. Philosophically, non-representationalism discards individual and non-essential attributes from numerous entities, extracting shared essential attributes. As a professional term, it generally refers to visual representations inclined toward formlessness or non-representational portrayal. The diversity

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of non-representational forms includes symbols, a form of semantic expression within it.

2.2. Semantics of Symbols

The term "symbol" in Chinese represents a concept both complex and simple. English terms such as "Mark," "Sign," and "Symbol" can all be translated to "fuhao." Hence, defining a symbol proves an abstract concept. Renowned scholar Professor Zhao Yiheng defines a symbol as a perceived entity carrying meaning. Meaning must be expressed through symbols, and symbols are employed to convey meaning. Conversely, expressions devoid of meaning need not employ symbols, and symbols without conveying meaning do not exist.[2]

Categorically, symbols are classified into three types based on the relationship between their form and referred objects: symbolic symbols, iconic symbols, and indexical symbols.[3] The symbols referenced in this paper primarily denote non-representational "iconic symbols," representing entities that are relatively uncertain or indicative of a generic category of entities.[4]

Non-representational symbols serve as a medium, an image, a language, and a form. As a manifestation of symbols, non-representational forms exhibit two fundamental characteristics: commonality and individuality, amalgamating within art design to convey underlying meanings.

3. Extraction Process of Non-Representational Symbols

3.1. Origin: Discovery of Symbolic Traces

In the era of primitive societies, individuals engaged in rudimentary design and manufacturing activities to meet two fundamental human needs: utility and aesthetics. These conscious or subconscious design behaviors led to the formation of initial conceptual symbols, enriching societal life. From ancestral Chinese knot-based records to pattern records and totems in song and dance, all served as informational visual symbols preserving societal information. This pattern persists in contemporary society.

Observational research reveals that both static entities, such as natural flora, architecture, daily objects, crafts, calligraphy, still life, language, and dynamic entities, like water ripples, sunlight, human anatomy, gestures, machinery, even Tai Chi movements, all exhibit traceable characteristics. This traceability stems from shared characteristics among similar substances, forming a design language through non-representational translation, creating "common symbols." Hence, in contrast to these, the unique aspects of certain substances represent "individual symbols." Both fall within the category of visual symbols applicable in artistic design.

3.2. Extraction: Extraction of Visual Symbols

The symbolic form of visual symbols is often considered to possess qualities of resemblance and imitation concerning their referents.[1] Research indicates that in nature or human society, the shared factors arising from the changes of similar substances are frequently extracted and variably processed through non-representational translation in artistic design. This process simplifies these factors into basic elemental forms like dots, lines, or planes — abstract entities used to maintain the continuity of symbolic language and form. Artists employ non-representational artistic techniques to create symbols by abstracting their material commonalities. These shared characteristics, evolving from the movement and changes in objective material, serve as common factors, elemental forms, and indeed, as non-representational or abstract symbols.

In our daily lives, numerous minute material phenomena exhibit shared characteristics, such as fluctuations in electrocardiogram waves, variations in electrical currents' strength, subtle undulations in water ripples, or the presentation forms in musical notation. These manifestations represent the

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diverse existence of "lines" in the material world, embodying meaningful artistic forms. Artists, through observation, investigation, and amalgamation of rich artistic imagination and literacy, employ non-representational translation techniques in artistic exploration and practice, thereby extracting a common symbol prototype — the "line." Similarly, entities like spots of light, balloons, pandas, brains, or spaceships, through the aforementioned extraction method, reveal symbols as "circles" or "points." Both examples portray the existence imagery of common symbols in everyday phenomena.

Certainly, the uniqueness of a certain substance compared to others of its kind represents the embodiment of individual symbols. This uniqueness finds numerous expressions in societal development. For instance, the spirit of the Long March as a Chinese cultural symbol distinguishes itself from symbols of other nations, representing an example of individual visual symbols, also serving as a symbolic symbol. Similarly, distinctive clothing styles of minority ethnic groups like the Bai, Miao, and Xibe, differ from Han or other ethnic attires. Employing non-representational artistic techniques can abstract these differences into "points," "lines," or "planes," presenting these abstract conceptual elements as symbols representing distinctive ethnic features.

The extraction of individual symbols is simpler and more direct compared to the translation and extraction of common symbols. Both extractions represent the results of non-representational translation, signifying traces discovered and extracted, establishing a robust foundation for artistic design practice.

3.3. Integration: Design Composition and Generation

The previous discussions on the origin and conceptual extraction of symbols necessitate a discussion on their formation and compositional forms. The process of "tracing discovery — symbol extraction — compositional generation" (Figure 1) is crucial for the amalgamation of symbols' development. This process materializes the development and evolution of non-representational symbols. The generation of visual symbols requires artists to enhance their observational and perceptual abilities towards changes in phenomena and societal developments. Artists, through non-representational abstraction of generalized symbolic concepts, aggregate forms. They take abstract, multi-dimensional, invisible, changing, evolving, and traceable material symbol languages, presenting them artistically on levels such as space, form, light and shadow, color, and spatial movements, generating one or multiple meaningful forms of artistic design.

For instance, artist Maya Lin, through observations of various liquid states, discovered shared and unique essential characteristics among different liquids, using the process of "tracing discovery — symbol extraction — compositional generation" to extract the essential symbolic feature — "dot." Utilizing the process of symbol aggregation, she composed meaningful artistic design works. Employing liquid molecular structural symbols, Lin presented two-dimensional symbolic languages in three-dimensional installation forms, symbolizing the natural circulation and conservation of water sources through her artistic creation. Lin's creative process, following the "tracing discovery — symbol extraction — compositional generation," resulted in the creation of installation art with unique significance. This process of aggregating non-representational symbols generated meaningful artistic designs, promoting the derivation and development of non-representational symbols in the field of artistic design.

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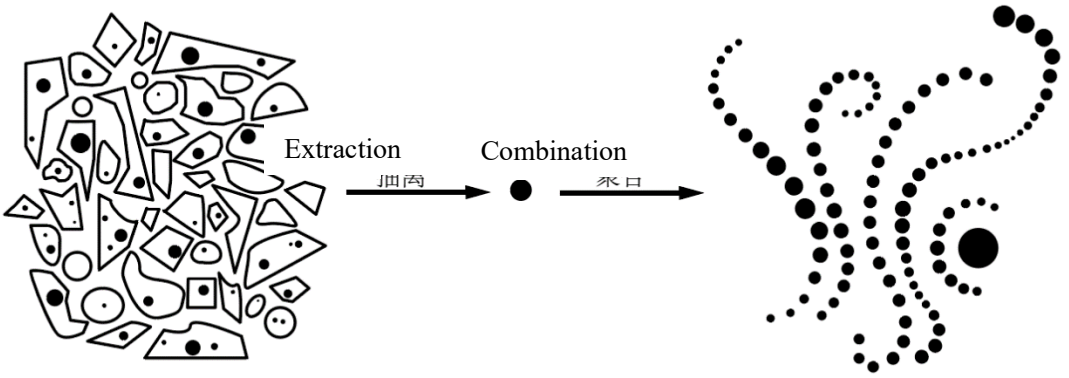

Figure 1: The Process of "Discovery - Extraction - Combination"

4. Presentation of Non-Representational Symbol Works

The creation and derivation of non-representational symbols involve a complex and abstract process of "discovery, extraction, and combination." This process showcases diverse and meaningful artistic forms through abstract, transformative, overlapping, disrupted, fragmented, juxtaposed, constructed, and superficial artistic techniques within the visual symbol language.

4.1. Generation of " Dynamic "

All material entities in the world are dynamic, where a dynamic state signifies movement or activity conducted to achieve a specific intention. Within the realm of artistic design in this context, a dynamic state refers to a common and individual abstract symbol formed by non-representational translation and extraction techniques applied to substances related to a dynamic state.

For instance, architect Le Corbusier, inspired by the continuous changes in light and shadows, conducted extensive research on the characteristics and manifestations of various light sources and halos. Employing the abstract deductive process of "discovery, extraction, and combination," he abstracted the common symbol - "dot." Le Corbusier aimed to make architectural spaces conducive to imagination and contemplation, thus factoring in a series of issues related to light, rays, and shadows in his subsequent design practices.

Le Corbusier's design of the Notre Dame du Haut chapel broke away from traditional cathedral patterns, using perforations in the facade and tapered windows between double-layer walls to enhance natural light inside the structure. Each wall was adorned with windows of various sizes, allowing sunlight to form distinctive shapes within the chapel. As the sun's position changed throughout the day, the shapes of light created varied experiences and perceptions, leading to different arrangements of light and shadow patterns on the floor, constituting a diverse "art of light and shadow." The dynamics of light represents the movement of common symbols within architectural spaces.

However, individual symbols are in contrast to common symbols, characterized by a relatively unique, straightforward, and pure application in artistic design. For example, in commemorating the centennial anniversary of the Chinese Communist Party, numerous red-themed artworks created by artists, employing the process of "discovery, extraction, and combination," extracted unique symbols from various forms of Chinese traditional characters and ornamental patterns. A monumental pillar installation carved with rich characters and decorative patterns depicted unique Chinese symbols through the installation's slow rotation and coordinated lighting, presenting captivating light and shadow art within the exhibition space and promoting a deeper understanding of Chinese characters

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from an artistic perspective, facilitating the dissemination of Chinese culture.

Additionally, sign language used by the deaf community for communication, formed through bodily variations, can also be termed as 'symbols.' The performance art piece "Thousand-Armed Avalokiteshvara" at the 2005 Spring Festival Gala, formed through this unique language symbol, represents the generation of a dynamic symbol.

4.2. Manifestation of " Statics"

Statics is relative to movement, referring to the state of profound existence in a person or object, characterized by stability and absence of sound. Static forms are common in art and design, where symbols constitute essential elements. Therefore, symbols also find diverse applications and manifestations in static art. For instance, Japanese artist Yayoi Kusama's life story is inherently one of suffering. Raised by her authoritarian mother and despondent father, she experienced torment in post-war Japan during her childhood and suffered from illnesses. Consequently, she contemplated life and death frequently, envisioning her world as a realm of dots, immersed within their essence. This unique and painful life experience endowed Kusama with artistic talents distinct from the ordinary. She amalgamated her agonizing life experiences with the developmental movement encapsulating all memory carriers. Employing non-representational and exaggerated artistic techniques, she, through the conceptual process of "Perception-Extraction-Composition of Symbols," extracted her distinctive common image symbol – "dots," also known as "polka dots." By applying these dots onto spatial material carriers such as pumpkins, she established a classic and meaning-laden artistic style. The "static" symbol of these polka-dotted pumpkins portrays the artist's rich emotional journey, representing the "statics" of common symbols.

Similarly, artist Chiharu Shiota used her personal unfortunate experiences as a source of inspiration. She considered her body a part of expressing her thoughts. Through the process of "Perception-Extraction-Composition of Symbols," she transformed her life experiences into the form of fibers, employing the operation of fibers as the primary non-representational symbol and her personal artistic language. She believed that this method allowed for a better expression of her artwork's core ideas, thereby exploring and seeking the internal workings of the soul. The installation "Amidst Silence" drew inspiration from Shiota's deep-seated, fragmented memories: a massive fire and a charred piano that left a profound mark on the artist when she was only nine years old. The fibrous black lines, as non-representational symbol carriers, entangled, interwove, and superimposed themselves, reflecting the artist's inner fears, disarray, emotional variability, and hinting at the vastness and expanse of the universe we inhabit.

Moreover, typical traditional architectural styles in China can be regarded as distinctive symbols within the field of Chinese architecture, setting them apart from others. Architectural marvels like the Forbidden City, Tiananmen Square, Yellow Crane Tower, Yueyang Tower, and Tengwang Pavilion all showcase a symmetrical beauty characteristic of Chinese architecture. Each architectural designer, through the process of "Perception-Extraction-Composition of Symbols," extracts non-representational elements for artistic creation from China's traditional culture and historical context. Elements such as rhyming poetry, regulated objects, symmetrical structures, and even the barter system embody common symbols. Extracting the commonalities of symmetrical structures from Chinese traditional architecture labels these structures as common symbols. Differentiated from other countries and regions, they epitomize the expression of unique symbols. This symbol is widely employed in China's architectural industry, showcasing the "statics" of symbols.

Design is an activity rooted in symbolic significance [5]. The generation of "movement" and the portrayal of "statics" represent two distinct forms of expression in symbolic language. Commonality and individuality constitute two ways symbols exist, offering diverse formal meanings and artistic experiences to people. The generation of non-representational symbols requires the abstract and

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complex process of "Perception-Extraction-Composition of Symbols" to construct artistic designs with formal meanings. The manifestation of artistic designs necessitates "movement" or "statics" to present shared or individualistic design works and symbolic languages.

5. Conclusion

Non-representational symbols, as intermediaries for carrying and conveying information, serve as a simplified means of understanding things, manifested in meaningful codes or forms. This paper applies the process of "discovery, extraction, and combination" to generate two non-representational symbol languages: common and individual, in the context of artistic design. By examining the connection and interaction between non-representationalism and symbols, this study explores the derivation and development of non-representational symbols. Through specific cases in artistic design, it analyzes and interprets the forms of existence of the "dynamics" and "statics" of symbols and their applications, suggesting the need for deeper research into these areas.

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