

# Research on the Design of Graphic Public Welfare Posters based on Semiology

## -- A Case Study of Graphic Public Welfare Posters of the "Water Resources Conservation" Theme

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**Abstract.** The theory of semiology as basis, first, the denotative meaning of the signifier and the signified generation in the vision of the graphic public welfare posters of natural resource protection were demonstrated and analyzed, as well as the connotative meaning of the ideological level in the dual characteristics, then the symbolic analysis, induction, deconstruction and construction were carried out in accordance with the division of binary composition, dual characteristics and different representation modes of symbolic graphics, and applied them to the actual creative process. In the design process, the extraction and transformation of different types of symbolic elements, such as color, graphics, and materials, isomorphism, symbolism and other creative expression were combined to carry out graphic poster design around the theme of "water resources conservation".

**Keywords:** Semiology; Public Welfare Posters; Resources Conservation; Graphic Design.

### 1. Introduction

In today's human society, both language symbols and graphic symbols are used as a carrier of knowledge and culture to connect internal thoughts and external environments. More information symbolization has also appeared in the design of graphic public welfare posters, the graphic public welfare poster itself is also a visual symbol, which uses rich graphics, text, colors and other visual symbols to achieve the purpose of efficient communication.

### 2. Interpretation of Related Concepts

#### 2.1 Definition of Graphic Public Welfare Poster

Graphic public welfare poster is a kind of communication medium of visual communication design that uses bright and concise visual symbols reflect social phenomena and expose social problems, it disseminates information for the purpose of awakening social moral awareness, code of conduct, and guiding correct values and social conception. It also acts as a carrier and communicator of positive, positive energy conception and spiritual culture, the audience is wide people, which can subtly guide the ideas and opinions of the audience, and partly reflect the outlook on life, values and world view of the public at present.

#### 2.2 Definition of Symbols

In a broad sense, the sign is "something that one thing (medium) represents or involve another thing." The sign is a carrier with a referential meaning or a concept, and its meaning can only be played in a sign system, and expresses information that the audience can understand. Symbol is not a one-to-one relationship, it may have multiple referential relationships and various meanings, it is a kind of information itself, it may show different information transmission contents due to differences in culture, environment, language among different communicators and recipients, etc.

### 3. Multiple Semantic Meaning of Symbols in the Design of Graphic Public Welfare Posters

In the study of semiology, we must mention Saussure, the founder of semiology, he believes that we can interpret any form of information signal by understanding the relationship between symbols and various symbols, he divided the whole concept of sign into "signifier" and "signified", it is also called as the "binary composition" of symbols. The "signifier" is the symbol itself, which has a certain materiality, and the "signified" is the abstract concept and meaning represented by the "signifier".

In the design of graphic public welfare posters, the signifier of symbols is the external expression of graphic poster design, including color, graphics, layout composition, text consideration, etc. in the two-dimensional space of graphic posters, the theme is expressed in accordance with certain design organization principles as the medium of meaning transmission. The content and deep meaning which it conveys are presented through the formation of signified relationships, it is a conceptual image projected in the mind, including abstract content such as emotion, identity, and status.

Roland Barthes proposed the hierarchical system of symbolic meaning based on "signifier" and "signified", introduced the concept of "signification", and discriminate denotative meaning and connotative meaning. Roland Barthes believes that the first level is the surface signification system, and the second level is the deep symbol system, the signifier and the signified in the first level are combined into the second level as the signifier, when combined with the signified, it can form new and more complex symbol system, the first level of signifier and signified constitute the denotative meaning, while the second level points to the connotative meaning of ideology.

### 4. Case Analysis of Design of "Water Resources Conservation" Graphic Public Welfare Posters



**Fig 1.** Global creative poster cases

Sources of Global Creative Poster Cases:

[https://pcedu.pconline.com.cn/sj/design\\_area/excellent/1208/2921180.html](https://pcedu.pconline.com.cn/sj/design_area/excellent/1208/2921180.html)

The denotative meaning in the graphic public welfare poster symbol is the "explicit" meaning of the visual symbol, which is a representative reference relationship. As shown in the public welfare poster of resource conservation in Fig.1, the main visual symbols on the picture are a large amount of garbage, thin people, cloud and mist with dirty colors, dry oceans, and pollutants flowing out of garbage, it represents that the ocean is polluted by a large number of harmful substances and garbage, dirty cloud and mist represent poor air and environmental quality (Fig.2). Therefore, the denotative meaning of this flat public welfare poster is that the garbage discarded by people has not been

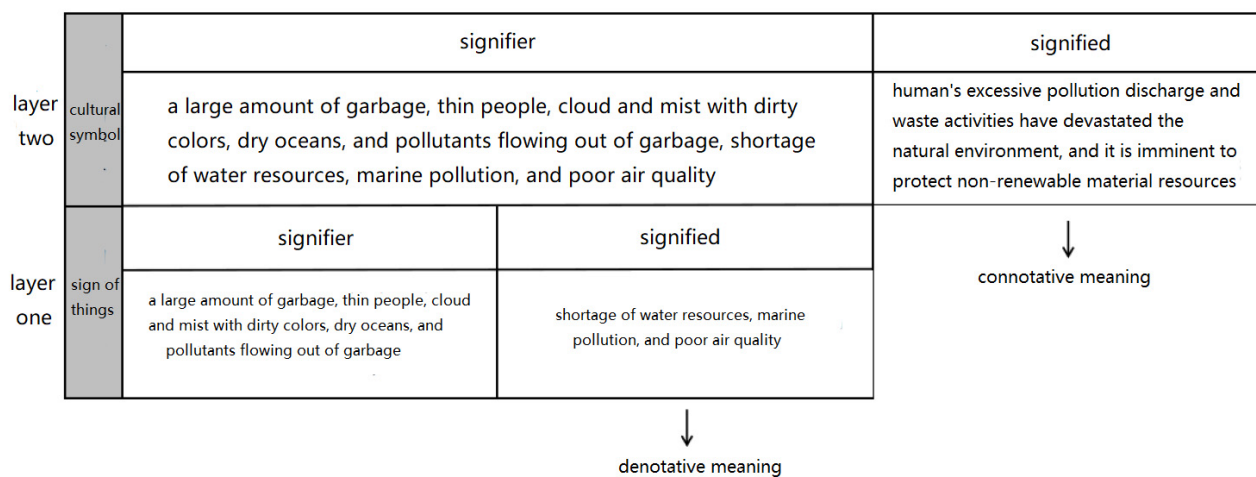
rationally treated and recycled, resulting in serious consequences such as lack of water resources, marine pollution, and poor air quality.

	signifier	signified
layer one	a large amount of garbage, thin people, cloud and mist with dirty colors, dry oceans, and pollutants flowing out of garbage	shortage of water resources, marine pollution, and poor air quality

**Fig 2.** The signifier and signified of the case of the graphic public welfare poster (image source: the author's drawing)

The connotative meaning of symbols in graphic public welfare posters is an implicit content outside the explicit language, namely the deep meaning behind the symbols. It will change with the individual cognitive differences, subjective attitudes, emotions of designers and viewers, as well as changes in the era environment, social culture, etc.

Taking the public welfare poster above (Fig.1) as an example, the signifier and signified of the first level form a new symbolic form, which flows to the second symbolic system with subjective judgment thinking. The new signified has an implicit meaning, it tells people that the uncontrolled pollution discharge and wasteful activities of human beings have devastated the natural environment, and it is imminent to protect the non-renewable material resources), no protecting will bear serious consequences, namely the connotative meaning of symbols (Fig.3).



**Fig 3.** The connotation and meaning of the cases of graphic public welfare posters (image source: the author's drawing)

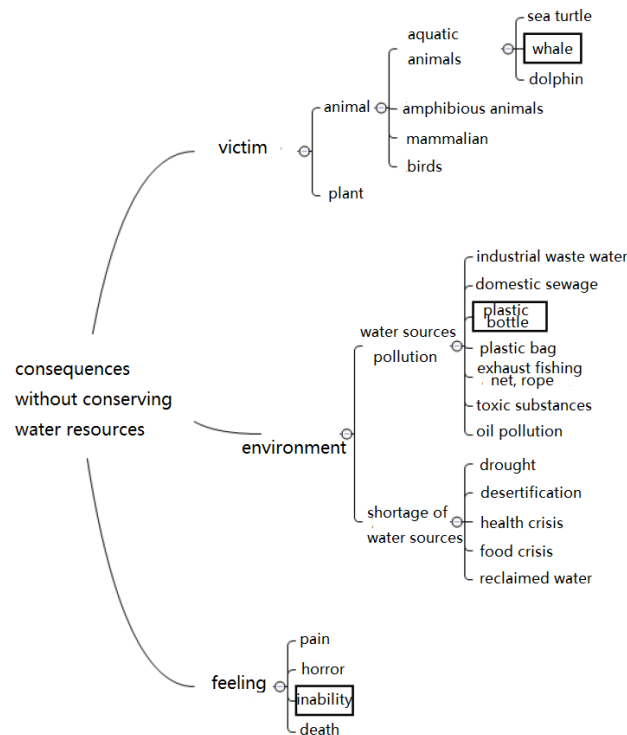
## 5. Design Practice of "Water Resources Conservation" Graphic Public Welfare Posters

### 5.1 Design Ideas of Public Welfare Posters "Water Resources Conservation" Theme

According to report of Xinhua News Agency, "about 270 pilot whales were stranded near the west coast of Tasmania, Australia on September 22, 2020, and about a third were dead." Experts dissected the whale in the whale stranding incident, they found that the whales' stomachs were full of plastic

products, ropes and other man-made wastes, human do not pay attention to water resources, which leads to the increasingly serious problem of water pollution.

Fig.4 is the author's thinking divergence graph, the exploration focuses on the consequences without conserving water resources, carries out the connection associated words on the possibility of victims (animals and plants), environment (water sources), and feelings, extracts the "whale" in aquatic animals, the "plastic bottle" of water pollution, and the victim's "powerless" feeling, selects the most representative basic elements to make the viewers emotionally resonate.










**Fig 4.** Thinking divergence diagram without conserving water resources (image source: the author's drawing)

## 5.2 Extraction and Construction of Design Symbols of Public Welfare Posters of “Water Resources Conservation” Theme

### 5.2.1 The Construction of Denotative Meaning of the First Level of Symbol

**Table 1.** The construction of the symbolic denotative meaning of the public welfare posters of "saving water resources" theme (image source: the author's drawing)

symbol element category	elemental contents of cultural symbols	name	sample	symbolic meaning of denotative layers
graph	victim	whale		space of whales is limited, there is not enough water resources
	environment	water		shortage of water resources, serious pollution
	feeling	helpless state		whale is unable to float in water, feel restraint, pain
material	subject matter	scrap		express the fragility of life with the fragility of scrap
	auxiliary matter	broken container		represents the destruction of the whale's living environment
color	subject	blue, black		represents the ocean, whales, meet psychological association
	background	white		leave blank to highlight the subject and derive imagination space

According to Roland Barthes's dual features of image symbols, on the first level of image symbols, the symbols such as graphics, materials, colors, texts and other symbols can be constructed in denotative layers, that is to classify and construct the meaning expression system formed by visual symbols, as shown in Table.1.

First, American logical semiotician Peirce divides the different representation modes of symbols, there are three types of graphic symbols: similar symbol, index symbol and symbolic symbol. This design mainly adopts symbol this type, it is more metaphorical in comparison with the former two, use symbolism to refer to things and express meaning.



**Fig 5.** Display of public welfare posters of "water resources conservation" theme (image source: the author's drawing)

In the graphic public welfare poster of "water resources conservation" (Fig.5), the floating whale figure is used to symbolize the whale's bound, powerlessness, and the loss of the environmental space for free swimming, this symbolic figure is handled through clever metaphors, and express the pain of the whale. The visual rhetorical expression of specific spatial isomorphism is used in the composition structure of graphic symbols to provide a creative sense of composition space.

Second, the use of material symbols. In the preparation of poster materials, plastic cups are used, it alludes to the pollution of plastics this thing on water resources, whales live in an environment full of plastics. The material of whales is scrap, the thin, fragile, and light characteristics of the paper are used to symbolize the fragile, powerless, and dying state of the whale.

Third, color symbols can awaken the viewer's psychological perception in the design of graphic public welfare posters, and different colors will have different psychological cues. In the color symbols of the posters, the blue of the ocean is used in combination with real life, it is easier for the viewer to associate, a large amount of blank space in the background can create an endless imagination space, it highlights the meaning that the subject wants to convey.

### **5.2.2 The Construction of the Symbolic Connotative Meaning at the Second Level**

The connotative meaning layer is more multi-dimensional and subjective than the denotative layer, therefore, the cognitive differences of the audience are considered in the design, it is easier to express the connotative meaning of "water resources conservation", for example, graphic elements signifier: "floating whale", "broken water glass" and so on constitute obvious denotative meanings, the connotative meaning is conveyed through the denotative meaning, namely water pollutants poison fish and other aquatic animals, causing them to lose their homes, and the living environment of marine fish such as whales has been severely damaged (Table.2).

**Table 2.** Construction of symbolic connotative meaning of public welfare posters of "saving water resources" theme (image source: the author's drawing)

conserve water resources	extension		connotation
	signifier	signified	implication
graphic elements	floating whale, broken water glass, small amount of blue liquid in the glass	whales survive in a water-scarcity environment, it is difficult for them to swim freely	water pollutants poison fish and other aquatic animals, cause them to lose their homes, the living environment of marine fish such as whales is severely damaged
material element	paper scrap whale, plastic water cup	fragile whales struggle to survive in wrecked environment	under the influence of human, the life of marine organisms has become vulnerable, the plastic pollution of water resources has led to frequent occurrences of whale stranding and death
color element	blue liquid, black paper scrap whale, white background	whales float in ocean.	follow the colors of things in real life, guide the viewer to review the reality, think about the "dignified", "desert", "broken" phenomenon

## 6. Summary

For graphic public welfare posters, the audience is no longer satisfied with the direct representation and expression of objective reality, the ideas which designer want to express and the central theme of the poster are integrated through image indication, symbolism, metaphor and metonymy, etc. Semiology dose not only provides creative thinking and rich expression methods for graphic public welfare posters, but also gives posters with emotion and implied meaning, making viewers think about the connotation of posters.

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