Mind, Meaning and Form
Toward The Visualization of Subjective Concepts to Abstract Forms

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Abstract: Form is an important medium in understanding the contemporary world; therefore, we have to look for forms which associate common meanings in the mind of the peoples. To reach this goal, a research started based on this question that "Can we associate forms, shapes and volumes to subjective concepts and meanings?" To answer this question, some experiments were done based on the practical exercises and sketches in different universities. The method of the experiment was based on presenting some groups of words (a subjective and an adjective concept) in connection with an objective and physical space. Although students worked totally independently, there were many similarities in their sketches. By comparing these words with different pictures on the internet, the same previous results were obtained. The result of this research can help us find parts of archetypes, and can be also useful for designing objects with special messages.

Keywords: language of form, subjective concepts, objective concepts, the internet, archetypes

1. Introduction

Form is a shape organized in the service of content [1]. The visual appearance of products is critical, determinate of consumer response and product success [2]. Actually, since the beginning of the academic education of industrial design in Bauhaus, this issue was also of great importance: Having been trained in the language of form, Bauhaus designers set about developing prototypes for the mass production of definitive, standard forms for the objects of everyday life [3].

Form, as one of the main elements of design, is an important medium in understanding the contemporary world. Considering the needs of global market and process of globalization, we have to look for forms which associate common meanings in the mind of people. Accordingly, a study was done about the language of the product and the relation between form and emotion, meaning and concepts, about 10 years ago from which a disputable question was brought about: "Can we associate forms, shapes and volumes to subjective concepts and meanings?"To answer this question, some experiments were started based on practical exercises and rapid drawing techniques (sketches) in the classes of "Form and Space" (A course in Iranian Universities which discusses Form and Space due to the importance of their concepts in design) in different universities. Exercises were conducted during different years (between 1996 and 2006). The general idea of the paper focuses on the fact that as there are concept archetypes, there are form archetypes too which are accredited to attributes and concepts by individuals. The epistemology of the form archetypes is testable through mental images.

2. Materials and Methods

Experiments were started based on practical exercises and rapid drawing techniques (sketches) in the classes of "Form and Space" in 3 different universities. Exercises were conducted during different years between 1996 and 2006. For this paper, exercises of 115 industrial design students, male and female aged between 19 and 25, within 8 semesters randomly were selected.

Based on comparison between sketches we reached an interesting answer. The method for experiment was based on communicating subjective and objective concepts with the concept of form and space by presenting some groups of words (a subjective concept and an adjective) in connection with an objective and physical space (as context). It should be mentioned that there were ten groups of words out of which only four are discussed here.

At first the 4 groups of words (Table 1) were introduced to students. Each group contains three words in which the first and second one impress a common state and the third word has been chosen to describe the situation or field in which both states can develop.

Table 1. Four groups of words

	Word 1	Word 2	Word 3
Group A	Honesty	Intimacy	University
Group B	Friendship	Relation	House
Group C	Cheerlessness	Reminding	Hotel
Group D	Trust	Optimism	Workplace

The first and second words have propinquity together. It caused students to search the meaning of these words in their mind, and sketch unique forms related to given typical and especial space, instead of using usual symbols.

Every student had to design abstract forms with those subjective concepts. Terms and spaces were presented without any changes so that comparison would be easier.

An Instruction had been set up for students in order to prepare identical situations. The main contents of the instruction show below:

1. Sketch a shape or volume with abstract form for each group of words.
   Your sketches are subject not to be implied from usual and natural forms and well-known symbols, even as well as industrial and artificial products.

2. Allocated time for sketching for each group is 10 minutes.

3. Each student has to work individually.

Sketches were collected after each session and the study was conducted to investigate the relationship between characteristic, symbol and emotion of sketches.

In 2003 we decided to search these words on the internet. We used Google search engine as an image source. The biggest advantage of using Google search engine was access to non-local ideas in related subjects which helped us to broad our domain of research. As we could find related issues in students' forms and web images, we concluded that resulted forms were mutual among peoples in the world in the case of ways to introduce concepts in form of figures and it would be concluded that there is a kind of figurative archetype in people's unconsciousness. It should notice that in comparison with web images with available results, we considered only figures and common forms and ignored colors, patterns and materials. Also the function of found images on the web was not important for us. Although there have been researches on the relationship between form and meaning in which the form was first given then the meaning and the emotional effect was obtained. While, in this research for the first time the method goes opposite.

3. Results

Sketches were compared together and analyzed. Although students worked totally independently from each other, there were many interesting similarities in their sketches and results of work. Most of them had common characters and meaningful similarities in the form. "Latent common geometric patterns ,lines or volumes" were

found on them.. Sketches were compared with different pictures in the internet websites and again the previous results were obtained. Several tables show the result in brief. We can study on these common characteristics for each group by categorizing the yielded figures. Categories and m utual characteristics have been mentioned in following tables.

Table 2: Group A: Honesty, Intimacy, University – Total number of sketches is 87.

Number of elements in each framework			Basic forms		Formal relations		States and characteristics
a1: three elements or more	a2: two elements	a3: Single element	organic	geometric	Elements with each other	Elements with context	
27 54		6	18	69	doodle & Convergent	Protector & Ascendant	Sharp & Clear edges

Table 3: Group B: Friendship, Relation, and House: Total number of sketches is 69.

Number of elements in each framework			Basic forms		Formal relations		States and characteristics
b1: Two elements	b2: Multiple elements	b3: Single element	organic	geometric	Elements with each other	Elements with context	
27 42		0	36	33	Twisted together , Proximity, Star shape arrangement	Protector & Ascendant	Soft or Curved edges

Table 4: Group C: Cheerlessness, Reminding, and Hotel: Total number of sketches is 89.

Number of elements in each framework		Basic forms		Formal relations		States and characteristics
c1: Single element	c2: Two elements or more	Organic	geometric	Elements with each other	Elements with context	
29 60		38	51	form tendency to inside, bent & empty form	Central and static state	Introverted, pored, transparent forms

Table 5: Group D: Trust, Optimism, and Workplace: Total number of sketches is 53.

Number of elements in each framework			Basic forms		Formal relations		States and characteristics
d1: Single element	d2: Two elements	d3: Four elements or more	organic	geometric	Elements with each other	Elements with context	
9 3		41	17	36	Elements are close,introverted, blossoming, branching upwards	Ascending , locating in the center	Exciting, extroverted form

Hidden Patterns

Considering the conditions assigned for students to visualize and illustrate the words, using the basic forms like different types of cubes, pyramids, spheres, and cones, the students presented their designs and drawings; that is why the designs lacked specific themes and the form itself along with formal relations among forms on one page as the background can be recognized and analyzed. The analysis could be done by drawing the hidden pictorial

patterns in the picture. That is, the hidden pattern in the formal relation is evident in the framework either as a single entity or in relation with others. For instance, in Group A, intimacy, honesty, and university have been pair elements. The pattern in Group A depicts jagged edges which are single or multiple element having roots in an academic environment.

4. Discussion and Conclusion

Most of the subjects about product language have a semantic approach. As product language is a real subject in today's life, it seems an encyclopedia for this language is necessary. Globalization issues support this reason. This article is an introduction to prepare that encyclopedia.

The students refrained from using any symbol and just used the basic forms and volumes such as cube, sphere, pyramid, cone, cylinder, and simple organic forms. They used them partially or in combination of forms or shapes. The way of using these volumes depending on the subject is different in numbers, size and dimensions. However, the symbolic value of each volume cannot be ignored. For instant, table 6 shows the result of group A. Red lines on original sketches help us to see hidden patterns better.

Table 6: Group A: Honesty, Intimacy, and University

Students' original sketches (with red lines on them)			
Pictures of The Internet			

To express the image of the concepts, the students used two, three or more of the mass elements which had forms changed from the original form. What stands out in the pictures is the relation of masses with one another. It seems that the supporting forms are holding the characters of human figures illustrating *intimacy* via a convergence and turning around one another. Although the forms and masses are capable of performing the *intimacy*, they possess some recognizable jagged edges and because of the defined background, *university,* each form with definite edges attains specific limit and character. Among these, there are also designs with close arrangements of simple forms like cubes and cylinders which have expressed the close and austere relations to bear in mind the idea of *honesty*. In comparison with the doodle-like designs, these get narrower rising to the top. Another characteristic of the designs is the supporting or authoritarian status of one of the figures which has leaned over another one. In the analysis of this concept in the pictures on Google, there are pair elements like two identical flowers, persons, objects, etc. which contain the same figures and formal relations. The hidden patterns of these forms come in table 6.

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