

Identification of Graphic Character Influenced by the Design of Characteristic Features.

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Graphic design of character has been included one of the main factors in corporate identity system. It makes people to create an interactive connection of emotions in addition to enhance brand loyalty through its gratifying appearance.

The characteristic feature performs the important role during the graphic character is being designed. It is able to create clear memory and impression for observers if the features of character were illustrated. The core of the investigation is to clarify the characteristic features demanded in identifying a character and to find out the importance of them. It is found that at least five characteristics should be illustrated for graphic design character that enables observers to recognize and memorize.

Identification of Graphic Character Influenced by the Design of Characteristic Features

Abstract

Graphic design of character as a visual symbol has been included one of the main factors in corporate identity system. It makes people to create an interactive connection of emotions in addition to enhance corporate image or brand loyalty although its gratifying appearance,

Symbolic meaning has been included in the graphic character of corporation that expresses the corporation culture, the brand image and product quality. It stimulates thinking of association of an observer. The characteristic feature has the important role during the graphic character is being designed, however, it may confuse observers perception that is unable to create clear memory and impression if the designer does not know to manage the feature of an character.

The cores of the investigation are to clarify the quality and quantity of characteristic features demanded in recognition, and to find out the importance of characteristic features of an object.

keywords : graphic character design, characteristic features, identification

1 Introduction

The design of graphic character encodes the image of a character associate with demand behaves of corporation that can be even utilized to be the visual identity of a corporation or an event. It makes friendly impression of corporate behavior for consumers.

It will not cause wrong perception while observers identify that graphic character when the designer totally manages the feature of a character that helps to develop its graphic design of image. For example, it was the donkey that originally designed, but indemnified to be a horse if a designer did not treat the length of legs of donkey as one of characteristic features. Therefore the focus of the research would survey and gauge the importance of characteristic features, and on the other way, avoid the invalid design of the graphic character. The objectives of this research are about to

- (a) Classify the characteristic features of the object.
- (b) Investigate the importance of feature subject to the object characteristics.
- (c) Examine the effect of identification of graphic characters in terms of the design of characteristic features.

2 Literature research

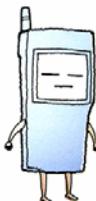
2.1 Definition of graphic character

The graphic character is a kind of graphic symbol that enhances the identity of commercial events for enterprise or product promotion (Lin, 1993). Those by presentation personified to catch the attraction choose the character of creature in order to strengthen a feature of the commercial event.

2.2 Classification of graphic character designs

The assortment of the object presentations personified in accordance with different corporation characteristics or activity themes, can be categorized into the human, animals, plants, and product appearances (Chang, 2003). Yet, some objects are not qualified in above-mentioned four categories, we defines those into the sort of 'fantasy' and lists after the human, animals, plants, products categories (Table 1).

Table 1 List of personification object sorts correlate to the company/ product

Object sort	The scope of the object sort	Examples	Company / products
Human	Objects that apply a human head, face and appearance, belongs to this category.		Oyatsu Cmpany / Snack Noodles
Animals	Including mammals, oviparity, amphibians, fishes, birds, insects, etc., all belong to this category		Nissin Foods / Noodles
Plants	Objects in shape of flowers, grass, fruits, vegetables, trees, fern, etc., belong to this category.		Tokyo Communication Network / Communication Business
Products	Objects that are relevant to the company's business or products belong to this category.		J-p (To be continued) Communication Business

Fantasy	Objects designed as fiction images, such as E.T., supernatural beasts, legendary beasts, etc. belong to this category.		Kdansha Publisher/ Tour Guide Magazine: Tokyo 1week
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To probe into the specific features of the object, the investigation firstly aims at a certain object such as canine in the kind of animals. It is quite often to see canines become the visual identity symbols in commercial activities.

2.3 Pattern recognition of graphic characters

The Information process of observers is starting from identifying the pattern of information (Peng & Chang, 1999). Without identify the pattern of information that stimulates Information process, would not generate the process of information storage and further process. That way, before memory and thinking processes begin, should firstly probe into identifying the pattern of information. The pattern of Information Identified means to aware, distinguish and convince the stimulate patterns. Normally it can be specified as sensory register, perception canalization and integration, semantic canalization and integration, decision and certification. If the information inputted relies on the feeling and stimulating, the pattern identified of information would become the bottom-up process (Fig. 1). If the information inputted relies on something stored in the human brain, the pattern identified of information would then become the top-down process (Fig. 2).

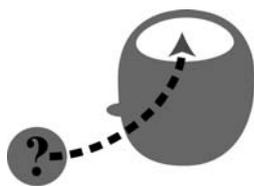


Fig. 1 Identify objects that are not acquainted with relies on bottom-up processing

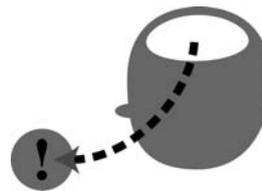


Fig. 2 Identify objects that are acquainted with relies on top-down processing

The research of the characteristic feature of the graphic character is to utilize the observers' response of the graphic design that is not acquainted with, bottom-up processing, and to explore the characteristic features of that object and its graphic presentation. The designer can design the effective graphic characters with least and appropriate features of the object.

2.4 Recognition by components theory (RBC)

Biederman (1993,1995) proposed the concept about Geon, namely the recognition by components theory, abbreviated as RBC theory. This is to assume that mental imagery of objects is composed by a few simple components, and name all these components as the Geon. Geon is a geometry shape generated after simplifying the characteristic feature of the object. After Geon is analyzed, will administer paired association of the object representative from the memory, it could make faster of distinguishing the object and increase its correctness. Different perspective and view angle of Geon will not influence the reaction time and its correctness; this is to say that Geon is indeed the steady representative of an object part. It is hypothesized that the screen of the characteristic features and its quantity will influence the identification of graphic character.

3 Research methodology

Through interviewing survey and experiment approach has been carried out in this research. Probe into the important characteristic feature of the graphic character and present some of the characteristic features that are divided into three stages: (a) Avoid the object sample selected on account of the features to be acquainted by the subjects. Firstly survey and select canine samples that subjects are least familiar with at this phase, and then arrange those samples into an order with the ranking of interviewee's acquaintance. (b) Investigate the characteristic features of canine samples that subjects selected at the phase (a), and arrange in an order subject to its importance in graphic character of the sample canine. (3) Carry out the experiment approach that the character designed in terms of its characteristic features could be recognized effectively.

3.1 Sampling subjects

Consider of limited manpower and material resources, it utilizes 'Convenient Sampling' and collects 30 college students as target subjects, though there is no specific academic background or professional experience required for the investigation.

3.2 Research environments and facilities

Subjects are arranged to take the survey and experiment in a quiet environment, which helps to prevent interruption throughout the investigation. A structural questionnaire regarding to the elicitation of the characteristic features of the canine sample will be filled in by the subjects. Many cards with canine samples that are designed in accordance with different characteristic features will be recognized by the subjects. The survey and experiment have been carried out in the design research

lab T1-402, National Taiwan University of Science and Technology from December 15, 2003 to January 10, 2004..

3.2.1 Choice of canine samples

Have the “focus group study” to screen the proper pictures of canine samples. A hundred canine samples are selected within 306 pictures collected that exclude those with blur photo effect or bad shooting angle. Those 100 canine sample photos were shoot as parallel angle; all canines remain the same posture and the same standing position. The photo images of those samples have to be approved by the focus group organized by six graphic designers who have had professional experience for over five years. Make up serial numbers from no.1 to no.100 for those canine samples selected.

3.3 Research procedures

3.3.1 Selection of canine samples in accordance with unacquaintance

The purpose is to prevent the subjects influenced by being familiar with canine sample from confusing the evaluation result of recognition. The approach is to apply Likert's (1932) ‘method of summated ratings’ that makes the subjects rank their familiar level of canine sample. It is therefore found out that the canine sample no. 54 (Fig. 3) has been perceived not acquainted with the most, and is selected for the specific canine sample in the studies of the characteristic feature of graphic character.



Fig 3 The canine sample not acquainted the most by the focus group studies

3.3.2 Investigation of canine samples' characteristic feature

The image of canine sample no.54 is carried to be surveyed its characteristic features and made a rank of its importance for each of the characteristic feature. Have the canine sample printed on the area of a square 15 by 15 centimeters and let the subjects draw out its characteristic features of this canine. The subjects describe what features they have drawn out from the canine sample, then fill in the form and grade them in the meantime according to their importance. That the feature written

down in the level 1 represents the most important and level 8 represents the least importance (Fig. 4).

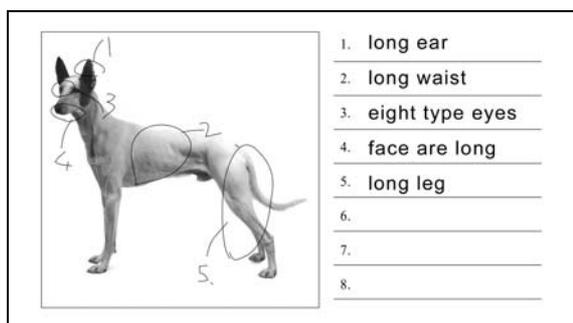


Fig 4 Questionnaire sample

It is found that the subjects have selected averagely five characteristic features for the canine sample no. 54 and have them the sequence of importance from the analysis of collected data. The approach of data analysis has 5 points to weight the level one feature, 4 points for the level two the secondary important characteristic feature, 3 points for the third level feature, 2 points for the fourth level feature and 1 point for the features from fifth level to eighth level. The sums of points for eight features are shown in the table 2.

Table 2: The ranks of characteristic features summed up their points of importance

Rank of importance	Characteristic feature	Description of characteristic feature	Points
1.	Ears	Long ear, pointed ear, upright ear	150
2.	Body / Waist	Thin waist, long waist	120
3.	Leg	Long leg, thin leg, strong leg	94
4.	Tail	Long tail, rising tail, curly tail	79
5.	Shape of face	Sharp face, face are long	65
6.	Nose	Long nose, round nose	58
7.	Eyes	Eyes in the shape of Chinese character “/\”	40
8.	Hair	Short hair (To be continued)	15

3.3.3 Recognition experiment of graphic characters

In order to learn the effect of characteristic feature, the experiment has been

carried out the pattern of combination and its quantity presented that are demanded for recognition while the design samples of graphic character of canine sample no.54 could be perceivable by the subjects.

Experiment variables

The independent variables of "combination pattern" and "quantity" of characteristic features have been manipulated for the design samples of graphic character.

Experiment facilities

The approach of designing sample is to make up that top five characteristic features in different numbers and patterns of combination displayed in table 3.2. They are specified as follows. (i) Involve and present one sort of characteristic features for one design sample of graphic character of canine. There are five presentations of design samples of canine. (ii) Involve and present two sorts of characteristic features for one design sample that could be ten presentations of design samples. (iii) Involve and present three sorts of characteristic features in one design sample that could be ten presentations of design samples. (iv) Involve and present four sorts of characteristic features in one design sample. There are five presentations of design samples. (v) Involve and present five sorts of characteristic features in one design that could be only one presentation of design sample (See Appendix). There are thirty-one possibilities mentioned the above in total of presentation of the canine sample no.54. They are produced by the software Illustrator 10.0 developed by Adobe limited Co.. Thirty-one design samples of graphic characters have been printed on the card of a square within the size of nine by nine centimeters.

Experiment approach

It is considered to explore the graphic character design samples that are the most effective and most similar characteristic features to the canine sample no. 54. In addition to select six samples (Fig. 5) among those canines that "focus group" members considered as least acquaintance at the first phase of investigation (See version 3.3.1) have similar images to the canine no. 54. They become the references that are utilized to classify thirty-one design samples of canine graphic characters. Hence the subjects screen out the design samples in terms of their combination patterns of characteristic features the most similar to the canines no. 54 image. In the same reference group of design samples the subjects carry on grading its similarity subject to the reference canine while those design samples having same quantity of characteristic features to be made up.

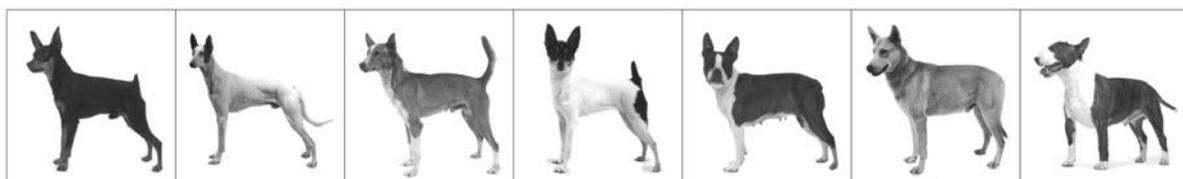


Fig. 5 Seven canines that "focus group" members considered as least acquaintance

4 Results and Discussion

The most effective graphic character design is that characteristic features evolved the least but able to present perceivable reference character to which is the investigation approach. It has been found that the graphic character design sample having five sorts of characteristic features evolved (Fig. 6) is the most simplified and recognizable for the canine sample.

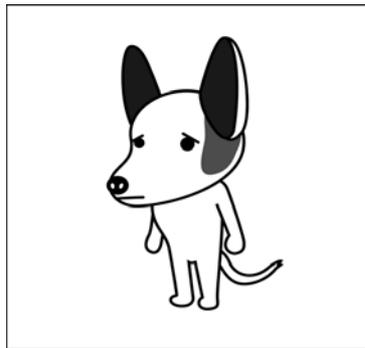


Fig 6 The most simplified and recognizable graphic character for canine sample

This research proposes that canine graphic character design requires to evolve five characteristic features at least so that it can clearly and effectively express and identify the breed of canine. Though some canines and their characteristic features are similar to each other, the outcome of the investigation is benefit for guiding the design of new graphic characters. It is recommend that the investigation approach can be referred to study other breeds of animals and even more materials explored in the future that are possibly able to testify the common features of graphic characteristics coordinated in different characters.

A noteworthy one is that the results of grading importance of characteristic features are somehow different from the reference base for the subjects while recognizing design samples. Some characteristic features elicited are considered to neglect by the subjects in the processes of identification though the most important feature graded become the significant to identify the graphic character. It is convinced that the most important feature of character could be strengthened in graphic design able to enough perception and identification. On the other hand, the presentation and evolvement of other features lowered is acceptable for the threshold of graphic character design that may be efficient in the task of design development.

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Appendix

 sample: a	 sample: b	 sample: c	 sample: d	 sample: e	 sample: a-b	 sample: a-c	 sample: a-d
 sample: a-e	 sample: b-c	 sample: b-d	 sample: b-e	 sample: c-d	 sample: c-e	 sample: d-e	 sample: a-b-c
 sample: a-b-d	 sample: a-b-e	 sample: a-c-d	 sample: a-c-e	 sample: a-d-e	 sample: b-c-d	 sample: b-c-e	 sample: b-d-e
 sample: c-d-e	 sample: a-b-c-d	 sample: a-b-c-e	 sample: a-b-d-e	 sample: a-c-d-e	 sample: b-c-d-e	 sample: a-b-c-d-e	

Note: Five letters of a, b, c, d, e represent five characteristic features selected from the canine sample no.54. Each graphic character design sample the above includes and presents different sorts and numbers of features.