

What Makes the Impression of the Shapes Decided? Experimental Study on Japanese Comic Ideophones with a Scene of Touching the Object.

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Abstract

Decorated characters in comic, which we call “comic ideophone” (or “描き文字” in Japanese) describe a sound, a state, an inner feeling of the object etc. in comic. In this research, we will experimentally investigate the effects of comic ideophones for viewers of the picture including the comic ideophone. We focused on comic ideophones which describe shape, texture and hardness of the object and will create some comic ideophones which have a different shape of the contour and a word sound. In the experiment, we will examine 5 different conditions to find out factors which can be correlated to the impression of ideophones.

Keywords: Comic/Manga, Ideophone, Comic Ideophone, Tactile

1. Introduction

We see decorated characters everywhere in daily. Especially in Japan, we find various types of decorated texts in comic/manga, which we call “comic ideophone” (or “描き文字” in Japanese literature). Comic ideophones are drawn as a part of picture in comic and play an important role in conveying some sense to the readers.

One may consider comic ideophones can be studied by analyzing the fonts in comics. The choice of fonts would be related to comic ideophone, but we believe in that not all effects of comic ideophone can be characterized with the fonts. We believe few studies have pointed out that comic ideophone is affected by the combination of phonetic and visual aspects of words, while the choice of fonts is often arbitrary from each of the words (rather it is chosen for passage-level text). A technical book which explains how to draw and use comic ideophones for comic artists has not been published for long time, however, it was finally published in Japan in 2023 (Tokyo Design Academy, 2023). This book describes the empirical effects of comic ideophones, what impression the readers may have, but it does not explain most of reasons why they can convey such impressions to the readers.

In this research, we aim to identify features of comic ideophones, which are correlated to participants’ impressions of the shapes of objects.

2. Method

We focus on the shapes of the objects and their texture by creating the pictures which describe scenes of touching the objects with the various shapes. The most significant feature of comic ideophones is the multi-modal characteristic which have a feature of the word and a feature of the decoration. This is why, we think that each feature should be considered in the experiment.

The experiment will consist of the following five parts:

- The participant looks either at a comic ideophone or a non-decorated text one at a time, then evaluates his or her impressions of each ideophones.
- The participant looks at a picture without any comic ideophone only one at a time, then evaluates his or her impressions of the picture.
- The participant listens to sounds of a word one at a trial, then evaluates his or her impressions of the sound.
- The participant looks at a picture without any comic ideophone and listens to sounds of a word one at a time, then evaluates his or her impressions of the picture with a ideophone sound.
- The participant looks at a picture including a comic ideophone one at a time, then evaluates his or her impressions of the picture with the ideophone.

We expect that analysis of the results of this experiment will reveal the combinatorial effects among the sound, the text decoration, the picture, the pictures with the sound and pictures with the ideophone by comparison of these five experimental conditions.

Stimuli

Base Picture The picture describes that someone is touching a physical object. Comic ideophones are mainly drawn in many cases that the object is passively moved or the object itself actively moves (there is an exception like “Silence”). The object has 4 different shape patterns (Figure 2). These

shapes are inspired by the Bouba-Kiki experiment (Ramachandran & Hubbard, 2001) which contrast forms (bubble/spiky) were used as stimuli. We consider three different colors of the objects. We use black, white and gray as the color of objects because it has been known that human's impressions are changed by its color. (Payne, 1958)



Figure 2: Pictures which show that someone is touching a physical object.

Comic Ideophone In this research, we will choose and create contours of ideophones which are created just by editing its original lines and can make a pair of contours which have contrast forms each other. The colors of comic ideophones include white, black and gray because of the same reason for object colors.

Word for comic ideophone We chose Japanese ideophones which have a repeating style because it is the most typical form of Japanese ideophones (Tamori, 1998), and we chose ideophones which describe a shape, texture or hardness to investigate the relationship between a visible perception (i.e., shape) and invisible (but tactual) perception (i.e., hardness). Texture is seemed to be some visible perception, which may also convey some information on invisible (but tactual) perception. The participant cannot touch the object in the picture in real so he or she must predict tactual feature of objects through textural patterns. The words will be chosen by a survey.

Sounds of ideophones Non-decorated characters still have a visible form. A sound which has no visible form was also needed to investigate essential effects of the word. This sound will be created by a synthetic voice (male/female). We use the same word list when we created comic ideophones to record sounds.

Pictures with an ideophone Each visual stimulus is created by combining a basic picture and a comic ideophone. The

comic ideophone is located on the top-left side of the hand and is tilted diagonally, because most comic ideophones are located near the object and along the direction of the expressed movement of the object in many cases. Our pictures show that the hand is supposed to move from the top right to the bottom left repeatedly. This is why, we think the best location of the ideophone is on the left side of the hand diagonally. (Figure 3)

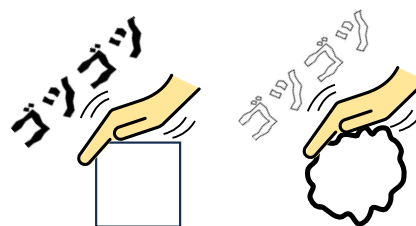


Figure 3: Examples of combined pictures.

Evaluation scale

Evaluation of impressions will be made using a scale, which are mainly to measure impressions of shapes, textures, hardness, from each stimulus. Participants will be asked to evaluate the impression by the scale which has a pair of adjectives which have an opposite meaning each other, in both edges. The pair of adjectives will be chosen by a prior survey.

Procedure

First, the participants will be asked to look at the picture, to listen to the sound, or to do both at the same time. And they will be asked to evaluate their impressions of the pictures or the sounds with the evaluation scale.

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