

Image Schema of Emotion in Drawing Task

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Introduction

The present study attempts to test experimentally several assumptions raised by cognitive linguists. They assume that the image schematic structures underly the metaphorical expressions on emotions. Cognitive linguists analyze emotion concepts such as anger (Lakoff, 1987), happiness (Kovecses, 1991) using linguistic materials. This study introduces a new method: first, direct method to explore image schema by having subjects drawn emotion concepts, second, to compared the image schema of four drawings of emotion concepts.

Method

Subjects

Two hundred and fifteen Japanese university students.

Procedure

The Production Task. Subjects (N=120) drew non-representational each image of two emotions (either anger and happiness or sadness and hope) and verbally described the emotional state.

The Rating Task. Subjects (N=96) rated seven Japanese emotional concepts (anger, sadness, hope, happiness, love, disappear, and anxiety) on seven bipolar scales (e.g. up-down, in-out, balance-unbalance).

Results and Discussions

Figures most frequently drawn by subjects

Two judges classified the image drawings based on configurational similarity. Anger is explosion (35%), jagged forms (32%), and thick lines (15%); sadness is drops (29%), darkness (18%), and fall (12%); happiness is circular forms (57%), radiation (19%), and curving forms (12%); hope is radiation (41%), diffusion (20%), and ascending lines (8%). Fig.1 shows the figures most frequently each emotion concept. The top three drawings covered almost 70% of the each emotion indicating inter-subjects commonality. Table 1 shows the orientation and the form of the drawings. The results shown in Table 1 indicated that relative frequency of physical characteristics of image drawings correspond to the relative

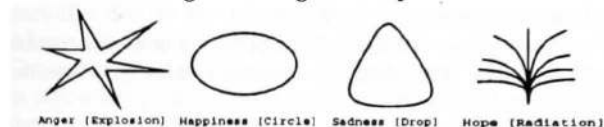


Fig. 1: Figures Most Frequently Drawn by the Subjects

TABLE 1: Characteristics of Image Drawings (%)

Emotion	Anger ¹⁾	Sadness ²⁾	Happiness ¹⁾	Hope ²⁾
Orientation				
up	20.6	2.0	14.3	32.7
horizontal	23.8	4.1	7.9	0.0
down	0.0	44.9	0.0	4.1
divergent	41.3	2.0	19.0	32.7
other	14.3	46.9	58.7	30.6
Shape				
angular	46.0	36.7	11.1	26.5
round	4.8	28.6	71.4	36.7
mixed	47.6	30.6	15.9	36.7
other	1.6	4.1	1.6	0.0

Note ¹⁾N=63 ²⁾N=49

percentage of word frequency in the verbal descriptions of production task. Result of which the word EXPLOSION (24%) elicited from anger, DOWN (14%), SINKING (10%) and DARK (10%) from sadness; LIGHT (43%) and EXTENSION (18%) from happiness; LIGHT (21%) from hope.

Major image schema of emotion

Correspondence between image drawings and descriptions could be summarized and expressed as the following image schema, which accord well with the image schema proposed by cognitive linguists (e.g., Kovecses, 1991; Lakoff, 1987).

(1) ANGER IS EXPLOSION OF CONTAINER. The image of anger is DIFFUSION. It is a HOT FLUID in a PRESSURIZED CONTAINER and the hot fluid pressed out of it. The rating data indicates that anger is energetic (94%) and hot (81%).

(2a) SADNESS IS DOWN. The image of sadness is oriented DOWN (45%) of drops or tear. In the rating data, sadness is DOWN (95%) and DARK (99%).

(2b) SADNESS IS DARK. The image of sadness is DARKNESS (18%) under rain or fog. Some examples of descriptions are "I can't see anything" and "The future seems to be dark".

(3) HAPPY IS UP. The image of happy is jumping or spreading of ROUND shape (71%) and oriented UP (14%). The rating data indicates that happy is UP (89%).

(4) HOPE IS DIFFUSION OF LIGHT. The image of hope is an extension of LIGHT, sunshine, future and possibility. In the rating data, hope is LIGHT (93%).

References

- Kovecses, Z. (1991) Happiness: A definitional effort. *Metaphor and Symbolic Activity*, 6 (1), 29-46.
- Lakoff, G. (1987) *Women, fire, and dangerous things*: University Chicago Press.