Pictures of age: Multimodal frame semantics and different age stages

Hsu-Hung Ke
National Taiwan University
udobrian@gmail.com

Sean Key
National Taiwan University
smid.exe@gmail.com

In Labov's (1973) classical experiment on the figure of a cup, subjects were instructed to name pictures along the gradient changes of either width or height. Since then, many scholars have followed this idea of describing a concept's typicality by features (Rosch and Mervis, 1975) or association (Hampton, 1981), known as prototype theory. Others have attempted to utilize visual stimuli in exploring the categorization of concepts (Bates et al., 2003; Szekely et al., 2004). These visual-based studies, however, center mostly on typicality judgements on the provided pictures instead of encouraging the participants to draw their own pictures. These studies are less capable of interpreting abstract concepts such as that of Hampton's (1981). Therefore, based on Hampton (1981) and Labov (1973), the current study intends to semantically frame (Fillmore, 1982) gradient concepts, like age-related terms, and examine if visual-based domains are different from writing-based domains.

Three tasks are conducted to determine the best representation of three Mandarin age-related terms. Three target terms were chosen to represent the gradient relation of age: Niánqīng (YOUNG), Zhōngnián (MIDDLE-AGED), and Lǎonián (ELDERLY). In the first task (Association Task), participants are instructed to name up to ten words or phrases related to each age term. They are then asked to rate the difficulty naming these words or phrases. The second task (Drawing Task) is similar to the Association Task, yet the participants of this task are asked only to draw one picture that is most related to one of the three target words provided by the experimenter. The last task (Judgement Task) asks a different group of subjects to judge if these verbal or visual stimuli gathered from the first two tasks are good examples or related to the three concepts.

The preliminary analysis on Zhōngnián (MIDDLE-AGED) suggests different semantic focuses between the output modes of words and images. When verbally associating with the concept of MIDDLE-AGED, Mandarin speakers are more likely to use health issues and body features to describe this concept (i.e. high blood pressure, gaining weights and wrinkles). On the other hand, drawings emphasize more frequently on financial issues, (i.e. drawing a dollar sign) and relations with family. A tentative model of analyzing visuals has been formed based on the data collected. Drawings can be described by the features that are present in the drawing. For example, Figure 1 contains several elements within the same frame, and these can be described based on the functions they serve. A general understanding of the picture can therefore be deduced (Table 1).

Figure 1. The drawing from one of the subjects (Middle-aged)

OBJECT

Main Character	MAN
Supportive Character	BUBBLE, FINANCIAL REPORT, HOUSE, ELDERL Y AND A CHILD

Description: Middle-age is a working class MAN who thinks about FINANCE, HOUSING, and ELDERLY AND A CHILD.

Table 1. The deduction of the Figure 1 based on its roles of visual elements