

# Synesthetic generalization revisited: a new perspective based on onomatopoetic words

## Abstract

This research addresses the following questions: (1) Is the uni-directionality of synesthetic expressions appropriate in the case of Japanese onomatopoetic words? (2) If not, what is the new picture?

Synesthesia is a condition in which stimulation of one sensory modality causes unusual experiences in a second, unstimulated modality (Hubbard and Ramachandran 2005). Following Ullmann's (1951/1959) discussion, Williams (1976) proposed a major generalization scheme based on English synesthetic adjectives. Since then, many researchers have tried to discuss the adequacy of his scheme (Yamanashi 1988, Murata 1989, Muto 2004, Osawa 2007). Among them, Osawa (2007) proposed a revised version of the scheme based on Japanese onomatopoetic and mimetic words, arguing that contradicting to Williams' scheme, the sound modality can affect color, touch and smell modalities. Regardless of this modification, most of the researchers, including the above authors, hold the view which the sensory modalities are separated in the scheme. For instance, Ullmann (1959: 276-284) claims a "hierarchical distribution", that synesthetic transfers tend to go from the "lower" to the "higher" sensory modes, namely, touch→ taste→ smell→sound→sight.

In this paper, we propose that since onomatopoetic and mimetic words are multisensory expressions and usually denote a multisensory integration, uni-directionality and separation of sensory modality cannot present the whole picture. Since the starting point is already multisensory, the direction should be also multi-direction. This claim has found some neurocognitive evidence advocated by Hubbard and Ramachandran (2005). Taking our data as example, *hokuhoku* and *pasapasa* are both a combination of taste modality and touch modality. *Tuyatuya* and *buyobuyo* are both a combination of sight and touch modality. In Taiwanese data, we found *am7-pak3pak3*, which literally means rampant-flame-flame, and *am7-shaa3shaa3*, rampant-noisy-noisy. They all denote 'a thick forest (or bush).' Clearly, they are a combination of sight and sound modality.

Our data come from three kinds of Japanese onomatopoetic dictionaries. Also we collect expressions from KOTONHA corpus for modern usage. As to Taiwanese data, we collect them from *Tai-Ri-Da-Ci-Dian* ('the complete Taiwanese-Japanese Dictionary') published in 1931. The preliminary result can be shown in Figure 1 and table 1. This research aims to bring a new perspective regarding the long-standing discussion on the possible generalization routes of synesthetic expressions, based on

synchronic corpus analysis.

Keywords: synesthesia, onomatopoeia, multiple sensory modality, metaphor, metonymy

## Data

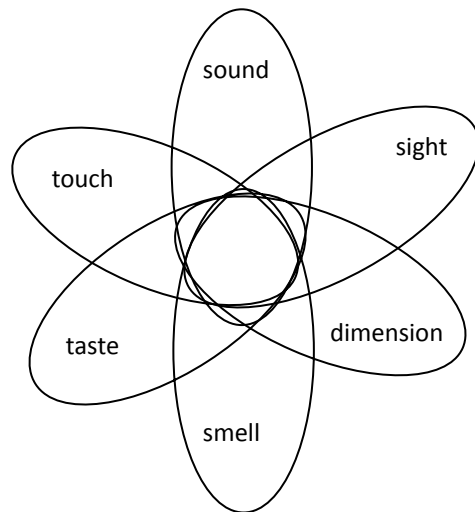


Figure 1 the image of multisensory integration in onomatopoeic and mimetic words

Sensory modality		examples
sight	sound	kakkak
sight	touch	buyobuyo, tuyatuya
sight	taste	puripuri
sight	smell	?
sight	dimension	hyorohyoro
sound	touch	paripari, karakara
sound	taste	shakishaki
sound	smell	tuntun
sound	dimension	gyuugyuu
touch	taste	hokuhoku, kasukasu, pasapasa
touch	smell	?
touch	dimension	fuwafuwa
taste	smell	kongari
taste	dimension	shikoshiko
smell	dimension	punpun

Table 1 some examples

## Dictionaries and corpus:

KOTONoha (“The Balanced Corpus of Modern Japanese Writing data” (the demonstration mode)), constructed by National Institute for Japanese Language and Linguistics.

([http://www.kotonoha.gr.jp/cgi-bin//search\\_form.cgi?viaTopPage=1](http://www.kotonoha.gr.jp/cgi-bin//search_form.cgi?viaTopPage=1))

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