

# Changes in the Language of Perception in Cantonese

**Hilário de Sousa**

**ABSTRACT** The way a language encodes sensory experiences changes over time, and often this correlates with other changes in the society. There are noticeable differences in the language of perception between older and younger speakers of Cantonese in Hong Kong and Macau. Younger speakers make finer distinctions in the distal senses, but have less knowledge of the finer categories of the proximal senses than older speakers. The difference in the language of perception between older and younger speakers probably reflects the rapid changes that happened in Hong Kong and Macau in the last fifty years, from an underdeveloped and less-literate society, to a developed and highly literate society. In addition to the increase in literacy, the education system has also

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undergone significant Westernization. Western-style education systems have most likely created finer categorizations in the distal senses. At the same time, the traditional finer distinctions of the proximal senses have become less salient: as the society became more urbanized and sanitized, people have had fewer opportunities to experience the variety of olfactory sensations experienced by their ancestors. This case study investigating interactions between social-economic “development” and the elaboration of the senses hopefully contributes to the study of the ineffability of senses.

**KEYWORDS:** Cantonese, lexical change, language of perception, semantic categories, Westernization

## Introduction



What impact does the socioeconomic development of a society have on the language of perception in general?

This article presents a rare case study of intergenerational changes in the language of perception. Amongst Cantonese speakers in Hong Kong and Macau, younger speakers tend to be more specific in describing color and shapes than older speakers, but older speakers tend to know more smell and taste words than younger speakers. After summarizing the results of a set of sensory tasks conducted with native speakers, I will discuss the possible causes of this difference. The most likely culprits for the changes include rapid socioeconomic development and the Westernization of the education system in Hong Kong and Macau in the last fifty year.

## Preliminaries

Cantonese is a Sinitic language (i.e. “Chinese dialect”) spoken primarily in Guangdong, Guangxi, Hong Kong, and Macau in far southern China. The sensory elicitation tasks (described below) were conducted in Hong Kong and Macau. The Cantonese spoken in urban Hong Kong is often regarded as one of the standard varieties of Cantonese, and the Cantonese of Macau is minimally different from that of Hong Kong. The Cantonese of these two places also share the commonality that they are comparatively free from Mandarin influence, as Hong Kong and Macau are not directly affected by the language policies of mainland China; Cantonese is the dominant language in these two places, and Mandarin has (so far) made little inroad.

The population density in Hong Kong and Macau is very high. The vast majority of people in both places are urban dwellers living in high-rise buildings, and working in secondary or tertiary industry. People live relatively prosperous lives, and literacy is high.

Six sensory tasks (see Majid and Levinson 2007) were conducted with native speakers of Cantonese from a Chinese cultural background. There were tasks for color, shape, sound, touch, smell, and taste; in this article only the results for the color, shape, smell, and taste tasks will be discussed (see below for details of the individual tasks). Smell is considered a proximal sense in this article, as it patterns more with the proximal (“chemical”) sense of taste rather than the distal sense of vision. (This is unlike Burenhult and Majid, this issue, where smell is partnered with the distal senses of vision and audition on ethnographic grounds.)

Five people in Hong Kong and seven people in Macau were interviewed. All the consultants were minimally high-school graduates, and most were also competent in English and/or Mandarin. The only sociolinguistic factor that was obviously significant to the data was age. The consultants could be divided into two groups: the average age of the “older consultants” was sixty-five years, and the “younger consultants” was thirty. Unfortunately, the age decomposition of the consultants was skewed: out of the twelve consultants, three were in the “older consultant” group, and nine were in the “younger consultant” group. Nonetheless, despite this unintentional bias (and the small number of consultants in general), only age, and none of the other sociolinguistic factors (e.g. place of origin, gender) correlated with any differences in the data for more than one of the sensory tasks. It is hoped that this experiment could be repeated in the future with a larger pool of consultants.

The vernacular data are presented here in Jyutping, the Cantonese Romanization scheme of the Linguistic Society of Hong Kong. The numeral at the end of a syllable in the Romanization represents the tone, e.g. *hoeng1* ‘fragrant’ is in tone 1.

### Color

For the color elicitation task, a booklet of eighty chromatic Munsell color chips was used. There were twenty hues in four values (i.e. lightness); each page presented one color chip, and the pages were in a random order. Ten basic color terms were provided by all consultants: *hung4* ‘red,’ *caang2* ‘orange,’ *wong4* ‘yellow,’ *luk6* ‘green,’ *laam4* ‘blue,’ *zi2* ‘purple,’ *fe1* ‘brown,’ *haak1* ‘black,’ *fui1* ‘gray,’ and *baak6* ‘white.’ Some younger consultants provided one or two other color terms that can be argued to be “basic” color terms: *ceng1* ‘light green’ and *juk6* literally ‘flesh’ (focus: 10R 8/6 or 5YR 8/8, a color that is light orange, approximately ‘peach’ or ‘beige’). Seven out of the nine younger consultants had *ceng1* ‘light green’ as a “basic” color term in the elicitation and/or subsequent free naming tasks, while four out of the nine younger consultants had *juk6* ‘flesh’ as a “basic” color term in the same tasks.

Before we look at the notion of “basic color term,” we will have a look at some historical studies on the Cantonese color terms in the last fifty years. Berlin and Kay (1969) describe Cantonese as having

eight basic color terms: *hung4* 'red,' *wong4* 'yellow,' *ceng1* 'green,' *laam4* 'blue,' *zi2* 'purple,' *haak1* 'black,' *fui1* 'gray,' and *baak6* 'white.' Caskey-Sirmons and Hickerson (1977) include the same eight basic colors, except that 'green' was *luk6* rather than *ceng1*. (*ceng1* is an earlier term than *luk6*; historically *ceng1* covered green, blue, and parts of black.) Endō (2000) reports three additional basic color terms in Cantonese: *caang2* 'orange,' *fe1* 'brown,' and 'green,' which has separate foci for *ceng1* 'light green' and *luk6* 'dark green.' The current study supports the basic color terms reported by Endō (2000), with the possible addition of *juk6* 'flesh.'

Berlin and Kay (1969) define basic color terms as being: (1) monolexemic, (2) non-context specific, (3) not included in the range of another term, and (4) highly salient. Let us consider *juk6* 'flesh' first. It satisfies criteria (1) and (3): it is monolexemic, and people do not consider this color to be part of another color. As for criterion (2), *juk6* 'flesh,' like *caang2* 'orange,' has moved from being a source-based color term to an abstract color term, with *juk6* 'flesh' used more often for things other than human flesh, e.g. garments, confectionary, wall paint. As for criterion (4), one rough measurement of salience is frequency, and one way to measure that is via occurrence on the Internet. Using Google and restricting searches to websites in Hong Kong (accessed April 30, 2010), the exact phrase *juk6 sik1* (flesh color) in Chinese characters had more hits (251,000 results; the vast majority not referring to human flesh) than the exact phrases *caang2 sik1* (orange color; 245,000) and *fe1 sik1* (brown color; 172,000). We can safely say that *juk6* 'flesh' is a basic color term in Cantonese. On the other hand, *ceng1* 'light green' is a bit more problematic. It satisfies criterion (1) and (2). As for criterion (3), the younger consultants fluctuated between considering *ceng1* 'light green' as a type of *luk6* 'green' and the two of them being separate. In terms of criterion (4), it fared well in terms of salience as eight out of nine younger consultants provided *ceng1* as a basic color term in the free naming task. Endō (2000) also measured the basic status of the various color terms according to their morphological and syntactic distribution, and gave them a score of "linguistic basicness": *ceng1* 'light green' fared similarly to *caang2* 'orange' and *fe1* 'brown.'

Variation in the number of color terms within the same community has been observed elsewhere (e.g. Kay 1975; MacLaury 1991), and it is not uncommon for younger people to have finer color categories. The number of basic color terms tends to increase due to intensification in societal complexity or cultural contact.

## Shapes

The shape elicitation booklet consisted of twenty pages of computer-drawn images of shapes, with one shape on each page. There were images of both two-dimensional and three-dimensional shapes. Some shapes were good Gestalt shapes (e.g. square), while others

were relatively complex, poor Gestalt shapes (e.g. four-petal flower shape).

There were ten pages with (two-dimensional renditions of) three-dimensional shapes. With the three-dimensional shapes, older consultants were more prone to using terms that were not specifically three-dimensional (e.g. *jyun4 jing4* 'round shape' for a sphere; a three-dimensional response would be something like *kau4* or *bo1* 'sphere'/'ball'). In contrast, younger consultants nearly never used terms that were not specifically three-dimensional to describe three-dimensional shapes. It is also interesting to note that even for good Gestalt shapes, in some cases some older consultants provided source-based responses, e.g. *jyun4 tung2* 'round bucket' for a cylinder, when all younger consultants used abstract responses, e.g. *jyun4 cyu5* 'round prism' for a cylinder. There were also cases where younger consultants created abstract responses for unusual shapes. For instance, one younger speaker analogically created the abstract response *to5 jyun4 tai2* (oval round body) = 'ellipsoid' when all the other consultants used source-based responses like "egg-shape" or "olive-shape."

### Tastes

We have seen how younger consultants have more categories than older consultants for color and shape. For taste and smell, on the other hand, older consultants had finer discrimination in language. The taste elicitation kit involved standardized liquid for four tastes (sweet, sour, bitter, and salty) and a capsule with monosodium glutamate powder, which was aimed at eliciting the umami taste. Interestingly, only the two oldest consultants (both around seventy years old) had a separate term for umami: *sin1 mei6* 'sin1 taste.' All other consultants used source-based responses like *mei6 zing1* (flavor essence) 'monosodium glutamate' or abstract responses like *haam4 haam2 dei2* 'kind of salty.'

### Smells

For the smell elicitation task, which consisted of a booklet with a separate smell panel on each of twelve pages, most responses were sourced-based (e.g. "chocolate cake smell," "instant noodle soup packet smell"), and there were no obvious differences in the data provided by older versus younger consultants. However, in subsequent free naming younger consultants were not able to provide more than one or two abstract terms, typically beyond *hoeng1* 'fragrant' and *cau3* 'stinky.' Older consultants, on the other hand, were able to provide many more smell terms, most of them negative smell terms, which Cantonese is very rich in. The following are some examples:

|               |   |
|---------------|---|
| <i>no3</i>    | something overheating (but usually not on fire)                               |
| <i>jun1</i>   | extreme stink: e.g. strong fart, salted fish, corpse, smell of athlete's foot |
| <i>suk1</i>   | sweat, mold, tofu gone off  |
| <i>ngaat3</i> | urine, ammonia  |
| <i>jik1</i>   | stale/oxidized: peanut, seeds, oil, preserved meat                            |
| <i>hong2</i>  | moldy smell: peanut, seeds, uncooked rice                                     |

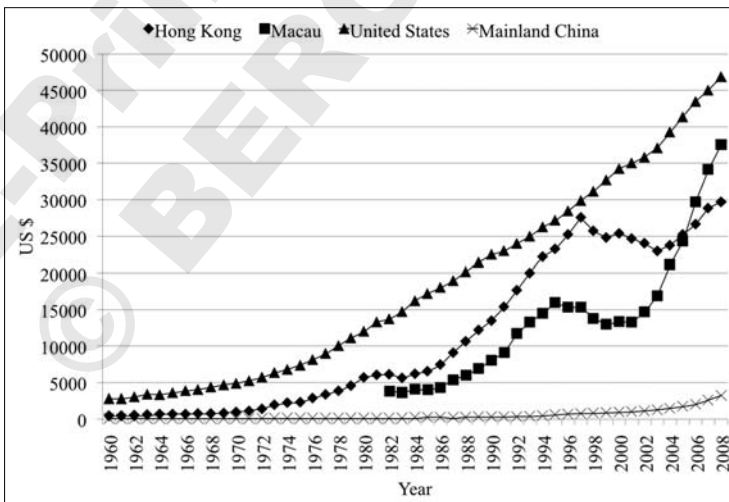
Younger speakers usually have heard of at least some of these terms, but they tend not to be as confident as older speakers in giving meanings or exemplars of the terms.

## Discussion

We have seen that in comparison to older consultants, younger consultants had finer categorization for visual stimuli, but less knowledge of the finer categories for taste and smell. What might have caused this change? There have been rapid social changes in Hong Kong and Macau since the 1960s: Hong Kong went from being economically underdeveloped in the 1960s to being one of the most-developed places on earth in the mid-1990s. The rise of Macau has even been more dramatic since mid-2000s (see Figure 1).

This rise in the economy was accompanied by a rapid increase in the literacy rate within the span of one generation in Hong Kong. In 2006, 36 percent of adults in their fifties have a high-school credential or higher while 85 percent of twenty-somethings do. (In the USA there is no generational difference, with over 85 percent of adults receiving at least a high-school education.)<sup>1</sup>

Being ex-colonies of Britain and Portugal respectively, Hong Kong and Macau have also experienced considerable Westernization



**Figure 1**

Gross Domestic Product per capita (nominal) in Hong Kong, Macau, USA, and mainland China between 1960 and 2008.

in their education systems. Traditional Chinese education system places great emphasis on the rote learning of classical literature and in reading and writing Literary Chinese. Traditional artistic activities, e.g. Chinese calligraphy and paintings, tend not to involve many colors. Modern Western education systems are much more diversified; there are music lessons and coloring activities, for instance. It is interesting to note that the twelve basic color terms described earlier coincides with the range of shades one finds in a basic set of coloring equipment (other than metallic colors like *gam1* 'gold'). In particular, the color *juk6* 'flesh' is one of the most important colors for Cantonese children, as teachers inevitably instruct them to use the *juk6* 'flesh' pencil to color in people's skin in drawings.

Bilingualism in European languages, facilitated by Western education, certainly has played a role in introducing *caang2* 'orange' as a basic color term to Cantonese. (Endō 2000 reports that Hong Kong Cantonese is far ahead in the development of "orange" as a basic color than Mandarin, Shanghainese, and Taiwanese.) The emerging prominence of *ceng1* 'light green' out of the *luk6* 'green' category could stem from Cantonese children being taught the colors of the rainbow: *hung4* 'red,' *caang2* 'orange,' *wong4* 'yellow,' *luk6*, *ceng1* 'green,' *laam4* 'blue,' and *zi2* 'purple.' (Older consultants are slow and indecisive in naming the colors of the rainbow; traditionally there was no consensus on the number of colors a rainbow has.) In fact, in free naming tasks, most younger consultants begin with these seven colors, in this exact order.

For shapes, the increase in the level of education may also lead to younger consultants utilizing more formal and "technical-sounding" abstract terms when describing geometric shapes (the good Gestalt shapes at least). Less formal school-training in geometry in the past may mean that older consultants are less familiar with the two-dimensional rendering of the three-dimensional shapes in the shape booklet, thus causing them to use terms that are not specifically three-dimensional.

Another consequence of the social development in Hong Kong and Macau is the increase in standards of hygiene. As the environment becomes more sanitized, younger speakers have less opportunity to experience the various types of unpleasant smells that their parents would have encountered. An example of this sanitization, and its impact on sensory practices, is described in Figuié and Bricas (2010) for nearby Hanoi. With globalization and the liberalization of the economy in Vietnam, Western-style supermarkets began to appear in Hanoi at the beginning of the 2000s. There are a number of salient differences between traditional Vietnamese food markets and Western-style supermarkets. Firstly, supermarkets are considerably more sanitized and orderly than traditional food markets. Secondly, in contrast to traditional food markets, where the food purchaser relies heavily on smell, touch, sight, verbal interactions with the food vendor and sometimes

even taste to assess the quality of the products, the products in supermarkets are mostly packaged, and this packaging blocks most of these sensory channels that customers would traditionally rely on when assessing the quality of products. Despite these limitations, the market share of supermarkets in the food retailing industry in Vietnam has increased rapidly; the economy of Vietnam is rising rapidly, and shopping at supermarkets is seen as more prestigious than shopping at traditional food markets. People are also more confident in the quality of food that they buy from supermarkets (supermarkets are considered to be more cautious in maintaining their reputation than stalls at traditional markets, as supermarkets are much more likely to attract media scrutiny), and this has removed some people's habit of assessing the quality of food by senses other than vision (Figuié and Bricas 2010). The scenario described for Hanoi has likely occurred in Hong Kong and Macau too, albeit earlier. These changes in consumer behavior would also have reduced the saliency of smell, especially unpleasant smells.

Moreover, the bad smell terms in Cantonese are not words that are taught at schools. (When Chinese is taught, written Chinese, i.e. written Mandarin, is taught. Cantonese words with no cognates or semantic equivalents in Mandarin, including most of the smell terms, are considered too informal to be taught at schools. Chinese characters are also not phonetic in a way that people could simply create a character to represent these words, so smell words are typically not written.) The increase in school education has also caused a decrease in the quantity of traditional domestic training, where these smell terms would have been acquired.

The rapid rise in the economy has led to a similar rapid rise in the number of restaurants and patronage of restaurants. The use of monosodium glutamate has been the norm in Chinese restaurants since around the 1960s; older speakers were introduced to monosodium glutamate at an older age, whereas younger speakers “grew up” with a lot of savory items having monosodium glutamate added to them. Perhaps this is the reason why the oldest consultants tended to be able to distinguish the umami and salty tastes, whereas younger consultants tended to conflate the umami and salty tastes and described the taste of monosodium glutamate as “kind of salty.”

In summary, this study represents a case study of culture–language interactions: coinciding with the rapid socioeconomic development in Hong Kong and Macau, the younger consultants have finer categorization of the distal senses, but are outperformed by the older consultants with the proximal senses. This suggests that the proximal senses are becoming more ineffable in Cantonese. This study of the changes in the linguistic encoding of senses touches on to the issue of the historical development of the ineffability of senses: is deficiency in the linguistic expressions of the proximal senses a normal consequence of industrial/economic development of a society? This article will hopefully contribute towards this debate.



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## Note

1. Source of Hong Kong data: [www.censtatd.gov.hk/hong\\_kong\\_statistics/statistical\\_tables/index.jsp?tableID=146](http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables/index.jsp?tableID=146). Source of US data: [www.census.gov/population/socdemo/education/cps2006/tab01-01.xls](http://www.census.gov/population/socdemo/education/cps2006/tab01-01.xls) (both accessed on August 25, 2010). "High-school credential" in Hong Kong refers to having finished eleven non-repeated years of education from the first year of primary school ("Upper secondary (incl. craft level)" in the source table), whereas in the USA it is twelve non-repeated years of education from the first year of primary school ("High school graduate" in the source table).

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