Case Study of Five-Sense Words Based on the Corpus of Sutras of Thirteen Buddhist

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This study analyzes the five-sense words of the body category based on the self-built closed corpus of five-sense words in the Sutras of Thirteen Buddhist and word frequency-based statistical data. After the definition of monosyllabic five-sense words and the introduction of the scope, criteria, and steps of the word selection in this study, the study summarizes the word frequency statistics of 29 monosyllabic five-sense words, in an attempt to find out the five-sense cognitive pattern behind cognitive process of the five senses through the basic five-senses words. Statistic data analyzing demonstrates the ranking of five-sense cognition of body category from the linguistic perspective. It is found that the proportion of visual words is the largest among five-sense words and five-sense cognitive pattern is mostly based on visual perception.

*Keywords*: five-sense words, Sutras of Thirteen Buddhist, cognitive pattern

**Introduction**

The physical organ is the main way for human to know the external world, and its experience is the basis of human cognition. Sensation is the sight, hearing, smell, taste, and touch that are perceived through the five physical organs of the eye, ear, nose, tongue, and body. The traditional “five senses” provides us with a sense based on similarity between objects. This “five-sense cognition” is mediated and encoded by language, thus producing a large number of “basic words”, which are the five-sense words from the perspective of linguistics.

**Literature Review**

After sorting out the research achievements of academic circles to sensory parts of speech, it is found that the study of sensory parts of speech showed a trend of diversification. In terms of research content, from the semantic features and semantic evolution of sensory words, the connection of lexico-syntactic semantics, to the comparative study of Chinese and foreign languages, in addition to the comparative study of some sensory words, it has made contributions to the comprehensive study of the lexical system of Chinese sensory words. In terms of theoretical basis, most of the research achievements applied traditional semantics, modern semantics, typology, or cognitive linguistics to conduct synchronic, diachronic, or both synchronic and diachronic studies on the evolution process and semantic features of Chinese sensory words. In terms of research methods, there are semantic analysis, corpus analysis, descriptive and graphical methods, quantitative and qualitative methods, and so on. Although the research direction is constantly expanding and deepening as well as the research angle tends to be cross-diversified, the research depth and breadth are still insufficient from the perspective of
comprehensive and systematic. Most of the research focuses on modern Chinese, and relatively few researches on ancient Chinese. This research absorbs the research results, based on the closed corpus of *Sutras of Thirteen Buddhist*, and makes a comprehensive study of the five types of sensory words, namely the five-sense words in this paper, aiming to make contributions to the comprehensive study of the vocabulary system of the whole Chinese sensory words, and provide theoretical and methodological supplements. The research on five-sense words indicates that the research on this issue has not received enough attention.

**Corpus Sources**

In the Buddhist sutras, the 18 realms refer to the six-sense organs, six-sense objects, and six aspects of consciousness. The 18 realms are a classification of the external world based on human knowledge. The six-sense organs are eyes, ears, nose, tongue, body, and heart, respectively corresponding to the body’s five sensory organs and heart, with cognitive functions; six-sense objects are the color, sound, aroma, taste, touch, method, as the six cognition object of the six-sense organs; six aspects of consciousness are consciousness of eye, ear, nose, tongue, body, and heart, corresponding to various psychological activities including feelings, perception, and thinking cognition. The corpus of six-sense organs in the Buddhist sutras exactly corresponds the research materials of the five-sense words.

Based on the accuracy of the text, the academic reliability and the authoritativeness of the edition, *Sutras of Thirteen Buddhist* published by ZhongHua Publishing House was selected as the corpus source of this research. And 13 sutras were collected into a closed corpus with a scale of 350,000 words. Most academic studies on Buddhist sutras are from the perspective of literature and religion, while semantic studies have not received enough attention and concern, especially the collected and published classics are less involved.

**The Definition of Five-Sense Words**

The classification of perceptual words studied in this paper is based on the daily cognitive division of perceived events. Any perceived events can be described as a semantic framework. Perceptual subject, perceptual action, and perceptual state are three semantic entities in this framework; the corresponding three lexical categories are sensory noun, sensory verb, and sensory adjective. Sensory nouns refer to the physical objects of sensory organs; sensory verbs refer to the words of sensory actions; and sensory adjectives refer to the characterization of the perceived state. Semantically, the five senses, namely eye, ear, nose, tongue, and body, are carriers to perceive the information of the external world through sight, hearing, smell, taste, and touch. In the three lexical categories, sensory verbs are regarded as the core and center of the semantic framework of the whole perceptual event. Linguistically, according to the traditional natural classification of “five senses”, Chinese sensory perception words are divided into five categories: visual, auditory, smell, taste, and tactile word, which we study “five-sense words” in this paper.

**The Scope, Criteria, and Steps of Selecting Words**

Based on the characteristics of linguistic materials, this study starts from monosyllabic five-sense words. In the process of sorting out related research achievements in the academic field, the word selection scope of monosyllabic five-sense words studied in this paper adopts the results of *Research on Fuzziness and Metaphor of Chinese Sensory Words* by Lou Aihua (2006): 59 basic five-sense words, including 19 visual words, 7 auditory words, 8 olfactory words, 12 taste words, and 13 tactile words.
Combined with the research content and object, a tactile noun “body” (身) was added in the part of tactile words, and a total of 60 monosyllabic five-sense words were included in the word selection range of the five-sense words in this study.

**Word Selection Criteria**

1. Monosyllabic five-sense words not found in the corpus of the *Sutras of Thirteen Buddhist* are not included in the research scope.

2. Search, collect, and record the double-syllable or multi-syllable words containing monosyllabic five-sense words, and conduct the word frequency statistics of five-sense words (the five-sense words appearing in the gatha are only counted into the total word frequency). Monosyllabic five-sense words collected in the corpus with word frequency statistics less than three times were not included in the study.

**Steps of Selection Words**

After the classified retrieval of 60 monosyllabic five-sense words, it was found that the word frequency of eight monosyllabic five-sense words was zero, including 2 visual words, 2 auditory words, 1 taste word, and 3 tactile words. The remaining 52 monosyllabic five-sense words were included in the next retrieval object.

After searching, collecting, and recording the double-syllable or multi-syllable words containing monosyllabic five-sense words, and conducting the word frequency statistics of five-sense words (the five-sense words appearing in the gatha are only counted into the total word frequency), 25 monosyllabic five-sense words collected in the corpus with word frequency less than 3 times were not included in the study, including 8 visual words, 1 auditory word, 4 olfaction words, 6 taste words, and 5 tactile words.

The only olfactory verb 嗅 (22 word frequency) and the only taste verb 尝 (20 word frequency) are included in the scope of the study though the two words fail to extend to a double-syllable or multi-syllable word for 3 times. The remaining 29 basic monosyllabic five-sense words were included in the study: 9 visual words, 4 auditory words, 4 olfaction words, 6 taste words, and 6 tactile words.

**Description of Five-Sense Words in the Corpus**

**Visual Words**

Vision is a sensation produced by the action of light waves on the organs of vision. The sensory organ of vision is the human eye. The main function of the eye is to transform the ever-changing stimuli of the outside world into visual information.

9 monosyllabic five-sense words have been included into the research scope of visual words: 目, 眼, 见, 观, 望, 瞧, 相, and 明. 目 and 眼 are visual nouns, which are human organ for observing external things. 见, 观, 望, 瞧, and 相 are visual verbs. With the help of visual organs, human beings can observe the actions of 见, 观, 望, 瞧, and 相. 明 means the “character” of an object, and its part of speech is difficult to define. 62 double-syllable or multi-syllable words containing the basic 9 monosyllabic visual words are collected in the corpus of the *Sutras of Thirteen Buddhist* as followed: 慧目, 心目, 头目, 面目, 目目, 色目, 目前, 目暗, 肉眼, 天眼, 慧眼, 法眼, 佛眼, 道眼, 将来眼, 眼根, 眼识, 眼色, 知见, 正知见, 正见, 邪见, 妄见, 常见, 断见, 恶见, 分别见, 觉知见, 佛知见, 众生知见, 解脱知见, 如来知见, 见解, 见闻, 正观, 性观, 谛观, 观照, 观察, 镜观, 洞视, 希望, 镜视, 洞视, 实相, 法相, 着相, 住相, 无相, 解脱相, 幻相, 我相, 人相, 众生相, 寿者相, 菩提相, 光明, 开明, 分明, 证明, 无明, and 聪明.
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Auditory Words

4 basic monosyllabic auditory words have been included into the research scope: 耳, 听, 闻, and 聪. 耳 is auditory noun, which is human organ for listening. 听 and 闻 are auditory verbs. With the help of auditory organs, human beings can listen to the actions of 听 and 闻. 聪 is the auditory adjective, expressing the state of sharp or perceptive hearing. 10 double-syllable or multi-syllable words containing the basic 4 monosyllabic visual words are collected in the corpus of the Sutras of Thirteen Buddhist as followed: 耳识, 耳根, 耳声, 见闻, 见闻觉知, 善听, 谛听, 承听, 听受, and 聪明.

Olfactory Words

4 monosyllabic five-sense words have been included into the research scope of olfactory words: 鼻, 嗅, 香, and 臭. 鼻 is olfactory noun, which is human organ for smell. 嗅 is olfactory verb and 香 and 臭 are olfactory adjectives. 9 double-syllable words containing the basic 4 monosyllabic olfactory words are collected in the corpus of the Sutras of Thirteen Buddhist as followed: 鼻识, 鼻根, 鼻香, 臭秽, 华香, 烧香, 香油, 末香, and 涂香.

Taste Words

6 monosyllabic taste words have been included into the research scope: 舌, 味, 尝, 苦, 辛, and 甘. 舌 is a taste organ. 味 is taste noun, 尝 is taste verb and 苦, 辛, and 甘 are taste adjectives, expressing three categories of taste perceived by taste organ 舌. 16 double-syllable or multi-syllable words containing the basic 6 monosyllabic taste words are collected in the corpus of the Sutras of Thirteen Buddhist as followed: 舌识, 舌根, 舌味, 舌行, 临舌, 舌识, 舌触, 觉触, 冷暖, 热恼, and 清凉.

Tactile Words

6 monosyllabic tactile words have been included into the research scope: 身, 触, 软, 冷, 热, and 凉. 身 is tactile noun, 触 is tactile verb and 软, 冷, 热, and 凉 are tactile adjectives, the 4 states perceived by tactile organ 身. 17 double-syllable or multi-syllable words containing the basic 6 monosyllabic tactile words are collected in the corpus of the Sutras of Thirteen Buddhist as followed: 三身, 佛身, 法身, 化身, 报身, 如来身, 色身, 肉身, 人身, 身心, 身识, 身触, 觉触, 冷暖, 热恼, and 清凉.

Findings

Based on the corpus of the Sutras of Thirteen Buddhist, the search of word frequency statistics of 29 monosyllabic five-sense words and the summary of 114 double-syllable and multi-syllable five-sense words are as follow.

Monosyllabic Five-Sense Words

The five organs—eye, ear, nose, tongue, and body—are the tools or carriers for perceiving information in the external world and an important link for forming human cognitive thinking. There are six organ nouns in the monosyllabic five-sense words: 眼/目, 耳, 鼻, 舌, and 身. The monosyllabic verbs are 见, 观, 视, 望, 瞭, 听, 闻, 嗅, 尝, and 触. The monosyllabic adjectives are 明, 聪, 香, 臭, 苦, 辛, 甘, 软, 冷, 热, and 凉. 相 and 味 are two monosyllabic nouns.

In the search and statistics of 29 monosyllabic five-sense words in the corpus, it is showed that the frequency of organ nouns is as follow: tactile organ 身 is 1,406, visual organ 眼 is 225 and 目 is 166, hearing organ 耳 is 117, olfactory organ 鼻 is 100, and taste organ 舌 is 85.
The verb frequency is as follow: visual verb 见 is 2,225, 观 is 687, 视 is 58, 瞰 is 44, 望 is 25, auditory verb 听 is 1,112, tactile verb 触 is 137, olfactory verb 嗅 is 22, and taste verb 尝 is 20.

The adjective frequency is as follow: visual adjective 明 is 1,166, olfactory adjective 香 is 415 and 臭 is 28, hearing adjective 聪 is 10, taste adjective 苦 is 398, 甘 is 54 and 辛 is 12, tactile adjective 热 is 49, 冷 is 16, 凉 is 12, and 软 is 1.

**Double-Syllabic and Multi-syllable Five-Sense Words**

The total number of double-syllabic and multi-syllable five-sense words containing the basic 29 monosyllabic five-sense words is 114, among which 64 are visual words, 17 are tactile words, 16 are taste words, 10 are auditory words, and 9 are olfactory words.

The above description and summary reveal how the eye perceives the shape, color, and texture of objects, the ear perceives the sound, the tongue perceives the taste, the nose perceives the smell, and the body perceives the heat and cold. The five-sense-perception provides the human cognitive based on object “similarity”.

However, from the linguistic aspect based on the corpus, when using words to describe external various appearances perceived by oneself, the word frequency of tactile organs noun 身 is the most frequent among the five visual organs, and visual organ nouns 眼/目的是 second only to 身. From the aspect of verb, the word frequency statistics of five visual verbs is 3,039, accounting for 70 proportion of the total 4,330 words frequency of 10 five-sense verbs. From the aspect of adjective, the word frequency statistics of visual adjective 明 is 1,116, accounting for 51 proportion of the total 2,161 words frequency of 11 five-sense adjectives. The word frequency of visual noun 相 is 2,334, ranking the first in the 29 basic monosyllabic five-sense words, which represents the various appearance of the external world.

**Conclusion**

The analysis of word frequency statistic data demonstrates the ranking of five-sense cognition of body category from the linguistic aspect, and it is found that the proportion of visual words is the largest among five-sense words, with 9 monosyllabic visual words accounting for one third in total 29 basic monosyllabic five-sense words as well as 64 double-syllabic and multi-syllable visual words accounting for half of the total 114 five-sense words. Therefore, five-sense cognitive pattern is mostly based on visual perception based on the corpus of the *Sutras of Thirteen Buddhist*.

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