A semantic study of "heavy" and its corresponding Chinese word "zhong"

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ABSTRACT: This paper aims to analyze the English adjective "heavy" and its corresponding word in Chinese, "zhong", using the framework of lexical typology as suggested by François (2008). Through this article, we gain a comprehensive understanding of the various semantic meanings associated with "heavy" in English. These semantic meanings are derived from empirical observations and functional properties. Moreover, we compare these meanings with their corresponding counterparts in Chinese, revealing both similarities and differences with the word "zhong". In the English language, "heavy" is connected to several senses, as defined by the Oxford Dictionary. It can refer to something weighing a lot, being worse than usual, not delicate when modifying, being thick as a material, being full of something, being large and powerful when modifying machines, being busy, or being involved in physically demanding work (heavy digging/lifting). Additionally, "heavy" can modify actions like "fall" or "hit", describe a substantial amount of food, indicate excessive use, modify sounds, imply seriousness or difficulty, describe large bodies of water (e.g., sea/ocean), and pertain to weather conditions, air, and soil. Furthermore, it can connote strictness in certain contexts. Several of these meanings find parallels in the Chinese word "zhong", such as referring to something that weighs a lot, modifying machines to signify size and power, relating to physically demanding work (e.g., heavy digging/lifting), describing the fall or impact of objects, indicating a substantial amount of food, or denoting seriousness or difficulty. Moreover, both "heavy" and "zhong" share the function of modifying actions related to drinking, smoking, or sleeping. However, it is important to note that in Chinese, alternative words like "chen" or "si" can also be used to express similar ideas.

KEYWORDS: heavy; zhong; meaning; similarities; differences

1. Introduction

Polysemy is a common semantic phenomenon in both Chinese and English, making it a significant focus of language studies. Polysemy refers to the occurrence of multiple meanings within a single word. Often, these meanings are interconnected, but sometimes they can be entirely unrelated. When conducting comparative research using François (2008) as a framework, proficiency in explicit vocabulary analysis across different languages becomes essential, especially in the context of vocabulary studies.

In this research, we will delve into the polysemy of the English word "heavy", presenting its various meanings through empirical observations and functional analysis. Simultaneously, we will compare these meanings with their corresponding expressions in Chinese, highlighting both their similarities and differences.

"Heavy" and its corresponding Chinese words "zhong"

In the first part, the senses of these two words are exactly the same:

1) a. A heavy boy.
b. Yi ge zhong de nan hai.
一个重的男孩.
(One) (a) (heavy) (boy).

2) a. A heavy sleep.
b. Shui jiao hen zhong.
睡觉很重.
(Sleep) (very) (heavy).

In the second part, the senses of these two words are totally different:

3) a. Heavy snow.
b. Da xue.
大雪.
(Big) (snow).

4) a. Older cars are heavy on gas.
b. Lao jiu de qi che hao you duo.
老旧的汽车耗油多.
(Old) (car) (fuel consumption) (much).

5) a. His voice was heavy with sarcasm.
b. Ta de yu qi dai zhe shi zu de feng ci yi wei.
他的语气带着十足的讽刺意味.
(His) (tone) (carry) (ten) (foot) (irony) (mean).

6) a. Polling has been heavy since 9 o'clock.
b. Cong 9 dian yi lai tou piao hen huo yue.
从 9 点以来投票很活跃.
(From) 9 (dot) (since) (vote) (very) (active).

In the third part, the senses of these two words are similar with each other:

7) a. Heavy house work.
b. Fan zhong de jia wu.
繁重的家务.
(Heavy) (housework).

8) a. I found the movie very heavy.
b. Wo fa xian zhe ge dian ying hen chen zhong.
我发现这个电影很沉重.
(I) (found) (this) (a) (electricity) (shadow) (very) (sink) (heavy).

In this section, we explore the translation of the English adjective "heavy" into Chinese, using various examples to illustrate the nuances and similarities. The examples are drawn from Oxford Dictionary, with slight modifications to avoid duplication. By comparing and contrasting these translations, we gain a deeper understanding of the variations and connections between the two languages. Additionally, visual aids in the form of pictures will be provided in the subsequent paper to facilitate a clearer comprehension.

The first part demonstrates that, in some instances (examples 1 and 2), the translation of "heavy" in English results in an exact correspondence with the Chinese word "zhong". However, the second part presents a contrasting scenario (examples 3, 4, 5, and 6), where, "heavy" in English is significantly different from "zhong", necessitating alternative Chinese translations.

Moving to the third part, examples 7 and 8 illustrate a more nuanced situation: when translating "heavy" into Chinese, it bears resemblance to "zhong", but requires an additional Chinese character to convey a similar yet distinct meaning. Thus, "heavy" and "zhong" share similarities, yet they differ in subtle ways.

The forthcoming paper will visually showcase these translation instances, allowing for a comprehensive visual analysis of the contrasts and similarities. It is essential to observe these variations carefully to gain valuable insights into the intricacies of cross-lingual expressions.

2. Theoretical background

This section in this article is aim to show the theoretical background by lexical typology's framework which suggested in François (2008).

2.1. Polysemy and lexical typology

"Heavy" is a versatile word, functioning as a verb, noun, adverb, and adjective. In both Chinese and English, lexical polysemy plays a significant and prevalent role, making it a crucial area of focus for linguists. Throughout my master's and doctorate studies, I have consistently been drawn to the subject of lexical polysemy, finding it the most captivating aspect of language exploration.

Polysemy refers to the phenomenon where a single word possesses two, three, or more meanings, often interconnected in some way. Most polysemous words are common terms that closely relate to everyday life experiences. Each of these meanings typically has a basic sense, as well as extended and derivative meanings. As society evolves, with increasing complexities in objective phenomena, people find themselves needing to express diverse concepts using the same primary word. This interconnection between meanings is a natural result of the social development of production and interactions.

The prevalence of polysemy is particularly evident in words that are commonly and intimately used in people's social lives. The dynamic nature of polysemy allows learners to effectively employ borrowing, metaphor, and analogy for expressive purposes. By exploiting the versatility of polysemous words, learners can enhance their ability to convey complex ideas and create richer linguistic expressions.

2.2. Research methods and procedures

In François (2008), a comprehensive approach consisting of three essential steps is proposed: sense classification, meaning connections, and lexical typology drawing. It is important to note that the research methods and procedures are built upon the theoretical research and accomplishments of teaching material by Professor Kim (2017a, 2017b), which will be elaborated on extensively in the subsequent

section.

François (2008) introduces a systematic framework encompassing three fundamental stages. Firstly, the classification of senses involves categorizing and organizing the various meanings associated with the target word or concept. Next, the process of connecting between these diverse meanings facilitates a deeper understanding of the interrelationships and semantic links between them. Lastly, the lexical typology drawing step aids in visually representing the comprehensive findings, enhancing clarity and accessibility for readers.

Crucially, the methodology adopted in this study is rooted in the theoretical groundwork laid out by Professor Kim (2017a, 2017b) in his teaching materials and article by Hu (2023). The upcoming section will delve into a thorough exposition of these foundational theories, providing a solid theoretical basis for the research's execution and interpretation.

2.2.1. Classification of the senses

In Section 2.1, the focus of the analysis in lexical typology lies not on individual words themselves, but rather on the senses derived from François (2008). This clarifies the rationale behind directing the analysis towards the senses rather than the isolated words. To illustrate this point, **Table 1** and **Table 2** in the subsequent section present a comprehensive display of all the senses associated with the adjective "straight" in English, along with their corresponding counterparts in the Buddha Language represented by the word "droit".

By examining the senses of the adjective "straight" and their translations in the Buddha Language, we gain valuable insights into the cross-lingual semantic nuances and variations. This analysis enhances our understanding of how a single concept can be expressed through multiple senses in different languages, shedding light on the intricacies of lexical typology. The forthcoming tables visually present these findings, providing a clearer picture of the interplay between the English and The Buddha Language interpretations of the term "straight".

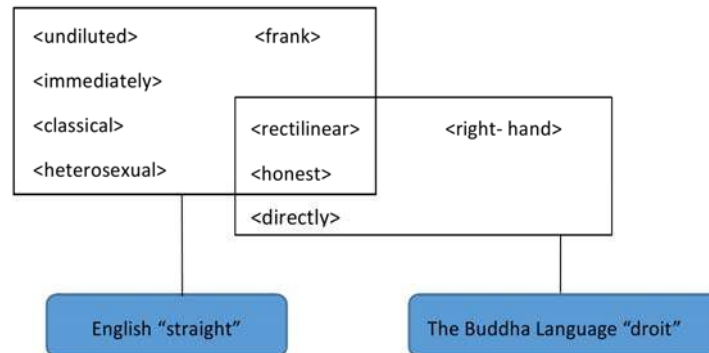**Table 1.** The senses of "straight" in English.

	Senses	Examples
(1)	rectilinear	a straighter line
(2)	honest	a straighter guy
(3)	directly	straighter to the point
(4)	frank	straighter talking
(5)	classical	a straighter play
(6)	heterosexual	gay or straight
(7)	undiluted	straight whisky
(8)	immediately	straight away

Table 2. The senses of "droit" in the Buddha Language.

	Senses	Examples
(1)	rectilinear	un trait droit
(2)	honest	un type au but
(3)	directly	aller droit au bu
(4)	right-hand	le côté droit

The meanings of some adjective words in English and the Buddha Language are displayed above. The meanings of "straight" in English and the meanings of "droit" in the Buddha Language are very similar. Their differences and similarities couldn't be found easily. But it is very simple to find the differences and similarities between them. When we compare them together, both of the two kinds of

languages include the meanings of <rectilinear>, <honest> as well as <directly>. What's more, "straight" in English has more other meanings while "droit" in the Buddha Language has another meaning of right-hand. The summary is in the following **Figure 1**.

Figure 1. The senses overlapping of the word "straight" in English and the word "droit" in the Buddha Language.

The dissimilarities and resemblances between the word "straight" in English and the word "droit" in the Buddha Language can be comprehended through a careful analysis of their respective meanings. Comparative studies of words from different languages often prove essential in understanding their distinctions and similarities, as exemplified by our examination of "straight" and "droit" above.

In everyday life, people frequently use English; however, accurately distinguishing between all the various meanings of a single word can be challenging. Consequently, misunderstandings of meanings may arise. When researchers delve into uncovering the diverse meanings of words, they often rely on their instincts as a starting point. As they progress, any perceived deficiencies in their understanding prompt them to define these shortcomings based on empirical observations.

Careful analysis of multiple senses or translations of a word in different languages allows researchers to gain a more comprehensive understanding of its semantic scope. By uncovering the connections and disparities between "straight" and "droit", we contribute to the broader study of lexical typology and cross-lingual semantics. Further investigation in this area will enrich our understanding of language and its inherent complexities.

### 2.2.2. Connecting between the meanings

By organizing closely related words into groups, we can observe semantic connections based on the degree of similarity between different meanings. This criterion of judgment relies on empirical data and ontological characteristics, which serve as ramification of meanings across various languages. To illustrate these connections and explore the diverse meanings further, I present examples from works by Professor Kim (2017a, 2017b).

Let's examine the objects associated with the word "open". Although listing all semantic meanings in this manner proves challenging, discerning each sense's ontological character becomes much more straightforward. As we delve into the semantic meanings, we realize that "Conference" possesses a degree of abstractness. However, in another context, we can easily enter and exit such a space, akin to the word "store". Additionally, when comparing body parts, "mouth" and "hand" share similarities. In my opinion, "mouth" and "hand" exhibit more resemblance to each other when compared to "arm". Furthermore, the other meanings of "arm" and "umbrella" do not involve interior space. In terms of extensibility, "hand" shows similarities with "arm".

Moving on to the semantic meanings of "door", we depict it in this article as a closing device.

Interestingly, the meanings of "beer bottle cap" and "tumbler lid" converge as "liquid container". Moreover, both "beer bottle cap" and "tumbler lid" share more similarities with each other than with "window". This is due to their repetitive use in an opened context, making them akin to the noun "door".

By grouping meanings based on functional characteristics, we connect related meanings that demonstrate affinity with one another. The subsequent picture visually depicts the degree of similarity, providing a clear illustration of these connections. Through this approach, we gain a deeper understanding of the interrelatedness and interplay of semantic meanings in various linguistic contexts.
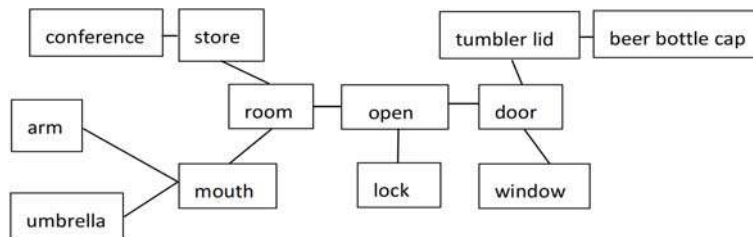
Figure 2. Basic connections about the meanings of functional characteristics.

Like the classification of the meaning in the first step above, when we define the connections of the words' meanings, we usually rely on our own sensory judgment habitually. We should pick characteristics of ontological. And researchers should confirm the analysis of the language development. Semantic map will be shown in the third step.

2.2.3. Lexical semantic map

The Grammar of Typology from Haspelmath (2003) provides valuable insights that can significantly aid the study and flexible framework of lexical typology, as proposed by François (2008). In the following section, we will explore both the lexical semantic map and the concepts presented by Haspelmath (2003) in depth.

The lexical semantic map is a representation of geometric figures that depict roles in "semantic conceptual" spaces, and it involves creating a network of interconnected lines. This map is formed by combining Emic categorization and Etic grid. The initial step involves selecting functional characteristics and an Etic grid, followed by the differentiation of the speaker's meanings based on demonstration and intuition. The classification of meanings groups semantic connections into distinct categories and differentiates similar meanings, forming a network of semantic connections.

In Section 2.2.2, **Figure 2** is presented as an illustrative instance of an Etic grid, but it is not a comprehensive picture. Similarly, Emic categorization, along with **Figure 2**, serves as an Etic grid for vocabulary in individual languages. The distinction between co-lexicalization meanings and non-co-lexicalization meanings is evident from this analysis.

Moving on to Section 2.2.3, **Figure 3** displays co-lexicalization's meanings represented by common curves, serving as another instance of Emic categorization for the Korean verb "open". Just like **Figure 2**, **Figure 3** is not a complete picture but rather a representative example of Emic categorization and the Etic grid discussed earlier. In subsequent sections, the comprehensive picture will be unveiled to provide a clear representation of the semantic map.

By exploring the Grammar of Typology and employing the lexical semantic map, we can deepen our understanding of lexical typology and its application in studying cross-lingual semantics. The visual representation of these complex concepts allows for a more profound analysis, contributing to a

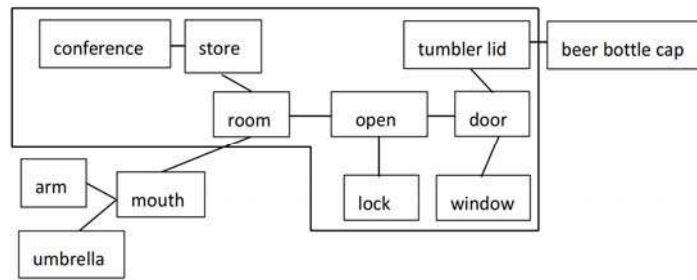comprehensive framework for lexical typology research.

Figure 3. Semantic map of open's vocabulary.

Up to this point, we have analyzed meanings, categorized similar semantic meanings into groups, and explored connections between meanings based on lexical typology in François (2008). However, a common challenge arises when a specific word presents entirely different numbers of meanings in various dictionaries, which can be frustrating for language learners. This discrepancy is due to the diverse methods used to analyze word meanings, making it challenging to reach a consensus among different researchers. As a result, in lexical typology, the focus shifts from the meanings themselves to examining the differences and similarities between meanings.

In this study, we compare meanings using François (2008) to analyze and define smaller semantic units rather than individual words. This approach suggests that researchers should adopt a theoretical perspective when examining various languages, enabling the identification of common differences between them. By explicitly listing the numerous meanings that constitute the essence of a single word from the standpoint of lexical typology, it becomes possible to make meaningful comparisons.

In this article, we focus on comparing the English word "heavy" with its corresponding Chinese word "zhong", as well as comparing the adjective "heavy" in English with its counterpart "zhong" in Chinese. Additionally, we explore the opposite pair of adjectives "heavy" and "light" in English, which are distinctly illustrated in the subsequent sections. By delving into these comparisons, we gain valuable insights into the intricate nature of lexical polysemy and the dynamic interplay of meanings between different languages.

3. The semantic study of "heavy" as well as "zhong"

In this article, heavy's Etic grid will be displayed mainly in Section 3.1. And in Section 3.2, the focus topic semantic study about the adjective word "heavy" in English and its corresponding Chinese word "zhong" as well as the Emic categorization of the adjective word "heavy" and its corresponding word "zhong" in Chinese will be displayed. In Section 3, the differences of them and the similarities of them will all be displayed in Sections 3.3 and 3.4.

3.1. Heavy's Etic grid

In the first step, I search the adjective word "heavy" in both Chinese dictionary and English dictionary. In the second step, I choose the 4 main meanings of "heavy" as {not easy}, {not light}, {not little}, and {not gentle}. In the article, nouns which can be modified by the adjective word "heavy" and its corresponding word "zhong" in Chinese will be shown as well. Nouns which can be modified by English word "heavy" and Chinese word "zhong", the fundamental classification of meanings and similar meanings are displayed in **Figure 4**.
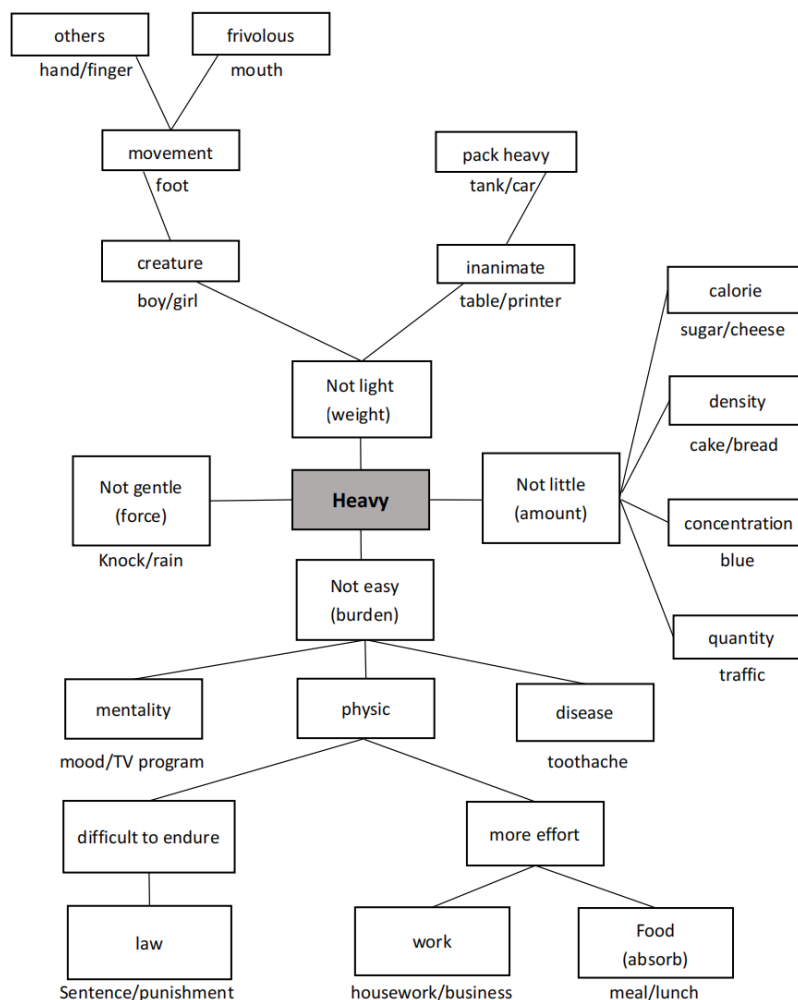
Figure 4. Heavy Etic grid.

In Sections 3.1.1, 3.1.2, 3.1.3 and 3.1.4, all 4 kinds of dominating semantic meanings of "heavy" as {not easy}, {not light}, {not little}, and {not gentle} will be displayed in the subsequent section.

3.1.1. {not light}: Weighting much

In this article, we distinguish objects' mass into two categories: inanimate objects and creatures. Inanimate objects represent general heaviness concerning total weight, including items like <chair>, <table>, and <printer>. We observe that both the English adjective "heavy" and its corresponding Chinese word "zhong" can be co-lexicalized with these inanimate objects. Additionally, when referring to heavy-loaded inanimate materials like <tank>, <boat>, and <car>, both "heavy" in English and "heavy" in Chinese can be co-lexicalized.

Similarly, when it comes to creatures, such as <people>, <baby>, and <girl>, both the English adjective "heavy" and its corresponding Chinese word "zhong" can be co-lexicalized. However, it is noteworthy that the mass of people tends to have a broader range in weight, making it more susceptible to variations. Despite this, the senses of "heavy" remain consistent between Chinese and English.

For words originating from parts of the human body, like <finger> and <hand>, both the English adjective "heavy" and "zhong" in Chinese can be co-lexicalized. However, for words associated with the parts of our body such as <mouth>, only the English adjective "heavy" is applicable for co-lexicalization, while the Chinese word "zhong" does not share the same co-lexicalization.

These observations reveal intriguing patterns of co-lexicalization for the adjective word "heavy" in both English and Chinese, offering valuable insights into the nuanced interplay of meanings in different linguistic contexts. By carefully analyzing these distinctions, we enhance our understanding of lexical typology and its implications in cross-lingual semantics.

3.1.2. {not gentle}: Serious or burden

In this section of the article, we will explore the degree of weightlessness represented by the adjective word "heavy" and its corresponding word "zhong" in Chinese. This degree of weightlessness is expressed through the term {serious}, which signifies a psychological state with a significant impact on the target. It can convey a heavy physical burden (clearly evident in the target) and a substantial psychological burden (requiring more effort). Additionally, the main meanings of {not gentle} encompass aspects related to mentality, disease, and physical burden. These meanings are used to express both heavy physical burden (demanding more effort) and substantial psychological burden. Each of these meanings will be thoroughly discussed and explained in this article.

The first category of description revolves around the state of mind. In situations without mental burden, objects such as <heart>, <voice>, <mood>, <temper>, and <footstep> can all be co-lexicalized with both the English adjective "heavy" and the corresponding Chinese word "zhong". Moreover, when "mental burden" is expressed, the term can convey sadness or pain from sources like <movie>, <music>, and <book>. Furthermore, after being applied to <movie>, <music>, and <book>, the term can amplify the feelings of sadness or pain experienced by the actors, as conveyed through meanings like <footstep> and <voice>.

Moving on to the second category, which deals with physical actions, the term "more effort" signifies that it is physically challenging to deal with certain objects. These objects include <business>, <work>, and <housework>. In the context of daily dietary habits, the term can be associated with the digestive ability of food. In cases involving <business>, <work>, and <housework>, when difficulties or problems arise, the term is usually linked to the need for significant effort and overcoming various challenges. Both the English adjective "heavy" and the corresponding Chinese word "zhong" can be co-lexicalized here. However, when referring to daily dietary habits and the digestive ability of food, the term "heavy" in English can convey that <fruit>, <breakfast>, and <dinner> can be easily digested and assimilated. However, the corresponding word "zhong" in Chinese does not share the same co-lexicalization

The last category deals with disease. Diseases such as <cancer> and <headache> can be co-lexicalized with the corresponding word "zhong" in Chinese, but not with the English word "heavy". Therefore, the English adjective "heavy" and the corresponding Chinese word "zhong" differ in this context.

These comprehensive analyses reveal the nuanced distinctions between the English adjective "heavy" and its corresponding Chinese word "zhong" when used to express various degrees of weightlessness. By examining these differences, we can gain valuable insights into the intricacies of lexical typology and its impact on cross-lingual semantics.

3.1.3. {not gentle}: Using much force

The English adjective "heavy" and its corresponding Chinese word "zhong" share a close connection with force when both are used to convey the meaning of {not gentle}. For example, it implies that considerable effort is required to open or close a window or door, as indicated by the action of <knock>. Similarly, when referring to weather phenomena like <wind> or <rain>, both "heavy" in

English and "zhong" in Chinese can be co-lexicalized.

In these instances, the term {not gentle} carries a connotation of force or intensity, emphasizing the significant physical or natural impact of the mentioned objects. Both English and Chinese utilize "heavy" and "zhong", respectively, to vividly express the demanding nature of these situations. This connection with force serves to enhance the overall understanding and context of the expressions used, further highlighting the intricacies of lexical typology across languages.

3.1.4. {not little}: Much in amount

In this section of the article, we will explore the meanings of the English adjective "heavy" and the Chinese word "zhong" that signify a significant amount. These meanings can be further divided into details such as quantity, density, concentration, and calorie.

When modifying certain objects, such as <beer> and <wine>, both the English adjective "heavy" and its corresponding Chinese word "zhong" can be co-lexicalized. This usage emphasizes a substantial amount of these items.

However, when modifying certain substances like <traffic>, <colors>, and <lunch>, the English word "heavy" can be co-lexicalized to convey a significant amount or intensity. On the other hand, the Chinese word "zhong" does not share the same co-lexicalization in these contexts.

By examining these specific instances, we gain valuable insights into how the English and Chinese languages handle the expression of substantial quantities and densities. The differences in co-lexicalization shed light on the nuances of lexical typology in cross-lingual semantics.

3.2. Semantic study of the English word "heavy" and Chinese word "zhong"

Up to now, the Etic grid of the English word "heavy" and the map of lexical semantic will be displayed in **Figure 5** and **Figure 6**. They are from co-lexicalization of the Chinese word "zhong".

In **Figure 5** and **Figure 6**, we can observe the objects that originate from the lexical semantic map. To distinguish between the English adjective "heavy" and the Chinese word "zhong", I have used different line divisions. Each section where the adjective word "heavy" in English and its corresponding word "zhong" in Chinese can be co-lexicalized is displayed within the mutual areas.

Interestingly, we can note that every co-lexicalization meaning is distinct from the semantic maps in both **Figure 5** and **Figure 6**. When associated with {not light} and {not gentle}, the English adjective "heavy" and the Chinese word "zhong" can be co-lexicalized. However, when associated with {not easy} and {not little}, only some of the meanings of the English adjective "heavy" and the corresponding Chinese word "zhong" can be co-lexicalized.

This observation reveals the intricacies of cross-lingual semantics and the unique ways in which the English and Chinese languages express certain concepts. The analysis of co-lexicalization patterns enhances our understanding of the differences and similarities in lexical typology, contributing to a more comprehensive exploration of language and meaning.
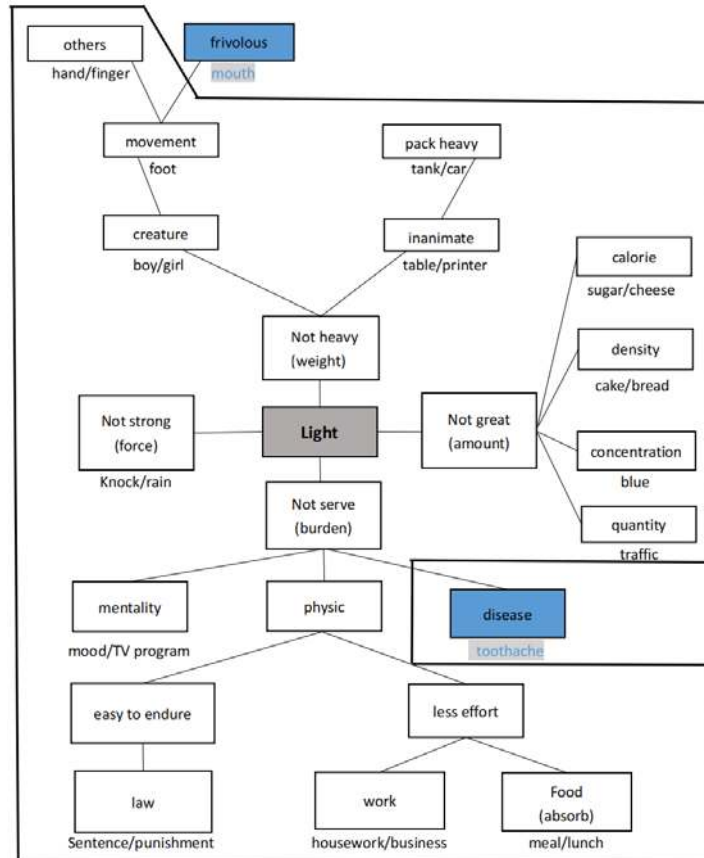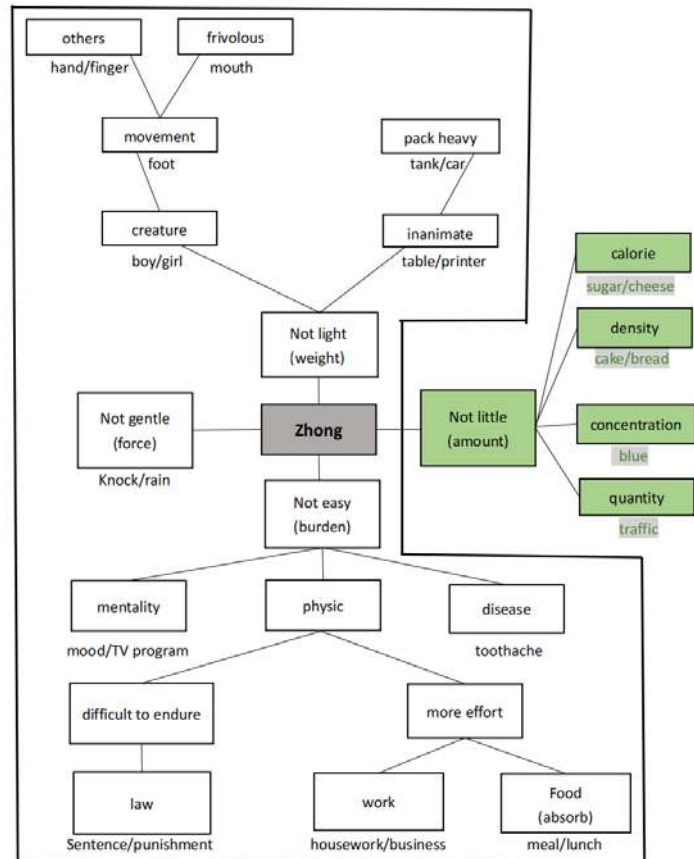
Figure 5. Lexical semantic map of "light".

Figure 6. Lexical semantic map of "zhong".

11

In the following section, the semantic study of Emic categorization about "heavy" and "zhong" are displayed. As well as their differences and similarities in meanings.

Emic categorization about "heavy" and "zhong"

In this section, both the adjective word "heavy" in English and its corresponding word "zhong" in Chinese could be co-lexicalized clearly in the map of lexical semantic. It is displayed in **Figure 7**. Both the adjective word "heavy" in English and its corresponding word "zhong" in Chinese could be co-lexicalized. It is displayed in mutual areas in **Figure 7**.

The differences about the meanings and similarities about the meanings are displayed as samples in Sections 3.3 and 3.4.
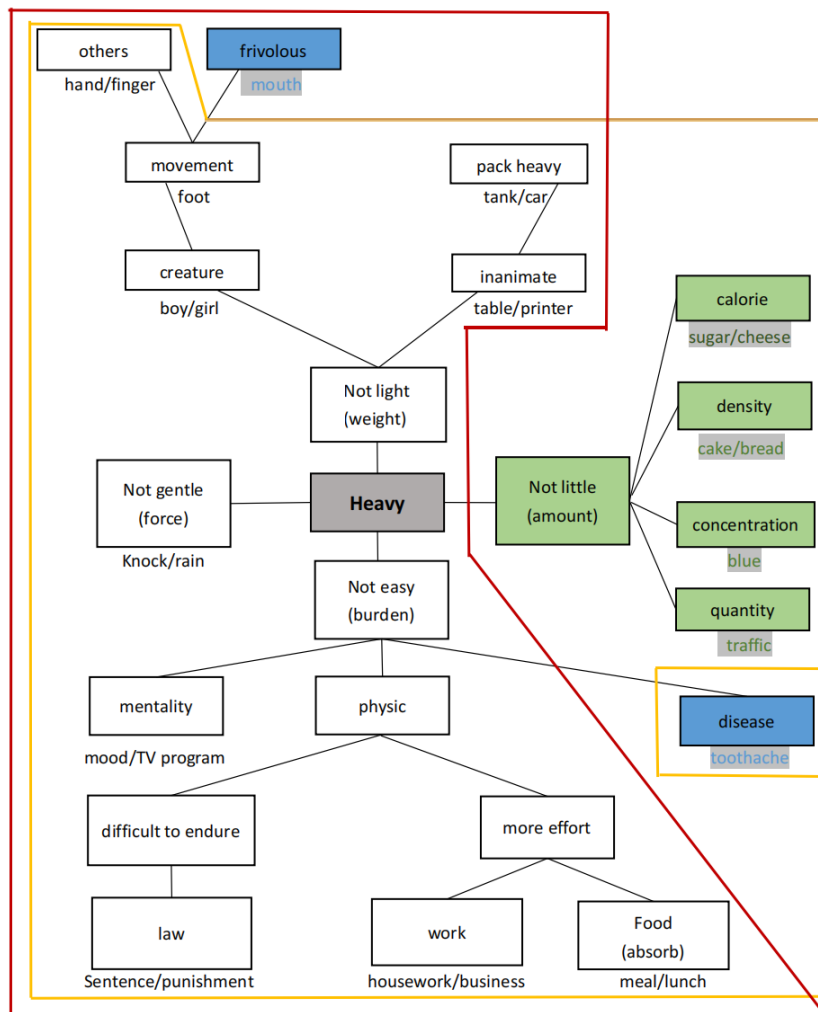

Figure 7. Semantic map for the Emic categorization of "heavy" and "zhong".

3.3. Similarity of the meanings

When we translate the adjective word "heavy" in English into Chinese, the adjective word "heavy" in English is totally the same with its corresponding word "zhong" in Chinese.

Not light (weight):
It means: not easy to raise up or move, means weighting much.
9) a. He takes two heavy balls to go to school.
b. Ta dai liang ge zhong de qiu qu shang xue.

他带两个重的球去上学.

(He) (carry) (two) (a) (heavy) (ball) (go) (up) (study).

Not gentle (force):

It means: need much force, not delicate.

10) a. He feels a heavy tap on his back.

b. Ta gan jue you ren zai ta de bei shang zhong zhong de pai le yi xia.

他感觉有人在他的背上重重地拍了一下.

(He) (felt) (have) (people) (at) (his) (back) (up) (heavily) (pat) (one) (down).

Not easy (burden):

It means: pay too much.

11) a. He got a heavy sentence.

b. Ta de dao le hen zhong de pan chu.

他得到了很重的判处.

He (got) very (heavy) (judge).

Above, we have presented three examples, (9), (10), and (11), that illustrate the similarities between the meanings of the English adjective "heavy" and its corresponding Chinese word "zhong". Both words can be categorized into four main domains: {not easy}, {not light}, {not little}, and {not gentle}. These dominant categories, along with their respective sub-classifications, have been meticulously displayed in various figures throughout this article.

Examples (9), (10), and (11) represent just a portion of these dominant categories, showcasing the co-lexicalization between "heavy" in English and "zhong" in Chinese. By organizing and examining these meanings in a systematic manner, we gain a comprehensive understanding of how these two languages share and express similar concepts in the realm of lexical typology.

In the subsequent sections, we will delve deeper into these dominant categories, exploring the intricacies of their co-lexicalization and the semantic connections between the English and Chinese words. This analysis will provide valuable insights into the cross-lingual semantic phenomena and contribute to a more profound exploration of lexical typology in linguistic studies.

3.4. Differences of the meanings

As we can know in the following Section 3.4 clearly. People translate English word "heavy" into Chinese, English word "heavy" is different from its corresponding Chinese word "zhong". The English word "heavy" should be translated into other words when we want to translate it into Chinese. We can sum up two conclusions from Section 3.4 in this article. The first summary is that just the English word "heavy" could be co-lexicalized into {not little} but Chinese word "zhong" cannot.

Not little (amount):

It means: great in amount.

12) Calorie

a. I just eat heavy cheese.

b. Wo zhi chi ka lu li gao de nai lao.

我只吃卡路里高的奶酪.

I only eat calorie (high) (cheese).

13) Density

a. I don't like heavy food.

b. Wo bu xi huan nan xiao hua de shi wu.

我不喜欢难消化的食物.

(I) (no) (like) (difficult) (digestion) (food).

14) Concentration

a. I have a pair of heavy black eyes.

b. Wo you yi shuang shen hei se de yan jing.

我有一双深黑色的眼睛.

(I) (have) (one) (double) (heavy) (black) (eye).

15) Quantity

a. I hate street with heavy traffic.

b. Wo tao yan yong ji de jie dao.

我讨厌拥挤的街道.

(I) (hate) (crowded) (street).

{not little} is distinguished into calorie, density, concentration and quantity. Examples (12), (13) and (14) as well as (15) are the instances of them. When people translate the English word "heavy" into Chinese, English word "heavy" is actually different with "zhong". "Heavy" in this article should be translated into other Chinese words as "b" in examples (12), (13) and (14) as well as (15). When we translate English word "heavy" into Chinese word "zhong" directly, the translated sentences have wrong senses as well as meanings. As a result, we can sum up that just the English word "heavy" could be co-lexicalized like {not little} but its corresponding Chinese word "zhong" cannot.

The second summary in this paper is that just the Chinese word "zhong" could be co-lexicalized like {not light}, such as steady, and {not gentle} such as disease.

16) Disease

a. I have a bad toothache.

b. Wo you yan zhong de ya teng.

我有严重的牙疼.

(I) (have) (serious) tooth painful.

17) Steady

a. He is a very steady people.

b. Ta shi yi ge hen wen zhong de ren.

他是一个很稳重的人.

(He) (is) (one) (a) (very) (stable) (people).

Examples (13) as well as (14) are two kind of cases that the English word "heavy" could not be co-lexicalized. Because of different means of expression in various languages, we have to express the meanings as mentioned above in English, people have to use other corresponding words. For example, "a" in examples (16) as well as (17) are the idiomatic expressions in English. So, as we can know that only the Chinese word "zhong" could be co-lexicalized like {not little} but the English word "heavy" cannot.

4. Conclusion

In conclusion, this paper encompasses two main components: the theoretical background and the

semantic study of the English adjective "heavy" and its corresponding Chinese word "zhong". Employing the framework of lexical typology proposed by François (2008), we thoroughly examined the various senses of "heavy" in the context of semantic study, utilizing functional properties and empirical observations as crucial benchmarks.

Throughout the article, we diligently compared and contrasted all the meanings of "heavy" with their corresponding Chinese counterparts, seeking to identify both the similarities and differences between the English and Chinese languages. It is evident that each language possesses unique nuances and expressions, reflecting the rich diversity of linguistic characteristics.

For language learners and translators, this research emphasizes the importance of making comparisons and conducting thorough investigations to achieve accurate language expressions. Such insights can greatly enhance language education and improve the proficiency of communication in multilingual contexts.

Ultimately, this study contributes to a deeper understanding of the intricate interplay of meanings in different languages, shedding light on the complexities of lexical typology and cross-lingual semantics. By employing a systematic methodology, we have explored the fascinating world of lexical polysemy and its implications, paving the way for future linguistic research and language learning endeavors.

Conflict of interest

The author declares no conflict of interest.

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