A COMPARATIVE STUDY OF "LIGHT" AND "QING" IN ENGLISH AND CHINESE: A LEXICAL SEMANTIC MAPPING APPROACH

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Abstract

This study explores the semantic meanings of the Chinese word "qing" and its English counterpart "light" through the lens of Lexical Typology, with a focus on polysemy - the phenomenon of words having multiple meanings. Utilizing François' (2008) framework, the study analyzes the functional properties and empirical observations of "light" and compares them with "qing" to identify similarities and differences between these two languages. The research methods include sense classification, connecting senses, and lexical semantic mapping. An etic grid for the semantic study of "light" and an emic categorization of "qing" and "light" are provided. The study demonstrates that polysemy facilitates efficient and expressive communication, enabling people to convey complex objective phenomena. By utilizing the Lexical Typology framework, the study highlights the fine distinctions between different senses of the same word and reveals the co-lexicalization that comes from individual words, which is crucial for cross-linguistic comparison. To facilitate comparative research, the study emphasizes the need for explicit skills in different languages.

Introduction

Polysemy is a pervasive phenomenon in English, with many words containing multiple meanings. However, this phenomenon is not unique to English and is also present in other languages, including Chinese. This linguistic study focuses on the semantic meanings of the Chinese word "qing" and its English equivalent "light," examining their functional properties and empirical observations to identify similarities and differences in meaning. To undertake this analysis, the study utilizes François' (2008) framework of Lexical Typology, which emphasizes the importance of identifying the fine distinctions between different senses of the same word and the co-lexicalization that comes from individual words. The study employs research methods such as sense classification, connecting senses, and lexical semantic mapping to explore the polysemy of "light" and "qing." By examining polysemy, the study highlights the role of language in facilitating efficient and expressive communication and the importance of explicit skills in different languages for comparative research. The study contributes to cross-linguistic comparison by revealing differences in meaning between languages and the ways in which words can be used to convey complex objective phenomena.

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1.   Theoretical Background

This part of the paper aims to introduce the background using the framework of Lexical Typology suggested in François (2008).

1.1   Polysemy and Lexical Typology

English word "light" is a noun, verb, adjective and adverb at the same time. Apart from adverb, "light" is polysemy as noun, verb and adjective. Lexical polysemy is the most pervasive and the most important semantic phenomenon in English. Therefore, it has been the focus of linguists" researches.Polysemy refers to a word that contains two or more than two meanings that often relate to each other. Polysemy is the symmetry of a single word, different things that relate to each other. Generally speaking, these meanings are of the same basic meaning"s transferred meaning, extended meaning and derivative meaning. In the development of social production, people need to reflect the increasingly complex objective phenomenon. As a result, people have to use the primary word to express other things that are relevant to and make the word"s old meanings and new meanings coexist together. Polysemy is often found in those words which are most intimate and commonly used in daily life, with Verbs, adjectives and monosyllabic words being the most common cases. Because of the trait of polysemy, they achieve good effect of expression on analogy, metaphor, borrowing and other rhetorics.

In the vocabulary study part, we argued that the explicit skills of various different languages were required for comparative research by using françois (2008).

1.2   Research Procedures and Methods

François (2008) proposes three steps: Classification of the sense, Connecting between the senses and Lexical Typology Drawing.

2.2.1 Classification of the Sense

In 2.1, the analysis target of Lexical Typology is not the word but the sense from François (2008). It explains why the analysis target of Lexical Typology is the sense but not the word by comparing the English adjective "straight" with The Buddha Language corresponding word "droit". The following Figure 1 and Figure 2 show each sense of the English adjective "straight" and the corresponding Buddha Language "droit". Table 1. The sense of English adjective "straight"

	sense	Example
(a)	rectilinear	a straighter line
(b)	honest	a straighter guy
(c)	directly	straighter to the point
(d)	frank	straighter talking
(e)	classical	a straighter play
(f)	heterosexual	gay or straight
(g)	undiluted	straight whisky
(h)	immediately	straight away

Table 2. The sense of The Buddha Language adjective "droit"

	sense	Example
(a)	rectilinear	un trait droit
(b)	honest	un type au but
(c)	directly	aller droit au bu
(d)	right-hand	le côté droit

The senses of adjective English words <rectilinear>, <honest>, <directly>, <frank>, <classical>, <heterosexual>, <undiluted> and <immediately> are shown in figure 1, and the senses of adjective Buddha

Language words <rectilinear>, <honest>, <directly> and <right-hand> are shown in Figure 2. By putting the two figures together, we can easily see the very fine distinctions between them.

But, like the sense from monosemist approach, the sense of "straight" and the sense of "droit" are so similar with each other that their similarities and differences cannot be found. However, it is easy to find the similarities and differences between the two words when comparing them with each other. Both of them include the sense of <rectilinear>, <honest> and <directly>. Besides those, "straight" has the sense of <frank>, <classical>, <heterosexual>, <undiluted> and <immediately>, while "droit" has the sense of right-hand. A summary of this can be seen in the following <chart
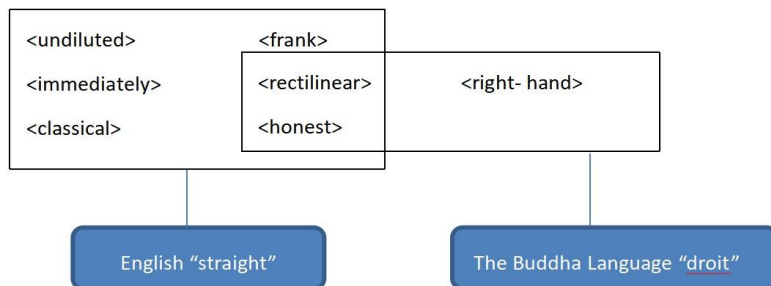

Figure 1. Sense overlapping of English "straight" and The Buddha Language "droit"

The similarities and differences between the two words can be easily seen by dividing them by sense. Various words can be compared to study their similarities and differences like "straight" and "droit".

But when we distinguish different senses of one word, the different senses presented from every dictionary are unable to be distinguished by Lexical Typology. Senses happened due to people who use English but usually cannot discern all the different senses of one word accurately. Researchers rely on their intuition when they need to find the different senses of words. At first, if there are some deficiencies of the sense in some form, researchers define them with empirical observations. François(2008) thinks Lexical Typology sense itself is not important, but the co-lexicalization that comes from the individual word – combination of the sense of words is important.

François (2008) compares sense to Biology, similar concept is it is made up of smaller units of atoms than molecules. When target of Lexical Typology is sense itself, the similarities and differences of different words can be seen clearly.

2.2.2 Connecting Between the Sense

The first step is looking at the various semantic relevancies of senses, followed by connecting them by using a polysemous network. At this time, we put close words together in a group to see their semantic connection. The degree of similarity between different senses is criterion of judgement. It is ontological character and empirical data in various languages that are derivative of senses. To explain connections between senses, I quote the example from Eunil Kim in the following part.

The objects of the verb "open" are "store, room, mouth, lock, door, conference, umbrella, arm, hand, window, tumbler lid, beer bottle cap". It is difficult to master semantic senses arranged this way, but each senses" ontological character can be seen clearly. The Subject of conduct becomes a new group – the sense of {room} is "space itself", the sense of {door} is a closing device. First, when observing the sense of {room} "space itself", <store>, and <mouse> as semantic senses are included. <conference> is abstract but in another kind of way --people can go in and out, it is similar with <store>. In terms of body parts, <hand> and <mouth> are similar with each other from the point of view of the hand being able to form an interior space, <hand> and <mouth> are more similar to each other compared to <arm>. <arm> and <umbrella>"s other senses don"t include interior space,　in terms of extensibility, it"s similar with <hand>. Next, the semantic sense of {door} is shown as a closing device, and both <tumbler lid> and <beer bottle cap>"s sense being liquid container. <tumbler lid> and <beer bottle cap> are more similar between each other compared to <window>, which

compared to <beer bottle cap>, since the opening behavior is repeatedly used, is more similar with <door>. After choosing functional characteristics, senses are put into groups and senses which are related to each other are connected. We can see the degree of similarity between them in the following chart.
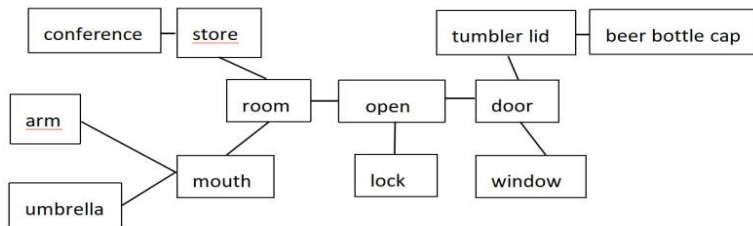

Figure 2. Basic connecting between the sense of functional characteristics

Like classification of the sense in the first step, when defining the connection of senses, we will rely on our own intuitive judgment. We need to choose ontological characteristics. Researchers need to verify analysis of language development. In the third step, I will show Lexical Typology of François (2008)‟s lexical semantic map.

2.2.3 Lexical Semantic Map

By François (2008), Grammar Typology Haspelmath (2003) can help framework and Lexical Typology study to be used flexibly. Haspelmath (2003) and lexical semantic map will be shown in the following section.

Lexical semantic map is a kind of geometrical representation of functions in "conceptual/semantic space" which are linked by connecting lines and create a network as a result. A lexical semantic map is formed by etic grid and emic categorization. First, choose the etic grid and functional characteristics, then distinguish the speaker‟s senses by intuition and demonstration. Classify senses which have semantic connection into groups, and classify similar senses which have semantic connection into a sense net. <chart 2> shown in 2.2.2 is not in complete form but an example of etic grid. Emic categorization and <chart 2> are the same etic-grid of the vocabulary of individual languages above, an indication of the distinction between co-lexicalization senses and which are not co-lexicalization senses. The following <chart 3> shows the co-lexicalization‟s senses represented by shaded curves, it is an example of emic categorization of the Korean word "open". This means that <chart 3> shown in 2.2.3 is not in complete form but an example of the etic-grid and Emic categorization above it. Then it can be shown by a Lexical semantic map.
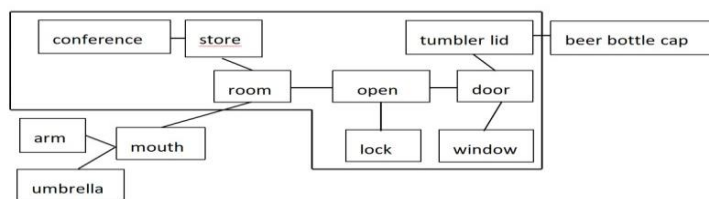

Figure 3. Open‟s vocabulary semantic study part

So far, in François (2008)‟s Lexical Typology, we analyze senses, divide similar semantic senses into group and show how to find the connection between senses. We recognized Lexical semantic map. The research object of this paper is the comparison between the adjective "light" in English and the corresponding word "qing" in Chinese which will be shown in the following part.

## 2.	Semantic Study of "light" and "qing"

### 2.1	Light Etic Grid

At first I studied the adjective "light" in English dictionary and Chinese dictionary. Then I chose the 4 main senses of "light" as {not heavy}, {not severe}, {not difficult}, {not great}. Nouns that can be modified by "light" and "qing" will also be shown in the paper. Nouns that can be modified by "light" and "qing", basic classification of senses and similar semantic senses will be shown in <chart4> etic grid.

< Picture 4> Light's etic grid
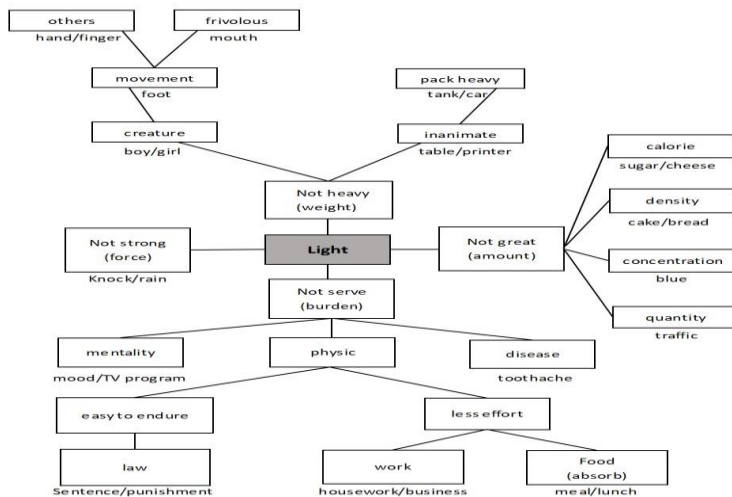
4 kind of main semantic senses of "light" as {not heavy}, {not severe}, {not difficult}, {not great} will be shown in the following part.

3.1.1 {not heavy}: not weighting too much

When I divide the object of weight into creatures and inanimate object, inanimate object indicates the degree of general heaviness. Like <table>, <chair>, <printer>, etc. both the English word "light" and the Chinese word "qing" can be co-lexicalized. The term that represents the weight of inanimate objects for "light-loaded" like <boat>, <car>, <tank>, both the English word "light" and the Chinese word "qing" can be co-lexicalized. The term that represents creatures, both the English word "light" and the Chinese word "qing" can be co-lexicalized. When represent a person"s weight like <boy>, <baby>, <people>, both the English word "light" and the Chinese word "qing" can be co-lexicalized. The weight of a person is more extended in weight, which can affect the movement of weight, its meanings are also the same aspects between English and Chinese. For example, the words from parts of the body like <hand> and <finger>. Both the English word "light" and the Chinese word "qing" can be co-lexicalized. But for words from parts of the body like <mouth>, only the Chinese word "qing" can be co-lexicalized.

3.1.2 {not severe}: not that serious or burden

This part represents the degree of lightness as {not serious}. {not serious} it represents a psychological state. The impact on the target is light. It can express: psychological burden is small, physical burden is light (less effort), physical burden is light (target not only can be achieved but also can be achieved easily). I wrote the central senses of {not serve} as: mentality, physic and disease. It is used when wanting to express small psychological burden and light physical burden (less effort). The first object will be started by mentality. The second object will be started by a physical action. The last object will be started by disease. Each of them will be introduced in detail.
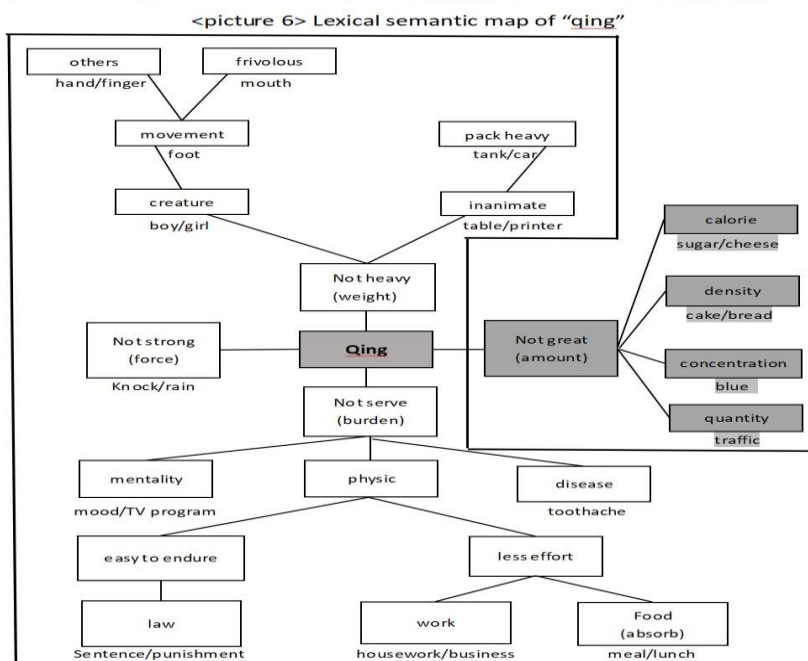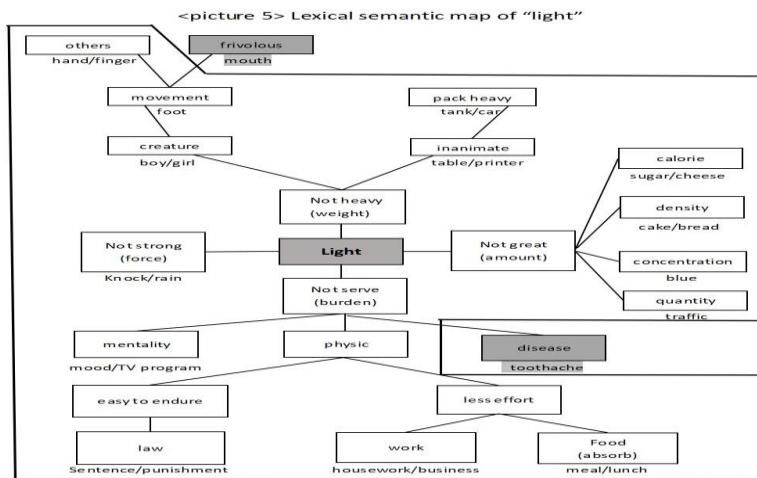
3.1.3 {not strong}: not using much force

Both the English word "light" and the Chinese word "qing" connect with force when they mean {not strong}. For example, with <knock> it means not using too much force on the door. In the case of <rain> and <wind>, both the English word "light" and the Chinese word "qing" can also be co-lexicalized.

3.1.4 {not great}: not much in amount

In this part, senses of English word "light" and Chinese word "qing" mean not much in amount will be divided in detail as concentration calorie, quantity and density. When it modifies some objects such as <wine>, <beer>, both the English word "light" and the Chinese word "qing" can be co-lexicalized. When it modifies some objects such as <colors>, <lunch>, <traffic>, then the English word "light" can be co-lexicalized but not the Chinese word "qing".

2.2 Semantic Study of "light" and "qing"

So far, the etic grid of "light" and lexical semantic map that comes from the co-lexicalization of "qing" will be shown in <chart 5> and <chart 6>.

<picture 5> Lexical semantic map of "light"

<picture 6> Lexical semantic map of "qing"

"light" and "qing" in < figure 5> and < figure 6> are the things that come from the Lexical semantic map. The solid line part is the co-lexicalization of "light", and the dotted line part is the co-lexicalization of qing. Each part of the English word "light" and the Chinese word "qing" which can be co-lexicalized will be shown inside the shaded areas. We can see that each co-lexicalization senses are different from < figure 5> and < figure 6>„s semantic maps. Both the English word "light" and the Chinese word "qing" can be co-lexicalized when they connect with {not heavy} and {not strong}. When they connect with {not serious} and {not much}, part of the senses of the English word "light" and the Chinese word "qing" can be co-lexicalized.
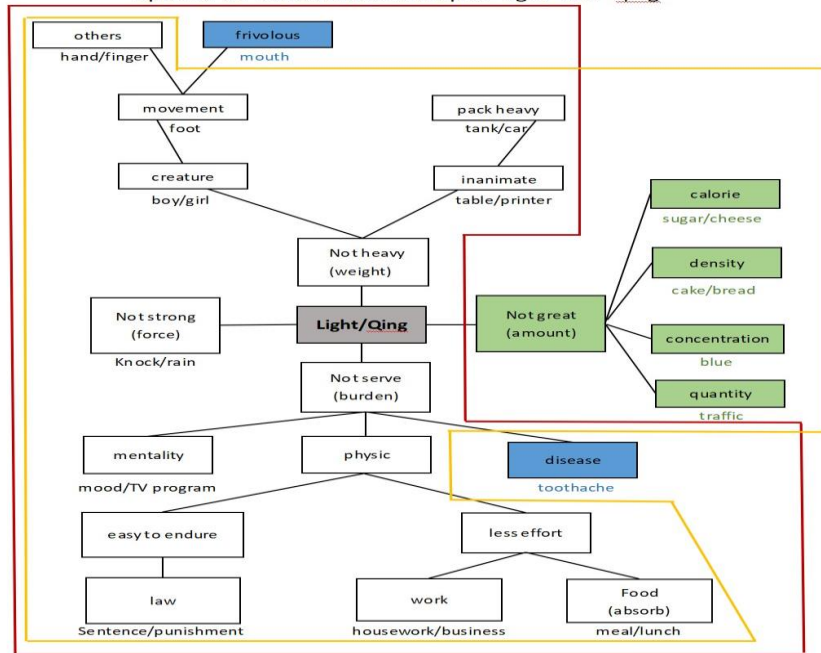
In 1.2.1, the emic categorization‟s semantic study of "light" and "qing" will be shown. As well as two words‟ similarities and differences in senses.

3.2.1 Emic Categorization of "light" and "qing"

The part that both the English word "light" and the Chinese word "qing" can be co-lexicalized in the lexical semantic map will be shown in <figure 7>. In < figure 7>, the part that both the English word "light" and the Chinese word "qing" can be co-lexicalized will be shown in shaded areas.

Differences of senses and similarities of senses will be shown as examples in 1.3and 1.4.

<picture 7> Lexical semantic map of "light" and "qing"

2.3   Similarity of Senses

When translating the English word "light" into Chinese, the English word "light" is exactly the same with the Chinese word "qing".

Not heavy (weight):

It means: easy to lift or move, not weighting too much.

(6)   a. Take a light bag to go shopping.

b.   Dai yi ge qing de bao qu gou wu. 带 一 个 轻 的 包 去 购 物.

(Carry) (one) (a) (light)   (bag) (go) (buy) (thing).

Not strong (force):

It means: not using too much force, delicate.

(7)   a. I feel a light tap on my shoulder.

b.   Wo gan jue you ren   zai wo de jian bang shang qing qing de pai le yi   xia.   我 感 觉 有 人   在 我 的 肩 膀 上 轻 轻 地 拍 了 一 下.

    (I)   (felt) (have) (people) (at)   (my) (shoulder) (up)   (lightly)   (pat) (one) (down). Not severe (burden):

It means: don‟t pay much

(8)   a. He just got a light sentence.

b.   Ta zhi de dao le hen qing de pan chu.

他 只 得 到 了 很 轻 的 判 处.

He only   (got)   very (light) (judge).

(6), (7) and (8) are three examples of the similarity of senses in the English word "light" and the Chinese word "qing". They are classified to 4 major categories as {not heavy}, {not strong}, {not severe} and {not strong}. All these are presented in some figures in this paper, every kind included in some small classifications. (6), (7) and (8) are examples of one of the major categories.

2.4   Differences of Senses

As seen in the contents of 1.4 when translating the English word "light" into Chinese the English word "light" is different from the Chinese word "qing". "light" needs to be translated to other words in Chinese. From 1.4

we can conclude two things. The first is that only the English word "light" can be co-lexicalized as {not much} but not Chinese word "qing".

Not great (amount):

It means: not much in amount.

(9)　　Calorie　a. She only eats light cheese.

　　　　b. Ta zhi chi ka lu li di de nai lao.　　　　　她 只 吃 卡路里 低 的 奶 酪.

　　　　She only eat calorie (low) (cheese).

(10)　　Density　a. He likes light bread.

　　　　b.Ta xi huan peng song de mian bao.　　　　他 喜 欢 蓬 松 的 面 包.

　　　　 He (like) (fluffy) (bread).

(11)　　Concentration　a. She has a pair of light blue eyes.

　　　　b. Ta you yi shuang dan lan se de yan jing.　　她 有 一 双 　淡 蓝色 的 眼 睛.

　　　(She) (has) (one) (double) (light) (blue) 　(eye).

（12）Quantity　a. I like street with light traffic.

　　　　b. Wo xi huan che liang shao de jie dao.　　我 喜 欢 车 辆 少 的 街 道.

　　　　(I) (like) (vehicle) (little) 　(street) .

{not much} are classified to calorie, density, concentration and quantity. (9), (10), (11) and (12) are examples of them. Here when translating the English word "light" into Chinese, the English word "light" is totally different with the Chinese word "qing". "light" needs to be translated to other words in Chinese as "b" in (9), "b" in (10), "b" in (11) and "b" in (12). If we translate the English word "light" directly into "qing" here, the resulting sentence will have incorrect meaning and sense. So only the English word "light" can be co-lexicalized as {not much} but not the Chinese word "qing".

The second conclusion is that only the Chinese word "qing" can be co-lexicalized as {not heavy}, like frivolous, and {not severe} like disease.

(13)　　Disease　a. He has a slight headache.

　　　　 b. Ta you qing wei de tou teng.　　　　　他 有 轻 微 的 头 　疼.

　　　　 He has (slight) 　head painful.

(14)　　Frivolous　a. He is frivolous.

　　　　b.他 的 嘴 很 轻 浮.　　　　　Ta de zui hen qing fu.

　　　　(His) mouth very light float.

(13) and (14) are the only two classifications in which the English word "light" cannot be co-lexicalized. Because of the different expressions in different languages, if we want to express the sense above in English, we need to use other words. "a" in (13) and "a" in (14) are the right expressions in English. So only the Chinese word "qing" can be co-lexicalized as {not much} but not the English word "light" here.

3.　Conclusion

The content of this paper analyzes the English adjective "light" and its corresponding Chinese word "qing" by using the framework of Lexical Typology suggested in françois (2008). In this paper, we showed the completely different semantic meanings of "light" based on functional properties as well as empirical observations and we compared them with corresponding Chinese words, showing the difference and similarities of the two language"s senses.

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