

Semantics and Pragmatics of Color Terms in Chinese*

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Chinese basic color terms follow the same evolutionary sequence discovered by Berlin and Kay (1969). However, many Chinese color terms appear to have different extended meanings from those of genetically unrelated languages such as English. This study provides diachronic and synchronic evidence to show that Chinese color terms have employed the same mechanisms as English (e.g. metaphor, metonymy, sense of opposite relation, and pragmatic inference) in the development of various extended and abstract meanings. It is argued that the differences in the extended meaning of Chinese and English color terms have systematically been grounded in their early developed semantic properties (i.e. semantic domains) and cognitive functions. As a result, the seniority of semantic functions determines the scope and characteristics of new meanings of color terms, contrary to the claim that accidental phenomenon leads to language-idiosyncratic development (i.e. Kikuchi and Lichtenberk 1983).

1. Introduction

Two competing accounts have emerged to explain the reason why color terms follow the same evolutionary sequence discovered by Berlin and Kay (1969): one led by Kay and McDaniel (1978:617) who claim that the semantics of basic color terms in all languages are the results of a common set of neurophysiological processes in which differences in wavelengths of light reaching the eye are transformed into response differences in the visual nervous systems, while the other, led by Wierzbicka, (1990) opposes Kay and McDaniel's claim and suggests that color concepts are anchored in certain universal identifiable human experiences, such as day, night, fire, the sun, vegetation, the sky, and the ground. Evidently, the two camps look at the same phenomenon from completely different angles, one from a neurophysiological perspective and the other from a cognitive perspective. As a result, one accuses the other of man-made connection between language and neural responses (Wierzbicka 1990) while the other discredits its opponent's argument as observation unsupported by empirical evidence (Kay 2003:243). Without further development in the study of the semantics of color term, it appears difficult that either camp will be able to agree with the other.

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Therefore, this study examines the semantic behaviors of color terms in Chinese and compares it with English to show how color terms in these two genetically unrelated languages extend their semantic functions from their original meanings to multiple modern meanings based on historical data. The results of this study should provide empirical evidence that not only supports the view that color meanings have developed based on certain universal identifiable human experiences, but also extends our understanding of why some color terms appear to have quite different semantic functions cross-linguistically even though they have employed the same or similar mechanisms in expanding their meanings. The paper organizes the discussion as follows: Section 2 reviews and analyzes the semantic extension of color terms in Chinese, Section 3 compares the characteristics and mechanisms of semantic extension involved in the development of the modern meanings of color terms in Chinese and English, and Section 4 discusses the patterns and tendencies of semantic extension of color terms and interprets the results of this study.

2. Chinese basic color terms

Traditionally, Chinese considers only five colors *basic*: *bái* “white”, *hēi* “black”, *chì* “red”, *qīng* “dark blue”, and *huáng* “yellow”, even though, like many other languages, Chinese recognizes eleven basic color terms: *bái* “white”, *hēi* “black”, *hóng* “red”, *huáng* “yellow”, *lǜ* “green”, *lán* “blue”, *huī* “grey”, *zōngs* “brown”, *júhuáng* “orange”, *zǐ* “purple” and *fěnhóng* “pink” (cf. Baxter 1983, Hardin & Maffi 1997). For the convenience of comparison with other languages, this study discusses the seven most commonly used colors in modern Chinese: *bái* “white”, *hēi* “black”, *hóng* “red”, *huáng* “yellow”, *lǜ* “green”, *lán* “blue” and *zǐ* “purple”, and focuses on the process and development of their modern meanings.¹

For each color term, three types of meanings are identified: original meaning, extended meaning, and abstract meaning. Original meaning refers to the etymological meaning of the color term; extended meaning refers to the meaning extended from the original meaning through metaphor, metonymy, or other cognitive means; abstract meaning refers to the meaning that has been further abstracted from the extended meaning. It should be noted that the time periods during which the various meanings of the seven colors were developed differ to a certain extent. However, since the original meaning is always the earliest meaning, the extended meaning is developed later, and the abstract meaning is the most recent extension of any given color term, this study omits the time periods unless relevant to the discussion.

Earlier studies show that “white” and “black” are the two colors that have the longest history among color terms in all languages in the world including Chinese, because they are the most contrastive and easily identified colors (e.g. Tao 1994, Baxter 1983, Hays *et al* 1972). This is probably also the reason why the Chinese *bai* conveys a wide range of meanings, as illustrated below:

¹The seven colors are the most frequently used in modern Chinese based on the frequency counts by Chinese National Language Committee (*Xiàndài hànyǔ Chángyòngzì Pīndù Tǒngjì* 1989) with the following order: *bái* “white”, *hóng* “red”, *hēi* “black”, *huáng* “yellow”, *lǜ* “green”, *zǐ* “purple”, and *lán* “blue”. It should be noted that these seven colors are not necessarily the most commonly used terms in classical Chinese. In addition, historically one hue (e.g. red) might be referred to by different terms (*chì*, *zhū*, *hóng*).

Original meaning:	“white color”
Example:	<i>báiyín</i> 白银 “white silver” <i>xuěbái</i> 雪白 “snow white”
Extended meaning:	“clean and pure”, “bright”, “blank/empty”
Example:	<i>jiébái</i> 洁白 “clean and white”, <i>chúnbái</i> 纯白 “pure white” <i>tiānxiàbái</i> 天下白 “the world is white/bright” <i>kōngbái</i> 空白 “blank/empty white”
Abstract meaning:	“clear”, “dislike”, “funeral”, “in vain” “free”, “legal”, “anti-revolutionary”
Example:	<i>míngbái</i> 明白 “bright white/understand” <i>báihuà</i> 白话 “white/clear language” <i>báiyǎn</i> 白眼 “white eye/dislike” <i>báishì</i> 白事 “white/funeral event” <i>báifèi</i> 白费 “white waste/in vain”, <i>bái lái le</i> 白来了 “white come/come in vain” <i>báichī báihē</i> 白吃白喝 “white eat & drink/eat and drink for free” <i>báishì</i> 白市 “white/legal market, <i>báidào</i> 白道 “white/legal way” <i>báifěi</i> 白匪 “white/anti-revolutionary devil”

All these semantic functions listed above may be categorized into eight types:

- 1) “white color” => “white clean”
- 2) “white color” => “white day/daytime” => “bright white/clear/understand”
- 3) “white color” => “white eye/dislike”
- 4) “white color” => “white event/funeral”
- 5) “white color” => “blank/empty white” => “white waste/in vain”
- 6) “white/clear language” ⇔ “black/secret language”
- 7) “white/legal channel” ⇔ “black/illegal channel”
- 8) “white/anti-revolutionary army” ⇔ “red/revolutionary army”

Notice that the first five types of extended and abstract meanings have all been developed from *bái*'s original meaning “white color”² either through metaphoricalization, namely meaning “construed as the analogical mapping of more concrete terms from a source domain onto a more abstract term in the target domain” (Traugott and Dasher 2002:75), or through metonymization, which traditionally refers to the semantic process of using a part for the whole or one entity is used to stand for another associated entity (see Lakoff & Johnson 1981; Lakoff 1987, 1993; Traugott & Dasher 2002). The first type extends *bái*'s meaning from the color “white” to the meaning “clean” with the assumption that if something is white, not tainted, then it is clean. The second type

² Some earlier studies provide different explanations to *bái*'s original meaning: *Shuōwén Jiězì* written by Xu Shen during the 2nd century noted that *bái* as a western color used to refer to things or objects with that color; Zhang Cheng (1991) suggests *bái* is a phonetic word; Wiegner (1965) believes that *bái* was derived from the similar pictograph *rì* 日 “sun”. This study simply considers “white” as its original meaning.

involves *bái*'s development first from its original color meaning to temporal meaning - the light of day as in *báitiān* "white/bright sky" or "daytime", and then to the description of abstract mental activity as in *míngbái* "(bright white) clear/understand". In other words, if one has a "bright white" mind, not a "black" or "muddy" one, this person has a clear understanding of matters. The third type simply extends *bái*'s original color "white" to refer to the whites of people's eyes, leading to the interpretation "dislike" as in *báiyǎn* "white eyes". That is, if someone turns up his/her eyes and shows the whites, this person *dislikes* or even shows *disdain* and *impatience* with whatever s/he sees. Clearly this is an instance where the lexical meaning of the color *bái* "white" extends to a phrasal meaning *báiyǎn* "dislike".³ The fourth type of semantic extension can be traced back to the Oracle Bone script (1200-1050 B.C), which documented *bái* "white" as the color of sacrificial offerings (cf. Tao 1994). Later on, *bái* became the color of funeral clothing and then, through metonymy, was used in *báishì* "(white event) funeral". The fifth type involves *bái*'s semantic extension from its original color meaning to the reference of the emptiness of the physical world, assuming if the world is white, it is empty. From the spatial "emptiness", *bái* continued to develop to refer to the abstract concepts of "nothingness", "in vain" or "free". Notice that these are all instances of analogical mapping of one semantic domain onto another.

As for the sixth, seventh, and the eighth types, *bái* appears to have developed several pairs of contrastive meanings. Both the sixth and seventh types have *bái* "white" and *hēi* "black" in contrast, while the eighth type has *bái* "white" and *hóng* "red" in contrast. From historical texts, it is difficult to discern which of the meanings in the pairs developed first. However, if compared with *bái*'s other extended and abstract meanings, *bái*'s meaning in *báihuà* "clear language" is clearly related to *bái*'s meaning in *míngbái* "clear/understand", but neither *bái*'s "legal" meaning in *báidào* "legal way" nor the "anti-revolutionary" meaning in *báijūn* "anti-revolutionary army" is remotely related to any of *bái*'s other meanings. In this case, we may conclude that *bái*'s "clear" meaning was probably developed earlier than *hēi*'s "secret" meaning in *hēihuà* "black language", but *bái*'s "legal" and "anti-revolutionary" meanings were probably deduced from *hēi*'s "illegal" meaning and *hóng*'s "revolutionary" meaning respectively through people's cognitive construal of oppositeness (cf. Croft and Cruse 2004).

The semantic functions of *hēi* "black" are simpler than those of *bái* "white". *Hēi*'s semantic extension process may be generalized into the following thread: color "black" => spatial concept "dark" => abstract concepts "bad", "evil", "illegal", as illustrated below:

Original meaning:	"black color"
Example:	<i>hēibái fēnmíng</i> 黑白分明 "black & white (are) clearly distinguished" <i>hēitóufa</i> 黑头发 "black head hair"
Extended meaning:	"dark"
Example:	<i>hēi'àn</i> 黑暗 "black dim" <i>hēiyè</i> 黑夜 "black/dark night"
Abstract meaning:	"bad", "malevolent", "secret", "illegal"
Example:	<i>hēi'àn de shìjiè</i> 黑暗的世界 "black/wicked world"

³ Many of the color terms studied in this paper extend their lexical meanings to phrasal meanings. Since these two types of meanings are closely related, they are not classified into two different types in this study.

hēi xīnyǎn 黑心眼 “black/evil heart”
hēi wūlèi 黑五类 “black/bad elements”
hēihuà 黑话 “black/secret language”
hēishì 黑市 “black market”
hēiháizi 黑孩子 “black/illegal child” (i.e. child without registration)
hēiqián 黑钱 “black money” or “money from an illegal channel”

It is a simple metonymical extension from “black” to “dark”. The extended meaning may also be construed through a sense relation, namely oppositeness, between *hēiyè* “dark night” and *báitiān* “white day”. Then, *hēi* also developed several abstract meanings, which evidently all have some degree of negative connotation: “evil”, “bad”, and “illegal”. This provides evidence showing that Chinese people have persistently and consistently use *hēi* to refer to unfavorable things, people, and everything else that they do not like in the world, probably because of the lack of light and transparency of “darkness”.⁴ It should be noted that in classical Chinese another term *qīng* was also used to refer to the color “black”. However, unlike *hēi*, *qīng* did not extend its meaning to other semantic domains, so it gradually became obsolete.

The third color developed in Chinese is *chi* or *hóng* “red”. According to Tao (1994), *chi* was frequently used in Oracle Bone script (1200-1050 B.C) to convey the color meaning “red”. However, it was gradually replaced by *hóng*, an instance often seen in the process of grammaticalization where, when two or more lexical or grammatical elements compete for a certain semantic or grammatical function, the one that has limited function and low frequency in use often loses the competition and becomes obsolete (cf. Xing 1994). For this study, only 红 *hóng*'s semantic functions are discussed.

Original meaning: “red color”
 Example: *xuèhóng* 血红 “blood red”
huǒhóng 火红 “fire red”
 Extended meaning: “blood”, “fire”, “flush/blush”
 Example: *jiànhóng* 见红 “see red”
hóngyàn 红焰 “red flames”
liǎnhóng 脸红 “face red/blushed”
 Abstract meaning: “young girl/feminine”, “lucky”, “favorable”, “wedding”,
 “revolutionary”, “jealous”
 Example: *hóngyán* 红颜 “red face/young girl”
hóngzhuāng 红妆 “red/feminine attire”
hóng bái dàshì 红白大事 “red & white events/wedding and funeral”
hóngyùn 红运 “red/good luck”
zǒuhóng 走红 “walk red/be lucky”
hóng rén 红人 “red/favorable person”
hóngwèibīng 红卫兵 “red/revolutionary guard”
hóngjūn 红军 “red/revolutionary army”

⁴ Professor Jiang Shaoyu of Beijing University pointed out that *hēi* “black” was favored by Emperor Qin (221BC-207BC) who often used *hēi* for clothes and army flags. However, this favorable usage did not continue later on.

hóngxīn 红心 “red/revolutionary heart”
yǎnhóng 眼红 “red eye/jealous”

Hóng's semantic functions appear to be straightforward. From the examples illustrated above, it is clear that *hóng* developed two clusters of meaning: 1) “red” => “flush” => “feminine” => “wedding”, “lucky”, “favored”; and 2) “red” => “redden” => “(red eye) jealous”. Other than *hóng*'s “revolutionary” meaning which was probably borrowed from Russian *kras-nuh-yuh ri-va-lyoot-see-yuhv* “red revolution”, the two clusters of extended meanings are all derived from *hóng*'s original meaning “red color”, yet one cluster relates to a number of positive concepts (e.g. “lucky”, “favored”, “wedding”) and the other relates to a negative concept (i.e. jealous). Without examples from historical texts, it might be difficult to see how one lexicon could have developed opposite meanings. Fortunately, Chinese is rich in historical texts from which one can easily find instances of *hóng* from one used to describe the color of an eye after someone cried in earlier texts as shown in 1 to one used to describe the reaction of someone's eyes when a person has a strong desire to get what s/he wants in modern texts, as shown in 2-3.

1. 见夫人一双眼哭得红红的 (*The Golden Plum* by Lanling Xiaoxiao Sheng)
jiàn fūren yīshuāng yǎn kūde hónghóngde
see madam one-pair eye cry-COMPL red-red-GEN
“(He) saw the lady's eyes turned very red as a result of crying.”
2. 这些人时常为一块钱急得红着眼转磨。 (*Rickshaw Boy* by Lao She)
Zhè xiē rén shícháng wèi yī kuài qián jíde hóngzhèyǎn zhuànmó
DET some people often for one CL money be-anxious red STAT eye restless
“For one dollar, these people often became restless and red-eyed.”
3. 喝着喝着，大家的眼睛红起来，有的就说：祥子，你这差事美呀！
(*Rickshaw Boy* by Lao She)
Hēzhe hēzhe, dàjiā de yǎnjīng hóng qǐlái, yǒude jiù shuō:
drink ASP drink ASP everyone POSS eye red become, some then say
Xiángzi, nǐ zhè chāishì měi ya!
name, you DET. business great PART.
“In the course of drinking, everyone's eyes became red. Then some said:
Xiangzi, this business is really good!”

Evidently, “eyes become red” in 2-3 is not a result of crying as in 1, but rather it is caused by a strong emotion or a strong desire. Such an emotion or desire is then interpreted as “jealousy”. In other words, when people can not get what they desire, they become restless and their eyes are likely to turn red, which is an indication of jealousy. Later on, this abstract lexical meaning began to be used in compound *yǎnhóng* 眼红. This is a typical example showing that semantic extension is not accidental but pragmatic and grounded in people's understanding and interpretation of the physical world (cf. Traugott and Dasher 2002). We will come back to this point later.

Early studies show that following *hóng*, Chinese developed two other colors: *huáng* “yellow” and *lǜ* “green”. Comparison of these two colors indicates that *huáng* has

undergone a more complicated semantic extension than *lǜ*. Let us examine the semantic functions of *huáng* first:

Original meaning:	“color of the earth”
Example	<i>dì huáng</i> 地黄 “The earth yellow.”
Extended meaning:	“color of gold”, “of the earth”, “underground”, “dusk”
Example:	<i>huángjīn</i> 黄金 “yellow gold” <i>huángpáo</i> 黄袍 “yellow/golden robe” <i>huángdì</i> 黄帝 “yellow/earth emperor” <i>huángquán</i> 黄泉 “yellow/underground spring” <i>huánghūn</i> 黄昏 “yellow faint/dusk” <i>huángyè</i> 黄叶 “yellow leaf”
Abstract meaning:	“wither”, “aged”, “fail”, “pornographic”
Example:	<i>wěihuáng</i> 萎黄 “wither yellow” <i>huángliǎnpó</i> 黄脸婆 “yellow faced lady/crone” <i>shìqíng huáng le</i> 事情黄了。 “The business is yellow/failed.” <i>sǎohuáng</i> 扫黄 “get rid of the yellow/pornography” <i>huángsè shūjí</i> 黄色书籍 “yellow/pornographic books”

These meanings may be categorized into five channels of changes:

- 1) color of the earth => the earth
- 2) color of the earth => color of gold
- 3) color of the earth => color of the sky
- 4) color of the earth => color of aged face or withered leaves => failed event
- 5) ?? => pornographic

Among the five channels of semantic extension, the first extends the original meaning “the color of the earth” to refer to “the earth”, a simple clear case of metonymy – using a part to refer to the whole. The second and the third channels extend *huáng*’s original meaning to “the color of gold” and “the color of the sky”, clear cases of metaphor – analogical mapping of one semantic domain onto another. The fourth channel first extends the original meaning to the color of aged people and leaves and then to failed events. Both steps have also been achieved through metaphoricalization first by mapping the semantic domain of yellow color shared by the earth, skin of aged people and withered leaves and then by mapping the semantic domain of “wither” shared by falling leaves and failing events. These channels of *huáng*’s semantic extension are all straightforward except for the fifth listed above which shows that *huáng* obtained the meaning “pornographic”, a function clearly not related to any of *huáng*’s other meanings discussed so far. The only plausible explanation this study has found is that *huáng*’s pornographic meaning was borrowed from another language, possibly from English “yellow journalism” a pejorative reference to unethical journalism. If this is the case, then it is purely mimicry that *huáng* came to be the color of pornography.

Lǜ “green” was developed at about the same time as *huáng* “yellow”, however, its semantic evolution is much simpler than *huáng*, as illustrated below:

Original meaning: “green color”

- Example: *lǜyè* 绿叶 “green leaf”
lǜlín hǎohàn 绿林好汉 “green forest hero/rebel”
- Extended meaning: “natural/organic”
- Example: *lǜsè shípǐn* 绿色食品 “green/organic food”
- Abstract meaning: “inferior”, “lewd”,
- Example: *lǜyī* 绿衣 “green/inferior quality clothing”
dài lǜ màozi 戴绿帽子 “wear a green hat/wife leads a lewd life”

From the examples given above, it is easy to see how the extended meaning “natural/organic” was developed from the original meaning “green”. However, it is not so easy to see how the abstract meanings, namely, “inferior” and “lewd”, are related to *lǜ*’s original or earlier developed meanings. According to the classical text *Shījī Zhuàn* 诗集传 “Collection of Poetry” written approximately two thousand years ago, *lǜ* was considered *jiānsè* an “in-between color”, while *huáng* “yellow” was considered *zhèngsè* a “central and pure color”. The in-between color was used for inferior quality clothing while the central pure color was for the attire of the most privileged ranks, such as the emperor. Once *lǜ*’s “inferior” meaning was established, it became a simple step to extend this lexical meaning to the phrasal meaning “lewd” referring to the color of clothes worn by prostitutes then further, referring to “wife commits adultery” as in *dài lǜmàozi* “wear green hat”. Interestingly, these abstract interpretations of the color *lǜ* by Chinese people (during approximately 13th century) appear to coincide with English speakers’ interpretation of *green* as “jealous”. Although “lewd life” and “jealous” are not exactly the same, they do share a similar semantic domain, namely the resentment and value judgments of human beings. Is it purely accidental that two groups of people who speak genetically unrelated languages would interpret the abstract meaning of the color *lǜ* “green” similarly? Or can we say people generally have the same or similar interpretation of color terms cross-linguistically based on their earthly experiences? We will come back to this point later.

Lán “blue” was developed after the colors “yellow” and “green” and its etymological meaning denoted the indigo plant. Later on it was deduced to refer to the color of that plant through metonymy. Similar to *lǜ* “green”, *lán* is not traditionally considered a central or pure color by Chinese people, which is probably why it has fewer extended and abstract meanings, as shown below.

- Original meaning: “indigo plant”
- Example: *cǎi lán* 采蓝 “pick (things) from the indigo plant”
- Extended meaning: “green color”
- Example: *qīng qǔ zhī yú lán, ér shèng yú lán*
 青取之于蓝，而胜于蓝
 “Dark blue is obtained from blue, yet it is darker than blue”
- Abstract meaning: “inferior” or “working”
- Example: *lánshān* 蓝衫 “blue shirt/poor quality clothes”
lánlǐng 蓝领 “blue collar/working class”

An exhaustive study of *lán* “blue” in historical texts dating from the first century AD to the nineteenth century finds that *lán* has only developed one abstract meaning, viz.,

“inferior” as in *lánshān* “poor quality clothes”, from its etymological meaning “indigo plant”. Like *lǜ* “green”, *lán* is an in-between color, which signifies inferiority. What makes it more interesting is that *lán*’s inferior meaning is more or less the same as that of “blue” in English in the expression *blue collar*.⁵ Is this another coincidental instance of two genetically unrelated languages using the same color term to express a similar meaning? The answer is “probably not”, because people of different languages generally have the same or similar cognitive ability when it comes to identifying and interpreting color terms, a central argument made by Wierzbicka (1990, 1996) to defend her position that human experiences are the foundation of color concepts.

Zǐ “purple” is the last color developed among the seven colors discussed in this study. Being an in-between color in Chinese, *zǐ* has quite limited semantic functions, as illustrated below:

Original meaning:	“blue-red/purple color”
Example:	<i>è zǐ zhī duó zhū yě</i> 恶紫之夺朱也 “Intense purple can overshadow red.”
Extended meaning:	“sky”
Example:	<i>zǐzhòu</i> 紫宙 “purple/sky universe”
Abstract meaning:	“heavenly/royal”
Example:	<i>zǐgōng</i> 紫宫 “purple/heavenly palace” <i>zǐyī</i> 紫衣 “purple/royal clothes” <i>zǐjìnchéng</i> 紫禁城 “purple/royal forbidden city”

Zǐ’s semantic functions may be summarized and diagrammed as: “purple” => “color of the clothes of emperor/king” => “royal”, with “purple” being the etymological meaning and “royal” the most recent developed meaning. Notice that both stages of development involve a metonymical extension.

So far, we have discussed the semantic functions of seven color terms in Chinese and the processes of the development of their extended and abstract meanings. In what follows, we will compare these seven Chinese color terms with their English counterparts to see if Chinese color terms possess any unique characteristics in their development or if they follow the same or similar paths in extending their meanings like the universal order of their evolution.

3. Characteristics of the semantic extension of color terms

Table 1 lists all the semantic functions of the seven Chinese color terms discussed in this study and the representative functions of equivalent English color terms.

Table 1: Semantic functions of color terms in Chinese and English⁶

Color	Chinese	English
<i>bái</i> 白 “white”	<i>xuěbái</i> 雪白 “snow white” <i>jiébái</i> 洁白 “pure & clean”	white as snow white flag of truce

⁵ It should be noted that Chinese *liánlǐng* 蓝领 was borrowed from English “blue collar”, but it is unlikely for *liánshān* 蓝衫 “poor quality clothes” to be borrowed from English as well because *lián* developed the “inferior” meaning as early as the 4th century.

⁶ I am grateful to Jacqueline Hawkins who provided some of the English examples.

	<i>báifèi</i> 白费 “in vain” <i>báiyǎn</i> 白眼 “disdain” <i>báijūn</i> 白军 “anti-revolutionary army” <i>báishì</i> 白事 “funeral”	white wedding white rage white liver white lie
<i>hēi</i> 黑 “black”	<i>hēiàn</i> 黑暗 “dark” <i>hēilù</i> 黑路 “black road” <i>hēishì</i> 黑市 “black market” <i>hēixīnyǎn</i> 黑心眼 “black heart” <i>hēi wūlèi</i> 黑五类 “bad elements”	black as night look black black list black heart black market
<i>hóng</i> 红 “red”	<i>huǒhóng</i> 火红 “fire red” <i>hóngxīn</i> 红心 “red heart” <i>hóngliǎn</i> 红脸 “red face” <i>hóngshì</i> 红事 “wedding” <i>hónglì</i> 红利 “profit” <i>hónggrén</i> 红人 “favored person” <i>hóngwèibīng</i> 红卫兵 “red guard” <i>hóngyǎn</i> 红眼 “(red eye) jealous”	red hot red-blooded red-faced red rose red flag red light district seeing red in the red
<i>huáng</i> 黄 “yellow”	<i>huángjīn</i> 黄金 “yellow gold” <i>huángdì</i> 黄帝 “emperor” <i>huángquán</i> 黄泉 “ground spring” <i>huángliǎn</i> 黄脸 “yellow face” <i>huángle</i> 黄了 “fail” <i>huángshū</i> 黄书 “pornographic”	yellow gold yellow hose yellow/cowardly person yellow leaf yellow-bellied yellow journalism
<i>lǜ</i> 绿 “green”	<i>lǜsèshípǐn</i> 绿色食品 “green food” <i>lǜyī</i> 绿衣 “inferior quality clothing” <i>lǜhuà</i> 绿化 “forestization” <i>lǜmàozi</i> 绿帽子 “(green hat) adultery”	green grass greenhorn green-eyed green energy
<i>lán</i> 蓝 blue	<i>cǎi lán</i> 采蓝 “pick up a plant” <i>lántiān</i> 天蓝 “blue sky” <i>lánshān</i> 蓝衫 “(blue) coarse shirt” <i>lánlǐng</i> 蓝领 “blue collar”	sky blue blue collar blue-blood true blue feel blue
<i>zǐ</i> 紫 “purple”	<i>zǐzhòu</i> 紫宙 “purple universe” <i>zǐyī</i> 紫衣 “purple clothes” <i>zǐjìnchéng</i> 紫禁城 “purple forbidden city”	born to the purple purple robe purple prose

It should be noted that the examples given in Table 1 are not meant to be exhaustive, especially for those in English. Efforts have been made to first include all representative Chinese examples and their English equivalents, then to find representative functions of color terms that only exist in English. By doing so, we hope to achieve two goals: 1) to find the similarities between Chinese and English, and 2) to find the semantic function of color terms unique to either Chinese or English. Comparison of the functions of Chinese and English color terms reveal the following results:

Bái “white”: Both Chinese and English use it to convey the positive meanings “pure” and “clean” and some kind of negative meaning such as “disdain” in Chinese and “cowardice” in English. However, Chinese *bái* has also extended its meaning to refer to “funeral” and “in vain”, whereas English “white” has extended its meaning to symbolize “innocent” and “morally pure”. We see that *white*’s extended meanings in English,

“innocent” and “morally pure”, are fundamentally different from *bái*’s extended meanings in Chinese of “funeral” and “in vain”. We have discussed earlier how *bái* has developed these abstract meanings from its etymological meaning “white color” and it is not difficult to see the connection between “pure/clean” and “innocent/morally pure” in English. Then the question is why the same lexicon, *bái* “white” in the two languages, extends its abstract meanings in two different directions. We find that this is NOT a case where people of different cultures perceive or interpret a given color term differently, the so-called language-idiosyncratic difference, as some earlier studies (e.g. Kikuchi and Lichtenberk 1983) suggest; but rather it is associated with the seniority of a certain semantic function in a language. That is, whichever semantic function is developed earlier can determine the direction and scope of the semantic function to be developed later. In other words, Chinese people do not use *bái* to convey the meaning of “innocent” or “morally pure” not because they do not perceive the color the way that English people do, but rather because the same color has already developed a meaning (e.g. associated with “funeral”) that to a certain degree contradicts a potential new meaning (e.g. associated with “wedding”). Once an established meaning, such as “funeral” or “innocent”, is fully entrenched in people’s minds and culture, it becomes nearly impossible to change it. With this analysis, we predict that in the future English *white* could develop the meaning “in vain” such as *bái* exhibits in Chinese because “white” in English has already developed the meaning “blank”, which is the source meaning for “in vain”.

Hēi “black” in Chinese and English conveys the same semantic functions at all levels: original meaning, extended meaning and abstract meanings.

Hóng “red” in both Chinese and English can be used to refer to “blood”, “fire”, “embarrassing” and “anger/jealousy”. They differ in that Chinese *hóng* has developed a number of positive meanings, such as *hóng shì* “(red event) wedding”, *zǒu hóng* “(walk red) good luck”, *hónglì* “(red benefit) profit”, *hóng rén* “(red) favored person”, *hóng wèibīng* “(red) revolutionary guard”, whereas in English *red* has not extended meanings in this direction except for its use as the valentine color symbolizing “love”. On the other hand, the English *red* can express or imply several negative lexical and phrasal meanings: “danger” as in *red flag*, “a place to find prostitutes” as in *red-light district*, and “in debt” as in *in the red*, but the Chinese *hóng* does not convey any of these meanings⁷. We know that, except for the “revolutionary” meaning, *hóng*’s numerous positive meanings have otherwise all been derived from the color meaning “red” while *red*’s “love” meaning is likely developed from its earlier referents to “blood” and/or “heart”. It is also evident that *red* extends the negative meaning “danger” from “blood/fire”. However, *red*’s two other negative meanings, “in debt” and “a place to find prostitutes”, are likely pragmatically deduced, rather than semantically triggered because *in the red* “in debt” was developed through people’s perception/understanding of *red* being the color of the ink used to note unbalanced finances whereas *black* ink signaled balanced finances. Similarly, the *red-light district* “prostitute district” was probably developed through people’s understanding of a *red-light* signifying a prostitute’s room while uncolored light signified other common people’s rooms. I would argue that the reason why *hóng* has not developed those negative

⁷ Chinese uses *chì* as in *chì zì* 赤字 “red character” to express the English equivalent meaning *in the red*. However, as mentioned earlier in this study, *chì* has become obsolete in modern Chinese except for its usage in frozen/fixed expressions.

meanings, and is unlikely to in the future, is that the Chinese *hóng* already developed so many positive meanings (e.g. lucky, fortunate, profit, favored) thus it would be contradictory or confusing for it to develop the type of negative meanings that have evolved for *red* in English. In other words, the same color term is unlikely to develop contradictory meanings within a language. For instance, Chinese uses *hóng qí* “red flag” to refer to the national and communist party flags. In this case, *hóng qí* “red flag” cannot now be used to express – and probably will not develop – the “danger” meaning that *red flag* has in English unless the Chinese change the color of their national/party flag. This provides further evidence that the early developed meanings of a color term determine the direction and scope of later developed meanings.

The uses of *huáng* “yellow” in Chinese and English have a number of functions in common; they can both express the meanings “gold color”, “wither”, “aged/weak”. In addition, Chinese extends *huáng*’s meaning from “wither” to “fail” and English *yellow* extends from “weak” to “cowardly”. The major difference between Chinese *huáng* and English *yellow* rests in *huáng*’s extending its original meaning “the color of the earth” to “ground” as in *huángquán* “ground spring” and “earth” as in *huángdì* “earthly emperor”, whereas English *yellow* does not have these meanings. On the other hand, English *yellow* conveys the meanings of “cowardly” and “ill” which Chinese *huáng* does not have. Interestingly, *huáng*, as discussed earlier, may have borrowed the meaning “pornographic” from other languages. Now the question is: Could *huáng*’s “pornographic” meaning in Chinese be related to *yellow*’s “jealousy” meaning in English? This study cannot find sufficient evidence to either support or dispute the connection.⁸

Lǜ in Chinese has similar semantic functions to *green* in English. Both *lǜ* and *green* can be used to refer to “natural” as in *lǜsè shípǐn* “green/organic food” and *green energy* and “jealousy/adultery” as in *lǜmàozi* “green hat” and *green-eyed*. However, only the Chinese *lǜ* conveys the meaning “coarse” and only the English *green* conveys the meaning “inexperienced” as in *greenhorn*, apparently developed from the concept of *green* being viewed as “young”. We know that *lǜ*’s “coarse” meaning, as discussed earlier, was developed through pragmatics, namely, Chinese people’s perception and understanding of *lǜ* as an inferior in-between color. In comparison, the development of *green*’s “inexperienced” meaning in English is more of a semantic extension than a pragmatically generated development.

Lán in Chinese has fewer semantic functions than *blue* in English. Although both *lán* and *blue* can be used to refer to the “color of the sky” and the “color of clothes for working class”, *blue* in English also conveys the meaning of “royal” as in *blue-blooded*, “faithful/genuine” as in *true blue*, and “discomfort/sadness” as in *feel blue*, all of which the Chinese *lán* is not used for. According to the Oxford English Dictionary (OED), the “royal” meaning was derived from the color of the veins; the “persistent/faithful” meaning was arguably derived from the persistent color of the sky; and the “discomfort/sadness” meaning was derived from the color of skin after a blow. Since

⁸ Randi Hacker (personal communication) suggests that Chinese *huáng*’s pornographic meaning may be related to the sensationalism expressed by “yellow journalism” in English.

these abstract meanings do not contradict any of *lán*'s existing meanings, this study suggests that they could be developed in Chinese as well.⁹

Zǐ in Chinese has similar semantic functions to *purple* in English. Both *zǐ* and *purple* can be used to refer to the color of dresses for the most privileged rank (e.g. emperor or king). The Chinese *zǐ* is also used to refer to royal places as in *zǐjìnchéng* “purple forbidden city”. The English *purple*, on the other hand, extends from the meaning “royal” to the more abstract meaning “extravagant” as in *purple speech/prose*. Compared with the semantic functions of other colors discussed earlier, both *zǐ* and *purple* have fewer functions and they are highly specialized focusing on the one theme “royal”.

To summarize, we have compared the semantic functions of seven Chinese color terms with their English counterparts and found that they share more similarities than differences. We may generalize our findings as follows:

- The majority of the extended and abstract meanings of the seven color terms in both Chinese and English are derived from their original meaning. This is because people's perception of color terms and their earthly experiences, regardless of their cultural and language background, is in general similar.
- Most functions of the seven color terms in Chinese are the same or similar to those of their English counterparts;
- Metaphoricalization and metonymization are two primary mechanisms involved in the semantic extension of color terms;
- Some extended and/or abstract meanings are developed through pragmatic inferencing;
- Some extended and/or abstract meaning are developed through other cognitive measures such as sense of opposite relation;
- Few extended and/or abstract meanings are obtained through accidental borrowing;
- The so-called pure colors in Chinese have developed more semantic functions than those in-between colors;
- Some color terms in Chinese have developed more extended or abstract meanings than their counterparts in English and vice versa. This is primarily due to two factors: seniority of a certain semantic function and contradiction between existing meanings and to be developed meanings.

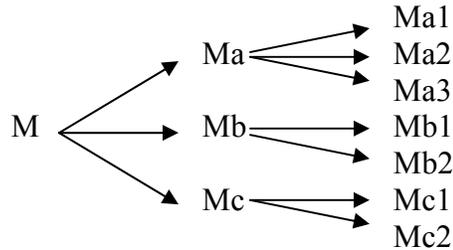
4. Conclusion

This study explores the semantic functions of seven Chinese color terms, focusing on the process and procedure involved in the development of various semantic functions of those color terms. The result of an in-depth analysis and comparison shows that Chinese and English color terms have more functions in common than not. Evidence was provided to show that language idiosyncratic functions of color terms are not accidental phenomena, but rather systematically developed based on the existing semantic functions

⁹ It should be noted that Chinese does have an expression, *yí kuài qīng, yí kuài zǐ* 一块青, 一块紫 “one piece dark-blue, one piece purple” to refer to the skin color after a blow. However, the character for dark-blue is *qīng* which is not commonly used in modern Chinese anymore.

of those color terms and whether there is a potential contradiction between the existing meaning and the prospective new meaning.

This study shows that the semantic extension of color terms follows a non-linear path. That is an original meaning (M) can simultaneously develop into several extended meanings (Ma, Mb, Mc ...) and an extended meaning can also simultaneously develop into several abstract meanings (Ma1, Ma2, Ma3 ...) as diagrammed below:



An accidental finding of this study is that all the extended and abstract meanings of color terms in Chinese and English can be categorized into two types: positive or negative. This should not be a surprise because it coincides with our understanding of the cognition between language and the physical world. Evidently, it is human nature to relate a descriptive linguistic symbol (e.g. *white*) to something in the physical world (e.g. *snow*), and then to express an opinion about the described object in the world (i.e. *White snow is clean.*) Due to the fact that *snow* is universally *white* and *white snow* is universally believed to be *clean*, it is inevitable for *white* to extend its color meaning to the “clean” meaning, which then automatically entails either a positive or a negative connotation. This also explains why the seven color terms in Chinese discussed in this study have many of the same or similar semantic functions as their English counterparts. Ultimately, people in the world, regardless of what language they speak, perceive and interpret the world in the same way.

In the process of analyzing the semantic functions of color terms in both Chinese and English, a few questions kept coming up: What is the nature of semantic abstraction from the original meaning to the extended meaning and then to the abstract meaning? Is it a semantic or a pragmatic process, or both? This study has identified several mechanisms employed in the development of various meanings of color terms: metaphor, metonymy, sense of opposite relation, and pragmatic inference. Earlier studies (e.g. Traugott and Dasher 2002:24) claim that semantic change is in general pragmatic because it is always context-dependent. The evidence from this study seems to support the claim in a broad sense, but also suggests that those four mechanisms differ in terms of the degree of their association with pragmatics. We have seen that meanings construed through metaphor or metonymy (e.g. *black* => *dark*; *white* => *clear*) depend less on context and speakers’ subjective interpretation than those construed through sense relations and pragmatic inferences (e.g. *báisè* “white” => *báiyǎn* “dislike”).

All the aforementioned evidence leads us to conclude that the development of color terms’ extended meanings have been consistently and undeniably triggered by people’s perception of the physical world, supporting Wierzbicka’s view that “color concepts are anchored in certain universals of human experiences” (1990:99). Admittedly though, the results of this study do not directly clash with Kay and McDaniel’s claim that “the color

perception of all peoples is the result of a common set of neurophysiologic process” (1978:611). The evidence provided in this study is purely cognitive and pragmatic oriented; none is of neurophysiologic nature, due to the author’s limited knowledge of the latter.

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