Color Conceptualization of AGE in English and Chinese

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Abstract—Both in English and Chinese there are extensions of color to human age. For gaining some knowledge of the differences in the extension in the two languages, color categories are discussed and compared first and then evidences in dictionaries and corpora are collected and compared as well. It is found that there is a higher possibility of color associations with age in Chinese than English. What’s more, there are more colors involved in color associations in Chinese.

Index Terms—basic color term, color categories, color association

Color shift is often conceived as the growth process of plants or human beings in Chinese. When it is applied to plants, there are green and yellow for ripeness. When it is referred to human beings, there are black and white for young and old age. Generally speaking, color is a distinctive property of objects and human beings usually attach much figurative associations to it. In other words, color is a basic concept which often serves a middle stage for figurative associations, metonymically and metaphorically.

As for different cultures like English and Chinese, are there any similarities or differences in the association between age and color? For example, in Chinese a person’s life can be compared to be lí-míng (黎明 black bright or dawn) and huáng-hūn(黄色 yellow dim or dusk), as seen in the expression huáng-hūn-liàn (黄昏恋 yellow dim love) which metaphorically refers to a love affair between two old people. In addition, the daytime is 白天(white sky) and the nighttime is 黑夜(black night). A busy work life is said to be qǐ-zăo-tān-hēi (起早贪黑 to work from dawn to night). Do English have similar conceptualization of color for age as Chinese does? These questions require a consistent comparison between English and Chinese in terms of the data collected from dictionaries like The Longman Dictionary of Contemporary English (LDOCE) and The Contemporary Chinese Dictionary (CCD), and from corpora such as British National Corpus (BNC) and Center for Chinese Linguistic PKU (CCL).

I. PRIOR STUDIES ON COLORS

Color has always been a focus for linguistic studies, synchronically and diachronically. For example, linguists like Berlin, Kay and their colleagues propose color categorization by comparing about 20 languages and put forward basic color terms as well as color evolution itinerary by Berlin and Kay (1969) and Kay and McDaniel (1978). Heider (1971, 1972) and Rosch (1973) regard the focal points of basic color terms as the best exemplars or prototypes of the concept, color. Wierzbicka (1990) suggests that color concepts are perceptually anchored in natural prototypes or natural reference points, i.e., culturally salient natural of objects or phenomena, aiming to explain the range of color terms and associate with connotations and some metaphorical uses. Color categorization is also a heated topic among Chinese linguists such as Liu Yunquan (1990), Yao Xiaoping (1988), Wu Jianshe (2010), and Li Hongyin (2003). Different linguists come to distinct views on the number of basic color terms in Chinese, especially the categorization of qīng (青).

Semantics of color is also a focus for academic studies. Typically, Niemteier (2007) explores color metonymies in English based on the discussions of bluestockings and blue movies. Hamilton sees color in English from a metonymical and metaphorical view and classifies different types of color metonymies and metaphors on the bases of The Historical Thesaurus of English. Her findings are really enlightening. As for contrastive study of color metonymies and metaphors in Chinese and English, most linguists describe the similarities and differences by means of superficial description of meanings color terms carry in the two languages.

As mentioned above, Chinese and English differ in their conceptualization of age in terms of colors. For gaining some knowledge of cross-cultural differences, queries are made into color conceptualization of age in terms of color categories, color metonymies, color metaphors

II. COLOR CATEGORIES IN ENGLISH AND CHINESE

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It has been discovered that color term inventories vary across languages (Davies and Corbett 1997:494). This means that color categorization is not always universal but varies from language to language, possibly because color is not just a physical phenomenon but our perceptual interpretation of light, which exists in socially anchored linguistic systems (Lucy 1997:340-341). Color terms are linguistic categories concerning both physical perception and cultural beliefs. It is a universal conduct among almost all languages to divide the continuous color spectrum into a restricted inventory of color categories. The naming of these categories may vary from culture to culture. Similar cultural needs and the cultural contact between speakers of different languages are regarded as factors for similarities across different cultures and contribute to the origins of linguistic color categories in different societies (Roberson and Hanley 2010:190, 194).

English is believed to have 11 basic color terms and this also holds in Chinese, but the inventory of basic color terms are different, which is a main topic of the study of color categorizations in English and Chinese. What’s more, the ranking of basic color terms in English and Chinese shows that some basic color terms are more psychologically salient than the others in a given culture.

| Basic color terms | English | Chinese |
|-------------------|---------|---------|
| **Evolutionary sequence** | white, black, red, yellow, green, blue, purple, brown, gray, pink, orange | hēi (黑 black), bái (白 white), hóng (红 red), huáng (黄 yellow), qīng (青 qīng), lǜ (绿 green), zǐ (紫 purple), hū (灰 gray), lán (蓝 blue), hè (褐 brown), chéng (橙 orange) |
| **Frequencies** | black, white, red, yellow, green, blue, purple, brown, gray, pink, orange | bái (白 white), hóng (红 red), qīng (青 qīng), hēi (黑 black), huáng (黄 yellow), lǜ (绿 green), hū (灰 gray), lán (蓝 blue), zǐ (紫 purple), hè (褐 brown), chéng (橙 orange) |

Based on the evolutionary sequence, both English and Chinese are similar, with white and black followed by red and yellow. But they differ much in the order blue.

| Colors | Frequencies | Colors | Frequencies |
|--------|-------------|--------|-------------|
| Black  | 19,140      | bái (白 white) | 7,818 |
| White  | 18,317      | hóng (红 red) | 7,236 |
| Red    | 11,094      | qīng (青 qīng) | 6,949 |
| Green  | 9,307       | hēi (黑 black) | 4,995 |
| Blue   | 8,304       | huáng (黄 yellow) | 4,662 |
| Gray   | 4,812       | lǜ (绿 green) | 2,474 |
| Brown  | 4,344       | hū (灰 gray) | 1,619 |
| Yellow | 3,850       | lán (蓝 blue) | 1,186 |
| Pink   | 2,714       | zǐ (紫 purple) | 797 |
| Orange | 2,045       | hè (褐 brown)/zōng (棕 brown) | 437 |
| Purple | 1,097       | chéng (橙 orange) | 101 |

It’s partly due to the culturally specific color term qīng (青 qīng) in Chinese, which can cover the spaces of green, blue and even black. By referring to the frequencies of the 11 basic color terms in these two languages, both white and red have much higher frequency as seen in Table 2.

In English the most frequently used color term is black, whereas in Chinese it is white. What’s more, English tends to use green and blue more frequently than their Chinese counterparts, while Chinese has the tendency to use qīng (青 qīng) and huáng (黄 yellow) more often than English.

Seen from the two tables, the earlier the color terms appear, the more figurative they are, and the more frequently they are used.

III. THE METAPHORICAL EXTENSION OF BASIC COLORS

The association between color and age can be found both in English and Chinese. Firstly, an investigation is made into the dictionaries for linguistic data for the association between COLOR and AGE. Second, corpora of native languages like BNC and CCL are compared for further evidence of such association.

Dictionaries are collections of recorded usage of language in practical life and they are able to provide well-established usage with relation to cultural experiences. The 11 basic color terms in English and Chinese are investigated into dictionaries LDOCE and CCD in search of evidence for the associations between color and life.
The Lexicographical Evidence of Age is Color

| Colors | LDOCE | CCD |
|--------|-------|-----|
| Black  | 0     | 2   |
| White  | 0     | 4   |
| Red    | 1     | 1   |
| Green  | 2     | 0   |
| Blue   | 0     | 0   |
| Gray   | 2     | 0   |
| Brown  | 0     | 0   |
| Yellow | 0     | 4   |
| Pink   | 0     | 1   |
| Orange | 0     | 0   |
| Purple | 0     | 0   |
| Qing   | 0     | 10  |

In English a young and inexperienced person can be compared to a young plant or animal such as be green and greenhorn. An old person is often referred to as gray which is an ordinary hair color of an old man, thus the gray vote refers to the votes of the old people and gray pound means the money which the old have. Besides green and gray, blue sometimes is extended to old age as blue rinse, originally a rinse for tinting gray hair, later picks up the reference to an elderly woman with conservative views. Comparatively, Chinese has more color terms involved in the association between color and age. For example, there are many opposite color pairs for young and old age including bái (白 white) and hēi (黑 black), qīng (青 qīng) and bái (白 white), huáng (黄 yellow) and bái (白 white), and hēi (黑 black) and huī (灰 gray). And these color terms often co-occur with words for hair, including sī (丝 thread), fà (发 hair), máo (毛 hair), tóu (头 head) or shǒu (首 head). Fà (发 hair) occurs most in the collocation with hēi (黑 black), bái (白 white), huī (灰 gray), huáng (黄 yellow) and lǜ (绿 green), and sī (丝 thread) usually occurs with yín (银 silver) and qīng (青 qīng).

Chinese also correlates facial color with age. For example, redness in the face means ‘being young and thus attractive’ while yellowiness in the face means ‘being old and thus unattractive’. For example, hóng-yán (红颜 red face), zhū-yán (朱颜 red face), which is more likely associated with attractiveness of a woman or her beauty. The expressions, like zhū-yán (朱颜 red face) and hóng-yán (红颜 red face), usually refer to young people, who are often thought to have redness in the face, i.e., physical color for youth, good health and thus beauty. On the other hand, huáng-lián-pó (黄脸婆 yellow face wife) is an ironic expression when referring to a woman, especially a married one whose red face is replaced by a yellow face, a symbol of lost youth and beauty. In addition, the color of the other body parts and the color of clothing can represent age, such as green hand, yellow beak, huáng-kǒu (黄口 yellow beak), qīng-yī (青衣 qīng clothing), and so on.

The Corpus Evidence of the Extension Between Color and Age

| Colors | BNC | Colors | CCL |
|--------|-----|--------|-----|
|        | a   | b   | c   | d   | a   | b   | c   | d   |
| Black  | 0   | 0   | 0   | 0   | hēi (黑 black) | 43  | 0   | 0   | 0   |
| White  | 0   | 0   | 0   | 0   | hūi (灰 gray)  | 53  | 150 | 0   | 0   |
| Red    | 0   | 0   | 0   | 0   | hóng (红 red)  | 0   | 542 | 0   | 46  |
| Green  | 0   | 0   | 0   | 0   | lǜ (绿 green)  | 12  | 0   | 0   | 0   |
| Blue   | 0   | 0   | 0   | 0   | fù ( fade)    | 0   | 0   | 0   | 0   |
| Gray   | 162 | 0   | 0   | 0   | huī (灰 gray)  | 53  | 0   | 0   | 0   |
| Brown  | 0   | 0   | 0   | 0   | hēi (黑 black)/fù (forge) | 0   | 0   | 0   | 0   |
| Yellow | 0   | 0   | 0   | 0   | huáng (黄 yellow) | 23  | 56  | 25  | 0   |
| Orange | 0   | 0   | 0   | 0   | chéng (橙 orange) | 0   | 0   | 0   | 0   |
| Purple | 0   | 0   | 0   | 0   | zǐ (紫 purple) | 0   | 0   | 0   | 0   |
| Pink   | 0   | 0   | 0   | 0   | qīng (青 qīng) | 180 | 0   | 0   | 0   |

From the discussion above, it is clear that the extension between color and age has 4 patterns: a) The hair color stands for age; b) the facial color stands for age; c) age is the color of the body parts; d) age is the color of clothing. For more linguistic evidence, the inquiries into the corpora are made. The results are shown in Table 4.

According to the results in Table 4, in English gray, usually in the collocation with hair, is often associated with old age, while the other colors do not often have such tendency. On the other hand, in Chinese there are more colors.
associated with young and old age, mostly represented in the combination with hair. What’s more, color terms in Chinese can be combined with body parts, clothing and accessories to refer to different ages.

IV. FIGURATIVE ASSOCIATIONS OF COLOR FOR AGE

Color is mainly a visual perception. People tend to employ different visual perception of objects to express various age. Some associations are directly based on the visual perception while some are conceived as abstractions on the basis of color.

| Color metonymies                  | Chinese                        | English             |
|----------------------------------|--------------------------------|---------------------|
| body parts                       | huáng-mào-xiǎo-zi (黄毛小子 yellow-haired boy), huáng-lǎo-pó (黄脸婆 yellow-faced wife), bái-fū-rén (白发人 white-haired man), qīng-tái-zài (青头任 qing head boy) | grey hair, green hand |
| clothing                         | fên-líng (粉领 pink collar), qīng-xī (青衣 qing clothing) | /                   |
| accessories                       | Huáng-huā-nǚ (黄花女 yellow flower girl), hóng-zhūăng (红妆 red makeup) | /                   |

Though Table 5 cannot list all color metonymies for age, it can still help to shed light on the cross-cultural difference. The color metonymies in Chinese are more fixed than the counterparts in English.

A. Color of Body Parts Stands for Age

Langacker (1987: 149; see also Lorena Pérez Hernández 2000: 261) contends that time is a primitive, non-derived, basic notion. Lakoff and Johnson (1999: 137) hold that in English time is primarily conceptualized in terms of SPACE, and MOTION through space, THE TIME ORIENTATION METAPHOR, THE MOVING TIME METAPHOR, THE MOVING OBSERVER METAPHOR. This argument is supported by Croft (2006: 278) states that motion involves time, change and location. Time is ontologically understood in terms of things (that is, entities and locations) and motion (Lakoff 2006: 201). Age, as a subcategory of time, is no exception. The growing process from young to old is often understood in terms of color variation, generally from dark colors to light colors. In English pink and blue are often cognitively interpreted as color for babies. Then gray is metonymically associated with old age. On the other hand, in Chinese it is common to find variant color terms associated with age in Chinese, such as qīng (青 qing), huáng (黄 yellow), lǜ (绿 green), bá i (白 white) and hēi (黑 black).

| language        | Hair color | examples                                    | age         |
|-----------------|------------|---------------------------------------------|-------------|
| English         | gray       | Gray hair                                   | Old age     |
| Chinese         | Black      | 黑发 (black hair)                           | Young age   |
|                  | Yellow     | 绿发 (green hair)                           |             |
|                  | Red        | 绿鬓 (green hair)                           |             |
|                  |            | 青丝 (qing hair)                            |             |
|                  |            | 青头 (qing head)                            |             |
|                  |            | 黄毛 (yellow hair)                          |             |
|                  |            | 红颜 (red face)                             |             |
| White           |            | 白发 (white hair)                           | Old age     |
| Yellow          |            | 灰发 (gray hair)                            |             |
|                  |            | 黄发 (yellow hair)                          |             |
|                  |            | 黄脸婆 (yellow-faced wife)                  |             |

Seen from Table 6, HAIR COLOR STANDS FOR AGE exceeds over FACIAL COLOR STANDS FOR AGE. In addition, Chinese tends to have more colors involved in color metonymies of body parts for age. In English the most striking hair color indicating old age is gray and it is hardly to find a reversed color for young age.

(1) a. He had aged: his hair was touched with grey, and his face was haggard. (BNC-AC6 1889)

b. There is the age at which I will grow into my own maturation, and there is the age at which my hair has started to turn grey. (BNC—G2V 3447)

c. She was sitting beneath the narrow, barred window when he entered the room, and the first lying ashen in her fair hair; there was more grey than gold in it now. (BNC—K8S 2102)

Examples of (1) indicate that when one is aging, his or her hair color will be gray. In Example a and b, there are obvious clues like the noun phrase the age and the verb phrase have aged to hint that hair turning grey is caused by the age, while in Example c there are no hints like age or aged, the readers can still predict regarding to the hair color that

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she is not as young as the one he once remembered or knew. Thus, here the combination of the color grey and the body part hair is associated with age, or time, metonymically referring to the aged person.

The contrast in HAIR COLOR STANDS FOR AGE can be shown in Figure 1, which further shows the color white in Chinese, reversed to black semantically, is opposite to different colors lexically. For example, the contrast between black and white hair refers to different ages, young and old. When referring to an old man, it is accepted to say bái-fà-rén (白发老人 white hair old man), or more outspokenly bái-fà-lào-zhē (白发老者 white hair old man). When referring to a young man, it is common to say hēi-fà-rén (黑发人 black hair man) or qīng-tóu-xiǎo-huá (青头小孩 qing head young man), or in Cantonese qīng-tóu-záí (青头仔 qing head boy). The color terms hēi (黑 black) and qīng (青 qing) form a contrast of hair color with bái (白 white) to indicate different ages.

![Figure 1. reversed colors of HAIR COLOR STANDS FOR AGE in English and Chinese](image)

(2) a. 这个道理是很容易理解的。相濡以沫的几十年夫妻生活，从**黑丝到白发**，还有什么是对方不了解的呢？(It's easy to understand that a couple who have lived together from black hair to white hair, caring for each other for scores of years, are sure to know each other well.) (CCL)
b. 舞台四周，**白发**的老人，**青头**的小伙子，坐满了前来看戏的人。(The audience, including the white-haired old men and black-haired young men, was seated around the stage.) (CCL)
c. 现在他们已经作古，未曾想这**白发**人却去送**黑发**人，真是不可思议！(Now they are no more. it's never thought before that the white-haired joined the funeral procession of the white-haired. So incredible!) (CCL)
d. 从1947年在美国研究WTO开始，五十年过去了，我也从**黑发**到**白发**，到白发直到现今的无发。(Fifty years has passed by since the start of WTO research in US in 1947. I have experienced from black hair to white hair, to white hair and to hairless now.) (CCL)

In the examples of (2), it is obvious that the color terms hēi (黑) and qīng (青 green or blue) and bái (白 white) appear in the combination with words like sī (丝 silk), fā (发 hair), or tóu (头 head) referring to the young or the old respectively. It seems a common sense that the young are usually black-haired while the old often have white hair. Therefore, people commonly tend to associate youth with black hair and old age with white hair in their cognition. Examples of (2a) and (2b) show that the color term qīng (青) doesn’t refer to the same color as in the expressions like qīng-tiān (青天 blue sky), qīng-cāo (青草 qing grass), etc. The color term qīng (青) in (2a) and (2b) stands as the opposite color to bái (白 white), an equivalent to the color hēi (黑 black).

The reversion between yellow and white is exceptional. In huáng-tóng-bái-sōu (黄童白叟 yellow child white old man), the two color terms huáng (黄 yellow) and bái (白 white) form a contrast of hair color for different ages, with huáng (黄 yellow) for young and bái (白 white) for old. But yellow can be an embodied color for old age in the idiom huáng-fā-chuí-tiáo (黄发垂髫), in which huáng-fā (黄发 yellow hair) literally refers to the hair of an old man turning from white to yellow, symbolizing longevity among ancient Chinese, thus metonymically meaning an old man.

(3) a. 《论衡·状留》：“吕望之徒，自首乃显。百里奚之知，明于**黄发**。” (Lun Heng.Zhang liu: Wang Lü's wits were shown till yellow hair.) DAC
b. **黄毛丫头**干到老太婆；认为只有死守农场，才能办好农场。(This thought ran against the tradition. In the past the slogan was settling down on the farm and “working from a yellow-haired girl to an old woman”; it was believed that only sticking to the farm could run it well.) (CCL)

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1 In Juuyong Idiom Dictionary, edited by Wen Tang, huáng-tóng-bái-sōu (黄童白叟) is similar to the idiom huáng-fā-chuí-tiáo (黄发垂髫), in which huáng-fā (黄发 yellow hair) literally refers to the hair of an old man turning from white to yellow, symbolizing longevity among ancient Chinese, thus metonymically meaning an old man. For avoiding misunderstanding and inconsistency in the explanation of the thesis, it is not included in the text. Similarly, in another idiom like huáng-huáng-wān-jíé (黄花晚节 yellow flower late morality), huáng-huáng (黄花) referring to chrysanthemums, which can endure the coldness in winter, which people conceptualize the same as wān-jíé (晚节 the moral integrity in one’s later years).
(3a) shows both white hair and yellow hair refer to old age, and (3b) describes a young girl in terms of yellow
hair. When yellow is associated with old age, it has no color terms for its opposite. It is common sense among Chinese
that ducklings and chicks have yellow feathers. People tend to ontologically conceptualize this into thinking that a boy
or a girl of the tender age is called huáng-mào-xiào-zǐ (yellow hair boy) or huáng-mào-yá-tóu (yellow head
yellow hair girl) in (3b). It does not necessarily mean that he or she does not have yellow hair. Here the color term
huáng (yellow) with mào (hair) features a person’s body parts, stressing on the tender age of the person.

The expressions like hóng-yán (red face), zhí-yán-lǐ-fā (red face green hair), huáng-lián-pó (yellow face
yellow face wife) show that besides hair color, facial color is also extended to age. These involve colors terms like
red and green. It’s an embodied cognition that a young man usually has ruddy or rosy cheeks.

B. Clothing Color Stands for Age and Color of Accessories Stands for Age

Besides body parts, the color of clothing or accessories are also related with age in Chinese. However, there are
hardly any such color metonymies related to age to be found in English.

As explained above, the color term huáng (yellow), contrasting with qīng (green), is associated with oldness. Interestingly, the color term huáng (yellow), on the other hand, can also be related with
someone inexperienced or young, as shown in the examples of (4).

(4) a. 直到那些 黄花闺女 被奸, 有的会有人写, 影响健康的, 有的反而会引起人们的关注。 (Until those virgins were
raped, even some having their health seriously harmed did it become the public concern.) (CCL)

b. 他不能不时刻小心, 都是不到 20 岁的 黄花女 啊, 如果出了失闪, 如何向人家父母交代呢! (He had to be
careful all the time, because they were all maidens of less than 20 years of age. Once something bad happened
to them, how could he account for your parent?) (CCL)

The relation between huáng-huáng (yellow flower) and inexperience possibly originates from the fashion
especially in Tang and Song Dynasties that young maidens wore yellow paintings or attached yellow paintings onto
the forehead, which they did not do after marriage. The paintings or cuttings carry the symbol of virginity then. It is also
possibly related to the conviction that things made of yellow were usually regarded as noble and bright ones and
virginity was often thought to be precious possession for an unmarried woman. What’s more, huá-huáng (flower yellow
yellow) was regarded as beauty, as seen in the examples of (5).

(5) a. 当窗理云鬓, 对镜贴红装—《乐府诗集之横吹曲辞 木兰诗》 (Combing hair by leaning against the window,
rubbing hua-huang by looking into the mirror. —Cross Blow ∙ Mulan Poem of Yuefu Poetry)

b. 留心散广黛, 轻手约花黄—《咏镜照》费昶 (南朝梁) (Drawing black eyebrows carefully, rubbing hua-
huang softly—Ode to Looking into the Mirror by Chang Fei in Liang, South Dynasty)

c. 青楼裁锦绣, 翠破贴花黄—《踏歌词》崔液 (唐) (Embroidering Mandarin ducks onto the silky sleeve,
attaching hua-huang with emerald—Chants by Ye Cui in Tang Dynasty)

Thus, huá-huáng (or huáng-huáng) develops an indication of a woman without sexual experience or a virgin in modern language. This metonymy indicates the innocent youth, manifesting the
sub-metaphor INEXPERIENCE IS YELLOW due to their young age.

Red is also a color often though to be a symbol of youth, especially young and beautiful women in Chinese ,
reflected in clothing color such as hóng-xiù (red sleeve), hóng-qín (red skirt), hóng-zhūang (red clothing), fěn-líng (pink collar), and so on, and represented in color of accessories such as hóng-zhūang (red makeup). In Chinese Peking Opera, black clothing is usually worn by young women characters, thus the character qīng-
yī (green clothing) particularly refers to young women in the opera .

In CLOTHING COLOR STANDS FOR AGE and COLOR OF ACCESSORIES STANDS FOR AGE, it is common
that youth, especially youth of a woman, gets special atte

C. Color Metaphor Age Is Color

Color, as one feature of things and a sub-domain of SPACE, is coordinated with the extension of the visual field.
Both Chinese and English have associated the color green with youth, based on daily observation of plants or animals
which co-exist as human beings. Again, Chinese overtakes English in the involvement of colors, especially opposite
colors. For example, Spanish has the metaphorical association of color with age is shown in terms of color changes of plants, as
shown in the examples in (6):

(6) a. 一直到他坟头的野草, 会今年 黄了, 明年又绿地持续下去, 十年也还如一日。 (CCL) (not better than
the wild grass on his tomb, which can keep on turning yellow  this year and turning green next year.)

b. rén-lào-zhú-huáng (人老 珍珠 as one grows old, the pearl turns yellow; the old age, especially referring to an
old woman)

The examples in (6) exemplify the time orientation metaphor. In (1a), the color terms huáng (yellow) and lǜ (green)
are grammatically verbs. Here the alternative change of colors—from huáng (yellow) to lǜ (green)—
manifests a circulation of seasonal changes: In autumn the grasses become yellow and dry, while in spring, the grass
turn green. And in daily life we also see that most of the fruits turn from green to yellow when getting ripe. Such is what a human perceives in daily experiences. Thus, change of time is defined in terms of color, i.e. AGE IS COLOR. Then in (6b), the expression ren-lao (人老 person old: one grows old) is paralleled with zha-huang (珠黄 pearl yellow: the accessories turn yellow because they are well-worn.) Here lao (老 old) and huang (黄 yellow) form a pair of synonyms. Similar to the state that a human grows old or lao (老 old), her accessories zha (珠 jewelry) are worn out. Metaphorically, The yellowness of something indicates that the best time (especially referring to one’s youth) has gone forever. These examples manifest a habitual Chinese way of thinking that yellow is a color associated with the concept of oldness while green is a color related with the concept of youth. The color huang (黄 yellow) in (6)a and b stands contrast to lu (绿 green) in ancient Chinese, indicating different periods of time: lu (绿 green), the color for something newly born, is then associated with somebody who is young, while huang (黄 yellow), the color for something well grown but fading in vitality, is related with somebody old, as shown in the following correspondences:

The color metaphor: AGE IS COLOR

Correspondence: difference periods correspond to different shades of color
A person corresponds to a leaf
Something new or somebody young corresponds to lu (绿 green)
Something old or somebody old corresponds to huang (黄 yellow)

In this sense, the metaphor AGE IS COLOR entails two sub-metaphors: YOUTH IS GREEN and OLDNESS IS YELLOW. YOUTH IS GREEN can be found in English, but not its opposite.

In ancient Chinese, there was no distinction made between the color blue and green. Both colors were terms as the color term qing (青 qing), as in the examples like qing-tian (青天 qing sky), qing-cao (青草 qing grass), etc. And in the expressions like qing-nian (青年 qing year), qing-chun (青春 qing spring), qing-chong-sui-yue (青春岁月 qing onion years: the teenage years, the adolescent years), etc., the color term qing (青 qing) is thought to refer to green only. The color terms huang (黄 yellow) and qing (青 qing) form a pair of color contrast to refer to different periods of time. Thus in the color metaphor AGE IS COLOR, the correspondences are changed accordingly:

The color metaphor: AGE IS COLOR

Correspondence: difference periods correspond to different shades of color
A person corresponds to a leaf
Something new or somebody young corresponds to the color qing (青 qing)
Something old or somebody old corresponds to the color huang (黄 yellow)

Here the metaphor AGE IS COLOR entails two sub-metaphors: YOUTH IS QING and OLDNESS IS HUANG. Colors huang (黄 yellow) and qing (青 qing) form a pair of color contrast, referring to different periods of time.

(7) a. 以前，农业社会时期，‘青黄不接’是常事，秋收时期粮食多、收入多，但在春夏时期则没有……(In the past, in the era of agricultural society, it was common to be in temporary shortage of food. During the harvest season there were more crops and more income while during the spring and summer there was not.) (CCL)
b. 当前，中西医结合高层次骨干队伍面临着‘青黄不接’的危机，这个问题应引起我们足够的重视。(At present the shortage crisis of cadres who are expert at the combination of Chinese traditional and Western medicine should deserve our full attention.) (CCL)

(7a) presents the literal meaning of the expression qing-huang-bu-ji (青黄不接 qing yellow not connected): qing (青 qing) refers to the period when the crops are not mature or ripe; huang (黄 yellow) refers to the period when the crops are already mature enough to yield. Thus, based on such cognition, qing (青 qing) is thought to be associated with immaturity while huang (黄 yellow) is related with maturity. (7b) shows the metaphorical understanding of qing-huang-bu-ji (青黄不接 qing yellow not connected): there is a shortage of young cadre who can take the place of the old cadre. In practical use, qing (青 qing) and huang (黄 yellow) show different tendency in word construction. huang (黄 yellow), as the opposite to qing (青 qing), either appears in the combination with qing (青 qing), or occurs in the expressions like ‘ren-lao-zhi-huang (人老珠黄 person old pearl yellow: an old person)’ and ‘huang-lian-po (黄脸婆 yellow face wife)’. As shown above of the same section, when the color ‘huang (黄 yellow)’ stands as the opposite to the color ‘qing (青 qing)’, it means old age. Comparatively, qing (青 qing) is more productive. More examples are shown in (8) as follows.

(8) a. 唯一的遗憾是我老了，而且还在变老，不复返的是宝贵的青春。(The only regret is that I am old, and I am getting old. What was gone is the precious youth.) (CCL)
b. 他说他也感到了温暖，能从我的身上感受到一股强烈的青春气息，这种气息仿佛昨日时光中似曾相识的再现，但是他不敢奢望。(He said he also felt the warmth, and he could feel a strong breath of youth in me, which to him was like reoccurrence of yesterday's familiar images, but he would never dare to have) (CCL)
c. 面对这些情况, 教师应该采取适当的方法进行青春期卫生性和知识教育。(In the face of these situations, teachers should take proper measures to conduct adolescence health education and popularize sexual knowledge) (CCL)
d. 添加青年的例子

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e. We hope this article can have some beneficial reference for promoting the enterprises to pay close attention to the young worker’s skills learning and intensive study. (CCL)

f. ... These身处异地的上海知青唯一揪心的，是自己的子女在读书和就业上所面临的诸多困难。(... The only thing making those displaced educated youths anxious was the numerous difficulties in schooling and employment their offspring were facing.) (CCL)

g. If failure cost you a heavy loss, or made you restless, you would call the lawyer and file a lawsuit, just as a rookie teenager did when in trouble.) (CCL)

In practical use, qīng (青) can be an independent unit to combine with lexical items such as qīng-nián (青年 qing year), qīng-chūn-qì (青春期 qing spring period), as shown in (8). In (8a) and b, qīng-chūn (青春 qing spring) literally means that the youth is like the spring often in the color of qīng. There is a famous Chinese saying that yī-nián-zhī-jì-zài-yǎ-chūn (一年之计在于春 Spring is the beginning of a year). Cognitively, qīng (青), combined with chūn (春), means the tender years of one’s life. In (8c), qīng-chūn-qì (青春期 qing spring) presents the literal meaning green spring period, known as the period which starts at the age of 11 or 13. Thus it is not difficulty to understand the idiom qīng-chūn-nián-shào (青年年少 qing spring year little) which stresses the freshness and innocence of youth. The expression qīng-nián (青年 qing year) literally means the immature age, i.e. the period when everything is still qīng and fresh. It refers to the youth who are at the immature years of life.

What’s more, qīng (青) can be an abbreviation of qīng-nián (青年 qing year), as in expressions like qīng-gōng (青工 qing worker) in (8e), zhī-qīng (知识青年 qing knowledge) in (8f), lèng-tóu-qīng (愣头青 reckless qing) in (8g), etc. Then qīng-gōng (青工 qing worker) refers to the abbreviation of qīng-nián-gōng-rén (青年工人 qing year worker) and zhī-qīng (知识青年 qing knowledge) is an abbreviated form of zhī-shí-qīng-nián (知识青年 educational qing year). Zhī-qīng (知识青年 qing knowledge) is a by-product of a particular historical era in Chinese history, “referring to secondary school graduates who were sent to the countryside for reeducation during the Cultural Revolution (1966–1976).” (Hui Yu 2004: 2093) In the example of (8g), lèng-tóu-qīng (愣头青 reckless qing), also called lèng-tóu-qīng-nián (愣头青 reckless qing year) vividly describes a young man who is not experienced and sophisticated.

V. CONCLUSION

Comparing metonymical and metaphorical extensions of color to age, it is evident that more basic color terms are involved in Chinese than in English.

In addition, Chinese has opposite colors pairs metonymically or metaphorically for age, which is rarely seen in English. For example, seen from the contrastive color pairs like qīng (青) and huáng (yellow), lǜ (绿 green) and huáng (黄 yellow), huáng (黄 yellow) and bái (白 white), qīng (青 black) and bái (白 white), hēi (黑 black) and bái (白 white), etc., the Chinese are more likely to conceptualize age in terms of colors than the English peers.

Metonymies:

| BLACK HAIR STANDS FOR YOUTH, WHITE HAIR STANDS FOR OLDNESS |
| BLACK HAIR STANDS FOR YOUTH, GREY HAIR STANDS FOR OLDNESS |
| YELLOW HAIR STANDS FOR YOUTH, WHITE HAIR STANDS FOR OLDNESS |
| YELLOW HAIR STANDS FOR OLDNESS |
| YELLOW FLOWER STANDS FOR YOUTH |
| RED CLOTHING STANDS FOR YOUTH |
| BLACK CLOTHING STANDS FOR YOUTH |

Metaphors:

YOUTH IS GREEN, OLDNESS IS YELLOW (PEOPLE ARE PLANTS)

YOUTH AND INEXPERIENCE IS QING, OLDNESS AND EXPERIENCE IS YELLOW

This is not a total list of color conceptualization in Chinese. For example, both Chinese and English have conceived gray hair as a symbol of old age, green symbolizing youth based on embodied experience. Such common conception manifests that both languages conceive color as a distinctive property of objects, which entails COLOR IS A DISTINCTIVE PROPERTY OF ORGANISMS. Here organisms is a broad term which includes people, plants, animals and things. The only difference lies in the fact that Chinese has more diversified color conceptualization of age in terms of color than English.

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