

## ORIGINAL ARTICLE

# A social-cognitive research on metaphor and metonymy: Taking age appellations in Chinese as an example

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**Abstract:** The process from individual language to communal language, from individual experience to communal embodiment, and from individual cognition to collective cognition is based on human embodiment and social interactions. Metaphor and metonymy are two basic cognitive approaches to the world. Thus, human cognition is metaphorical and metonymic in essence, and metaphonymy is embodied and social in nature. In the perspective of social embodied cognition, this paper, taking social metaphonymy as a theoretical foundation and the Chinese age appellations as the corpus, demonstrates that Chinese age appellation has eight metaphonymic categories, namely, physiology, gender, wisdom, accessories, raising, behavior, animal and plant, and number. The paper, by expounding the embodiment and metaphonymy, aims to reveal metaphonymic cognitive mechanism of Chinese age appellations.

**Keywords:** embodiment; sociality; metaphonymy; age appellation

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**Received:** April 20, 2022; **Accepted:** June 11, 2022; **Available online:** September 16, 2022

**Citation:** Zheng Y (2022) A social-cognitive research on metaphor and metonymy: Taking age appellations in Chinese as an example. *Forum for Linguistic Studies* 4(1): 66–77. DOI: 10.18063/fls.v4i1.1456

## 1. Introduction

Human beings are social animals, and sociality is one of the essential attributes of human beings. The transition from individual language to communal language is based on this attribute which is also the process from individual experience to communal embodiment, from individual cognition to collective cognition. The prerequisite for language to undertake the communicative and cognitive functions is intersubjectivity (Zlatev, 2007; Cheng, 2009; Zhao, 2015) which means when performing cognitive processing on a specific object, humans must reach an agreement in a specific community to form “knowledge”, which will then become the basis of human communication, shared by all members of the society. Metaphonymy is the basic means of human cognition. Therefore, human cognition is metaphorical and metonymical, and human sociality determines that metaphonymy is social in nature. Age appellation is an important research field of sociolinguistics. In the perspective

of social embodied cognition, this paper, taking the Chinese age appellations as the corpus (mainly from the National Language Commission Corpus of Ancient Chinese), demonstrates that Chinese age appellation has eight metaphonymic categories, namely, physiology, gender, wisdom, accessories, raising, behavior, animal and plant, and number, which expounds the embodiment of metaphonymy and reveals the metaphonymic cognitive mechanism of Chinese age appellations.

## 2. Sociality of metaphor and metonymy

Lakoff and Johnson (1980) subverted the traditional view of metaphor and metonymy pioneered by Aristotle in *The Metaphors We Live by*, arguing that metaphors are not just rhetorical devices, but more importantly, the basic cognitive style of human beings. Later, Lakoff and Johnson (1999) discussed the embodiment of metaphor and metonymy based on the system of experienced philosophy. Panther and Radden (2002: 1) believe that metonymy is more basic than metaphor to some extent. Although scholars still have different views on the relationship and cognitive mechanism of metaphonymy, at least the following four points of agreement have been reached:

- (1) Metaphor and metonymy are the basic ways for human beings to understand the world;
- (2) Metaphor and metonymy are the basic modes of human thinking;
- (3) Metaphor and metonymy are the result of human experience and cognitive processing;
- (4) Both metaphor and metonymy try to establish the connection or relevance between cognitive objects.

As far as the basic cognitive styles of human beings are concerned, metaphor and metonymy play important roles in human cognition and the external world (Lakoff and Johnson, 1980, 1999), which form the two basic cognitive ways for human beings to recognize themselves and the world. This paper holds that metaphor and metonymy have both connections and differences. Metaphor establishes the cognitive connections between the source domain and the target domain based on iconicity, while metonymy uses one cognitive domain to replace another based on relevance. For example, in terms of age appellations, the ancients used “cardamom” to refer to “13- to 14-year-old girls”. The basic cognitive methods and cognitive processing steps are as follows: firstly, in people’s cognitive experience, “cardamom” is very “young and tender”, while 13- to 14-year-old girls are also in the stage of “immature blooming season”. Using metaphorical mechanism and conceptual projection, the cognitive relationship between “cardamom” and “13- to 14-year-old girls” is established with their “immature” iconicity; in the second step, people use metonymy to refer to one part and another based on the relevance of the two subjects. In this case, “cardamom” is used to refer to “girls aged 13 to 14”.

In terms of the social attribute of cognition, we have to emphasize that human cognition of embodiment is not the cognition of individual members, but the collective cognition of people in a specific community. Therefore, as a social animal, human’s cognitive embodiment must be marked with social brand, that is to say, the embodiment is social. Specifically, human thinking is shaped by practical activities, consciousness, and the material environment. As a part of the whole, the three are contained within each other (Lantolf and Qin, 2018: 1). The formation of the conceptual mechanism of human metaphor and metonymy is the process by which human beings experience and

process social reality and reach consensus in the long-term productive labor (Lindblom, 2015; Wen, 2019). That is to say, the cognitive mechanism of metaphonymy is not an individual behavior but a collective behavior, which implies the sociality of metaphonymy. For example, the ancients believed that “boys under teething in eight months will grow permanent teeth when they are eight years old; girls under teething in seven months will grow permanent teeth when they are seven”. Based on this cognitive experience, the ancients used the mechanism of metaphonymy in terms of the permanent teeth period to refer to children aged 7 to 8. In the long-term cognition of embodiment, based on the specific social reality, especially the application of these intelligent complex age appellations in scholars’ literary works and statements, these expressions finally are spread, developed and accepted in Chinese language and Chinese culture community, which also reflects the adjustment of society to the cognitive experience of cognitive subjects and finally helps the formation of intersubjectivity which becomes the basis and common ground of interaction between humans. At the same time, this has made the complex age appellations and profound cognitive mechanism behind them an important content of Chinese traditional culture.

### **3. Cognitive mechanisms of metaphor and metonymy in age appellations**

With the historical development, the ancients have continuously established and developed the Chinese age appellations, which is the manifestation of both ancients’ wisdom and their cognition upon themselves and the outside world. Based on the cognitive analysis of the corpus in this paper, the age appellations in Chinese reflect that the ancients have adopted eight types of cognitive mechanism on metaphonymy, which is also an important part of Chinese traditional culture, in an attempt to recognize age based on the specific social context and cognitive embodiment. The following will expound on them respectively.

#### **3.1. Metaphonymy of physiological attributes**

Embodiment is the basic way for humans to perceive the world. Human embodiment is the main source and foundation of human knowledge (Lakoff and Johnson, 1999; Shapiro, 2019; Wang, 2014, 2015; Winter, 2019). The human being, as a complex biological system, is material. Metabolism is the natural law of human being. Being a complex biological system, the human body is composed of many organs. In the human life cycle, people will show some physiological attributes at a specific age. According to Shen (2009), from a cognitive perspective, when human beings use mechanism of metaphonymy, the most important attribute is often apparent and becomes the first choice to represent the whole. Therefore, in the long-term development of Chinese culture, age is often connected with physiological attributes by means of metaphor and metonymy, thus creating a rich representation system of physiological attributes of age. There are eight such expressions in the corpus of this study, as shown in **Table 1**.

Generally speaking, when girls are 7 years old and boys are 8 years old, their deciduous teeth fall off and permanent teeth begin to grow. The ancients called this stage *tiao* or *chen*. Based on this physiological attribute, the year of *tiao* or *chen* refers to children aged 7–8 years old, just as the examples (1) and (2) show. Conversely, the examples of age appellations in these literary works also promote the spread of these expression in Chinese and construct their status in age appellations and Chinese culture.

**Table 1.** A list of metaphonymy of physiological attributes in age appellations

Number	Appellation	Age	Example	Source
1	<i>chi zi</i> 赤子	Newborn	If you protect your people as if they were newborn babies, they will be happy and obedient.	<i>The Book of History · Kang Gao</i>
2	<i>dao</i> 悼	Seven years old	Children aged 7 can be called <i>dào</i> . Even if they committed a crime, there was no punishment, for they had poor knowledge of the law and did not break it intentionally.	<i>The Rites · Qu Li</i>
3	<i>tiao chen</i> 齠齠	Seven to eight years old	Boys under teething in eight months will grow permanent teeth when they are eight years old; girls under teething in seven months will grow permanent teeth at seven.	<i>Shuowen Jiezi</i>
4	<i>hui chi</i> 毁齿	Seven years old	Girls under teething in seven months will grow permanent teeth when they are seven years old.	<i>Records of the Grand Historian</i>
5	<i>ni</i> 鬯	The aged	The aged and the young make a family rich.	<i>Complete Tang Poems</i>
6	<i>hua fa</i> 华发	The aged	The aged has treasurable experiences.	<i>Hou Han Shu</i>
7	<i>gu xi</i> 古稀	70 years old	It's common to wine on credit but rare for any to live to 70 years.	<i>Qu Jiang</i>
8	<i>mao die</i> 耄耋	80 to 90 years old	It is quite satisfying for anyone to live up to 80 to 90 years old.	<i>Strange Tales from a Lonely Studio</i>

(1) Boys under teething at eight months old will grow permanent teeth when they are eight. (*The Unauthorized Biography of Han Poem*)

(2) Boys who haven't lost deciduous teeth cannot be soldiers. (*Guan Zi*)

In addition, *chen* has the same meaning as “losing teeth” in Chinese. Other expressions related to this kind of expression are: *chen tiao*, which means baby teeth falling off and unbound hair, is used to refer to childhood; *shi chen* refers to a child of seven or eight years who has just lost his baby teeth (An, 1987: 74).

In contrast, when an old man's teeth are worn out and then he spits out fine teeth like children's, this period of old people can be addressed as *ni* (Ma, 2007: 54). The ancients used this metonymy mechanism of physiological characteristics to refer to the elderly. Also, it was taken as a symbol of longevity, as shown in example (3):

(3) The elderly and children play with each other to celebrate and the whole family prospers. (*Han Dyke Poetry*)

From the above examples, it can be concluded that the ancients' cognition of tooth metabolism is the same as our cognition on teeth today; through this metonymic mechanism, the ancients referred to the corresponding age with the physiological feature of tooth loss or rebirth, which not only made it an important part of the rich culture of age appellations in the long-term social development, but also demonstrated the wisdom of the ancients.

### 3.2. Gender metaphonymy

Gender refers to the difference between male and female. Normally, every species has two gen-

**Table 2.** A list of metaphonymy of gender attributes in age appellations

Number	Appellation	Age	Example	Source
1	<i>dou kou</i> 豆蔻	Girls aged 13 to 14	Young girls of 13 and 14 have a graceful posture and a light and beautiful demeanor, just like the cardamom flower budding in February.	<i>The Farewell</i>
2	<i>ji ji</i> 及笄	Girls aged 15	A girl should be an adult when she is fifteen.	<i>Book of Rites</i>
3	<i>hua xin</i> 花信	Women aged 24	When flowers bloom in March, famous flowers trade in the wind.	<i>Yan Fan Lu</i>
4	<i>dai nian/dai zi</i> 待年 / 待字	The age of 15 when a woman is to be married	The beginning of staying years is the age of going on a journey.	<i>Quan Tang Wen</i>
5	<i>sang mei</i> 桑梅	A woman who is ready to be married	Plums fall one after another, leaving 70% on the tree. Young man, please don't delay the good time.  Plums fall one after another, leaving only 30% on the tree. The young man who wants me must not wait.  Plums fall to the ground one after another, and dustpans should be used to clean up. Young man who wants me, please speak now and don't hesitate.	<i>The Book of Songs</i>
6	<i>wu xiang</i> 舞象	A man aged 15 to 20	Boys aged 15 to 20 can be called as <i>wu xiang</i> and are old enough to learn archery and horse riding.	<i>Book of Rites</i>
7	<i>ruo guan</i> 弱冠	A man aged 20	Boys aged 20 can be called adults.	<i>Book of Rites</i>

ders, male and female. For humans, it's the same. In the complicated age appellations in ancient China, the expressions that distinguish male and female are also very rich. They are not only the basic embodiment and cognition of ancient Chinese ancestors, but also the manifestation of their wisdom. There are seven such expressions in the corpus of this paper, as shown in **Table 2**.

Based on social metaphonymy, according to the appellation of male and female age differences, this paper finds there are three obvious trends about male and female gender in ancient China. First, women's status is relatively low. It is generally believed that women at certain age are supposed to marry and stay home while men can work as officials. In example (4), if a woman cannot get married on time, the word "*dai nian*" is used to refer to her age, which highlights the social cognition that women must get married at an appropriate age. Example (5) holds that when a man reaches the age of 20, he must have the crown ceremony to show that he is an adult and can become the master of his own house and pursue fame and fortune.

(4) Xi said: I have a daughter who is not yet fifteen but she is smart enough. She can come to your house and wait to be married, if you like. (*Eastern Zhou Kingdoms*)

(5) By the age of 20, not only was I good at writing, but I also read widely. (*Book of Rites*)

Second, women are weak and men are masculine. For example, "cardamom" in example (6) highlights the beauty of women's softness, while "*shu fa*" in example (7) refers to a boy's hair tied in a bun at the age of 15 before the Qing Dynasty, indicating that he has entered the age of a child



and should be masculine.

(6) Young girls of 13 and 14 have a graceful posture and a light and beautiful demeanor, just like the cardamom flower budding in February. (*The Farewell*)

(7) When boys grow up, they will tie their hair in a bun. (*Book of Rites*)

Third, women are good at dressing, and men are good at martial arts. For example, *ji* (a hairpin) in example (8) originally refers to knotting hair but is worn with a hairpin. It is an iconic ornament of ancient women and is used to refer to the age of 15 years. In example (9), “dancing” is homophonic with fighting in Chinese, which means one can go to the battlefield. Therefore, *wu xiang*, literally “dancing elephant”, is used to highlight that men are aggressive and good at martial arts.

(8) I have five daughters, all of whom are smart. First, I taught them the Confucian classics, and then poems and songs. Although they do not reach the period of wearing a hairpin (the age to get married), they all write good articles. (*Old Tang Book*)

(9) Boys who aged 15 to 20 can be called as *dancing elephants* (*wu xiang*) and are old enough to learn archery and horse riding. (*Book of Rites*)

### 3.3. Wisdom metaphonymy

In the long-term production practice of mankind, personal intelligence will increase with age; so will the knowledge. And people’s understanding and perception of life will be gradually deepened and widened. The ancients often referred to age based on their perception, knowledge and wisdom of life, and the cognitive mechanism is a metonymic mechanism based on social embodiment. There are 10 corpora in this paper. See **Table 3** for details.

The history of human’s social development is a history of human cognition of themselves. Based on long-term social practice, the ancient people recognized that each age stage should have a specific mission and have a special understanding of life. Human beings used the mechanism of metaphonymy to refer to a specific age with certain social mission and wisdom characteristics of a specific age stage. In example (10), *you xue* is used to refer to the age of 10, because the mission of this age is to acquire knowledge, or go out to learn from teachers, which indicates that people at this age should step into society and continue to learn and acquire knowledge; in example (11), *bu huo* means that at forty, people can be intelligent and broad-based, and can distinguish things clearly. According to Zheng Xuan’s explanation, *zhi shi* example (12) refers to the retirement from the government and give the official work back to the king (see Ma, 2007: 57). Later, *zhi shi* was used as a substitute for the age of 70.

(10) A boy reaching the age of ten is called *you*, and it is time for him to go to school. (*Book of Rites*)

(11) I wasn’t confused in case of trouble when I was 40. (*The Analects of Confucius*)

(12) By the age of 70, old and frail, it is time for officials to retire. (*Book of Rites*)

### 3.4. Metaphonymy of ornaments

During the development of human society, people’s love of beauty has also been continuously

**Table 3.** A list of wisdom metaphonymy of age appellations

Number	Appellation	Age	Example	Source
1	<i>you xue</i> 幼学	Ten years old	A boy reaching the age of ten is called <i>you</i> , and it is time for him to go to school.	<i>Book of Rites</i>
2	<i>wai fu</i> 外傅	Ten years old	Boys can go for schooling at the age of ten.	<i>Preschool Education</i>
3	<i>hua nian</i> 华年	Days of youth	Why does the exquisite serpent have fifty strings? Every string and column remind me of my youth.	<i>The Zither</i>
4	<i>er li</i> 而立	30 years old	When I was 15, I set my mind on learning. When I was 30, I could do things independently.	<i>The Analects of Confucius</i>
5	<i>bu hu</i> 不惑	40 years old	I wasn't confused in case of trouble when I was 40.	<i>The Analects of Confucius</i>
6	<i>qiang zhuang</i> 强壮	40 years old	A man in his 40 is called <i>qiang</i> (strong), and it is time to become an official	<i>Book of Rites</i>
7	<i>zhi fei</i> 知非	50 years old	In my fifty, I know the mistakes I have made in the previous forty-nine years.	<i>Huai Nan Tzu</i>
8	<i>zhi ming/zhi tian ming</i> 知命 / 知天命	50 years old	At the age of 50, I can know those who can't be controlled by human power are on God's orders.	<i>The Analects of Confucius</i>
9	<i>er shun</i> 耳顺	60 years old	At the age of 60, I can tolerate different opinions. At the age of 70, I can do whatever I want while not exceed the rules.	<i>The Analects of Confucius</i>
10	<i>zhi shi/zhi zheng</i> 致事 / 致政	70 years old	Officials aged 70 are supposed to retire.	<i>Book of Rites</i>

**Table 4.** A list of metaphonymy of ornaments related to age appellations

Number	Appellation	Age	Example	Source
1	<i>chui tiao</i> 垂髻	3 to 9 years old	The elderly and children were all at ease and enjoy themselves.	<i>Peach Blossom Spring</i>
2	<i>ji ji</i> 及笄	Girls aged 15	Girls aged 15 are old enough to wear a <i>ji</i> .	<i>Book of Rites</i>
3	<i>shu fa</i> 束发	Boys aged 15	When boys become adults, they can go for the Great Learning.	<i>Book of Rites</i>
4	<i>zong jiao</i> 总角	Childhood	How happy we were, our hair in tufts, how fondly we talked and laughed, how solemnly we swore to be true!	<i>The Analects of Confucius</i>
5	<i>ruo guan</i> 弱冠	Men of 20 years old	Boys aged 20 can be called <i>ruo</i> and it's time to be crowned as adults.	<i>Book of Rites</i>
6	<i>ai fu</i> 艾服	Men of 50 years old	Men of fifty years old is called <i>ai</i> and are supposed to participate in state affairs.	<i>Book of Rites</i>
7	<i>zhang xiang</i> 杖乡	Men of 60 years old	When one is getting old, s/he will turn to a walking stick for support.	<i>Reciprocal Poems in Jian'an</i>

strengthened. According to the existing archaeological findings, human beings have all kinds of ornaments in the early stage; and with the development of society, ornaments that are suitable for all

age stages have been formed. Therefore, people use the mechanism of metaphonymy to refer to age with ornaments. There are seven such expressions in author's corpus, as shown in **Table 4**.

According to the *Book of Rites*, accessories that people wear in specific situations are an important part of our traditional etiquette. Therefore, in the long-term social development, people continue to form some etiquette norms about accessories. For example, in example (13), *ji* refers to the accessories used to fix the knotting of hair. The ancients used *ji ji* (a hairpin) or *ji* to indicate that a woman has reached the age of marriage; in example (14), *ruo guan* refers to a man who is 20 years old, and *ruo* means “small” and “crown” refers to the “Crown Ceremony” which is connected with our traditional custom that ancient men have the crown ceremony to show their adulthood at the age of 20.

(13) Girls aged 15 are old enough to wear a *ji*. (*Book of Rites*)

(14) Boys aged 20 can be called *ruo* and it's their time to be crowned as adults. (*Book of Rites*)

In addition, looking up the existing corpus, there are as many as accessories for males compared to that for females. For example, *ruo guan*, *ai fu* and *zhang xiang* are typical male accessories, which also shows that men had a higher social and political status in the society at that time.

### 3.5. Raising metaphonymy

Lindblom (2015) believes that people's development is not sound at birth. In order to grow healthily, people must constantly interact with society to experience and understand the external world. In this process, from childhood to adulthood, the raising of parents or others is of the most importance. Therefore, in ancient Chinese, under the cognitive mechanism of metaphonymy, the ancients often used physiological or external characteristics related to raising to refer to age. There are five such expressions in the corpus of this paper. See **Table 5** for details.

According to the physiological rules, people need to be brought up by others from birth to about 3 years old and also in the last days of life, so the word “baby” in Chinese means a newborn child. As shown in example (15), when a baby is born, the mother holds the baby in arms to breast feed, and *ying* means breast, which can be used to replace the Chinese character *ying* (which means babies) (Chen, 1984: 74). When people get old, they often need to be taken care by others, and the elderly especially need more rest and quietness, as shown in example (16).

**Table 5.** A list of raising metaphonymy in age appellations

Number	Appellation	Age	Example	Source
1	<i>ying er</i> 婴儿	Newborn	A newborn baby can talk even if there is no teacher to teach him. That is because he is surrounded by talking people.	<i>Chuang Tzu</i>
2	<i>yi ni</i> 婴妮	Newborn	When a baby is newly born, she initiates her babbling.	<i>Complete Poetry of the Tang</i>
3	<i>qiang bao</i> 襁褓	No more than 1 year old	People from all directions will come to serve you with their babies, leaving their farms behind.	<i>The Analects of Confucius</i>
4	<i>hai ti</i> 孩提	2 to 3 years old	Kids aged 2 to 3 years old.	<i>Mencius</i>
5	<i>qi yi</i> 期颐	100	Centenarians can't take care of themselves, so they need to be supported or taken care of by others.	<i>Book of Rites</i>



**Table 6.** A list of behavioral metaphonymy in age appellations

Number	Appellation	Age	Example	Source
1	wu shao 舞勺	13–15 years old	Boys began to learn music, recite poetry and dance at the age of 13.	<i>Book of Rites</i>
2	wu xiang 舞象	15–20 years old	Boys over 15 years old can be called adults and can learn archery and horse riding.	<i>Preschool Education</i>

(15) Babies are in the year of babbling.

(16) Centenarians can't take care of themselves, so they need to be supported or taken care of by others. (*Book of Rites*)

### 3.6. Behavioral metaphonymy

People's biological and social attributes determine that they need to interact with the external world in production practice, so as to carry out cognitive processing on specific objects. Some specific behaviors constitute the specific behavioral characteristics of human beings at specific ages. Of course, these characteristics may be different due to different cultures. During the long-term development, ancient Chinese people associated specific behaviors with age, and then used cognitive mechanism of metaphonymy to refer to specific age. There are two such expressions in this paper, as shown in **Table 6**.

As shown in example (17), at the age of 13, children would learn dancing with minors, play with their peers and engage in social communication. The ancients used this behavior metonymy to refer to the age of 13; example (18) tells us that when children are 15 years old, they will dance with weapons to show that they can go to the battlefield. Therefore, *wu xiang* refers to the age of 15 to 20.

(17) Boys began to learn music, recite poetry and dance at the age of 13. (*Book of Rites*)

(18) Boys over 15 years old are old enough to learn dance with weapons. (*Preschool Education*)

### 3.7. Metaphonymy of animal and plant

Life on earth has experienced and is still undergoing a long process of evolution. Human evolution and survival are inseparable from the external environment, and the animals and plants around us are most closely related to human beings. Therefore, human beings use cognitive methods such as metaphor to project the physiological characteristics of human beings at a specific age and the characteristics of some animals and plants to form relevant metaphorical expressions which are then used to refer to a specific age of humans. There are seven such expressions in the corpus of this paper, as shown in **Table 7**.

In the cognition of the ancients, *huang kou* originally refers to the beak of young birds. Through the metaphorical cognitive mechanism, the iconicity between the beak of the young birds and the newborn baby is established, and the metonymy mechanism is used here to refer to babies. As shown in example (19), *huang kou* refers to the newborns. In addition, as shown in example (20), the ancients believed that in old age, the wrinkled skin of the old was like the markings on the mackerel which indicates that the old men's strength faded and the hue on their skin diminished, so

**Table 7.** A list of metaphonymy of animal and plant in age appellations

Number	Appellation	Age	Example	Source
1	<i>huang kou</i> 黄口	More than 10 years old	In ancient times, the young will be left alive in wars between countries.	<i>Huai Nan Tzu</i>
2	<i>dou kou</i> 豆蔻	Girls aged 13 to 14	Young girls of 13 and 14 have a graceful posture and a light and beautiful demeanor, just like the cardamom flower budding in February.	<i>The Farewell</i>
3	<i>tong</i> 童	15 years old	A bare mountain raising no vegetation is called <i>tong</i> .	<i>Shiming</i>
4	<i>sang mei</i> 搔梅	A woman who is ready to be married	Plums fall one after another, leaving 70% on the tree. Young man, please don't delay the good time.  Plums fall one after another, leaving only 30% on the tree. The young man who wants me must not wait until now.  Plums fall to the ground one after another, and dust-pans should be used to clean up. Young man who wants me, please speak quickly and don't hesitate.	<i>The Analects of Confucius</i>
5	<i>tai bei</i> 鲐背	90 years old	The spots on the back of the old man are like mackerel patterns, which is a sign of longevity.	<i>Erhya</i>
6	<i>huang gou</i> 黄耇	90 years old	People aged 90 are called <i>tai bei</i> , <i>huang gou</i> , <i>dong li</i> , <i>ni chi</i> or <i>mei shou</i> .	<i>Shiming</i>
7	<i>dong li</i> 冻梨	90 years old	People aged 90 are called <i>tai bei</i> , <i>huang gou</i> , <i>dong li</i> , <i>ni chi</i> or <i>mei shou</i> .	<i>Shiming</i>

they got a thin body and wrinkled skin. In addition, senile spots on the skin of the elderly shaped like the surface of frozen pears, so *dong li* (frozen pear) is used to refer to the elderly (Chen, 1984: 73), as shown in example (21).

(19) In ancient times, the young will be left alive in wars between countries. (*Huai Nan Tzu*)

(20) Ninety-year-old people are having fun hitting boards which are called *rang*. (*Weide Theory*)

(21) People aged 90 are called *tai bei*, *huang gou*, *dong li*, *ni chi* or *mei shou*. (*Shiming*)

### 3.8. Numeric metaphonymy

People's definition of age is inseparable from human's definition of time based on astronomical knowledge. Taking the earth's revolution around the sun as a year, the concept of human age was born. Of course, Chinese characters themselves condensed the Chinese nation's cognition of the world, so the ancients also tried to express age with the wisdom of Chinese characters which both demonstrated politeness in a specific context and highlighted the speaker's cultural level. Therefore, the ancients used some Chinese numbers to form metonymy which can be used to refer to age. There are seven items in the corpus of this paper, as shown in **Table 8**.

Ancient Chinese literati had the habit of dismantling characters. For example, literati disassembled the character *gua* for two and eight to mark the year. Therefore, as shown in example (22), the metonymy of *po gua* refers to a girl of 16 years old. In addition, in ancient times, the heavenly stems and earthly branches cooperated with each other as the chronological period. Every sixty years is called a *hua jia*, also known as a *jia zi*. Here, *hua* is used to describe that Chinese era was intricate

**Table 8.** A list of numeric metaphonymy in age appellation

Number	Appellation	Age	Example	Source
1	<i>chu du</i> 初度	1-year-old child	The birthday of a 1-year-old child is called “the first birthday”.	<i>Preschool Education</i>
2	<i>po gua</i> 破瓜	Girls aged 16	Maybe at that time, the talented showgirls under 16 wore hair accessories; today when actors played as Dan (a young female role in Chinese Opera), they also wear hair accessories.	<i>Sheng'an Poetry</i>
3	<i>ban bai</i> 半百	50 years old	Xun Ouyang, one of the best calligrapher of Wang Xizhi's semi-cursive script, started learning calligraphy over 50 years old; even his works can be seen as perfect as god's works, it was not until he was 53 years old that he was acclaimed for his success in writing it.	<i>Miscellaneous Words of Mongolian History</i>
4	<i>da yan</i> 大衍	50 years old	<i>Da yan</i> , fifty years.	<i>Yi</i>
5	<i>hua jia</i> 花甲	60 years old	Since I had lived for more than 60 years, I will not regret it if I die now. It's just Lanying, my poor daughter, will suffer all the consequences.	<i>Ming Zhu Yuan</i>
6	<i>bai shou</i> 白寿	99 years old	Thousands of <i>bai shou</i> brought the post to the Criminal Department. Liu Ji asked for the original memorial, but they refused to give it, and Liu Ji also refused to issue it.	<i>Ming History</i>
7	<i>cha shou</i> 茶寿	108 years old	When one is in the period of <i>cha shou</i> , he has a really long longevity.	<i>Documents of History of Qing Dynasty</i>

and uneven. Thus, as shown in example (23), the metonymy of *Hua Jia* refers to the age of sixty. This is also the wisdom and embodiment of Chinese traditional culture (Lu, 2018).

(22) Haven't reached the age of 16, the girl had been enrolled into the mansion of marquess as a good singer and dancer. (Lu You, *Untitled*)

(23) In the year of 60, he stroked his white-colored beard. The world still goes round and round, and it circulates day after day, just like beads fiddled back and forth. (*Record Event of Tang Poetry*)

#### 4. Conclusion

Based on the metaphonymical mechanism of social embodiment, this paper systematically analyzes the complex age appellation system in Chinese. From the cognitive ways of the eight types of age appellations described in this paper, the reason why these age appellations can become age references is that in human experience and cognitive activities, people established cognitive relevance based on specific context and cognitive perspective. Highlighting specific features and using metonymic mechanisms to refer to age have formed the wealth of age appellation expressions in ancient China, which strongly proves the view that sociality is the essential attribute of metaphor and metonymy. We can certainly see, from the source of the corpus, that the birth, development and dissemination of these age titles are also due to the literati, poets and their works, which causes these intelligent and rich expressions to appear, develop and continue. Therefore, literary works have the function of social construction. That is to say, some expressions in ancient times are still used by people today, but some are not. For example, the expressions in *the Analects* are more commonly

used in daily language expressions and widely spread in Chinese language and culture, while the expressions in some minority works have not been widely spread in Chinese traditional culture and are no longer commonly used. However, the wisdom reflected by them is still an important part of Chinese traditional culture.

## Conflict of interest

The author declared no conflict of interest.

## Acknowledgement

The research is sponsored by the Chinese National Fund Project for Philosophy and Social Sciences “A Study on Sociality of Language Based on Cognitive Sociolinguistics” (18XYY001).

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