STRAIGHT Image Schema and Its Metaphorical Extensions: A Contrastive Study between Chinese and English

Yingjie Li
Guizhou University of Finance and Economics, China

Abstract

This paper investigates STRAIGHT image schema and its metaphorical extensions in Chinese and English in the framework of Cognitive Linguistics. Our central goal is to highlight the important role of embodied and cultural elements on the meaning formation. By observing the corpus data, we find three common variations both in Chinese and English, namely, STRAIGHT-PATH, STRAIGHT-LINK, STRAIGHT-OBJECT, and one characterized variation in Chinese, STRAIGHT-SCALE. The ratio of metaphorical usage of *zhi* in Chinese is higher than that of straight in English while straight enjoys a wider metaphorical extension than *zhi*. The findings suggest that although bodily experience serves as the general cognitive basis for the formation of image schema and its metaphorical extensions, cultural elements contribute to the language-specific preference.

Keywords: image schema, STRAIGHT, metaphorical extensions, Chinese, English

1. Introduction

Image schema is an important conceptual principle and an analytical tool to meaning construction in cognitive linguistics. As it is stored in the mind and highly abstract in structure, it can be the major structuring element of certain cognitive models by virtue of the fact that each represents a simplified abstraction of some pattern in our bodily

experience which we use as a model for conceptualizing more abstract concept of our lives (Johnson, 1987; Evans & Green, 2006). STRAIGHT schema is one of the most important image schemata in human cognition. The purpose of this article is to analyze STRAIGHT image schema and its metaphorical extensions in English and Chinese in order to uncover how it functions as a mental structure to construe abstract concepts, to find out the similarities and differences between English and Chinese speech communities when they use this schema as a mental structuring, and to explore the culture factors in metaphor choice. To do so, linguistic data used for analysis will be extracted in meta-corpus and the method of cognitive linguistics and corpus linguistics will be combined in the analysis of the texts in the concordance.

2. Cienki's Research on STRAIGHT Schema

In his article, Cienki (1998) provided evidence for his claim by reviewing research on the special role of straight lines in visual perception, by considering the relationship between spatial and force-dynamic properties of straight bodily form and movements, and of straight objects which we commonly encounter in our environment. He then discussed the use of STRAIGHT in metaphors. He examined the metaphorical expressions that draw on STRAIGHT as the source domain in English and Russian and characterized them in terms of a variety of target domains, namely, discourse, thought, order, morality, and expected social behavior. In addition to an examination of English and Russian, he also provided the use of STRAIGHT as a source domain in metaphors in non-Indo-European languages, such as Hungarian and Japanese. He claimed that there is a duality in the STRAIGHT related system—a given domain is commonly characterized by two types of metaphor: an OBJECT version and a LOCATION version. There is no exception to the system. For example, when referring to legality and morality, one's actions can be described as straight or bent objects—straight dealings—or as motion along a path, as in "to follow the straight and narrow". "The OBJECT and LOCATION metaphors of event structure are high-level mappings in that they are very general and are elaborated in many different ways in terms of different kinds of events" (Cienki, 1998, p. 139). This proves Lakoff's (1993, p. xx) view that "the high-level metaphors for event structure are the ones more likely to be shared cross-culturally, while the lower-level metaphors are more likely to vary

across cultures". He also mentioned that the straight is a symbol of masculine in many Indo-European cultures, while the round, one form of the non-straight, stands for feminine. The straight associates with strength, hardness and stability, and the non-straight is related to softness. The culturally-based stereotypes of men are rational and emotionally stable while women are intuitive and emotionally unstable. Therefore, the use of STRAIGHT reflects some cultural bias.

Although Cienki elaborated STRAIGHT schema from its embodied groundings to its metaphorical extensions, there are still some limitations in his study. First, most of the examples in his study are commonly occurring idiomatic expressions and few are naturally occurring data. The relative frequency with which these expressions actually occur in discourse should be considered in order to learn about the relative cognitive salience of the proposed metaphors in different contexts. Second, the variations of STRAIGHT schema are not described in his study, and it is still open to be completed. It should diagram and classify its variants so as to explore the working mechanism of STRAIGHT schema. Lastly, as Cienki's research mainly focused on English and Russian, in order to investigate the universal linguistic property and distinct linguistic features in different languages of STRAIGHT schema we need to extend his theory to Chinese and thus demonstrate the embodied view in cognitive linguistics.

3. Data and Methodology

To distinguish the image schema STRAIGHT and the words *straight* and *zhi* (直 in Chinese), the former shall be capitalized and the latter shall be italicized in lowercase. This study is based on the naturally-occurring linguistic data from the Chinese Corpus powered by Peking University for Chinese Linguistics (henceforth CCL)[1] and the Corpus of Contemporary American (henceforth COCA)[2]. Our search for instances of *zhi* and *straight* resulted in a concordance containing ca. 175000 and 40000 citations respectively. 10% of all the citations for *straight* or *zhi* works as a proper noun (which lack sufficient context for analysis), and 17557 instances of *zhi* and 4008 instances of *straight* formed the final corpus database as shown in Table 1.

Table 1. The number of *zhi* and *straight* retrieved from corpora and examined in the study

Word	Total	10%	Examined
zhi	178452	17845	17557
straight	41161	4116	4008

The MIP procedure (Pragglejaz Group, 2007), the procedure for metaphor identification, includes the following steps. First, establishing the meaning of *zhi* and *straight*. Four dictionaries were used in this process: the *Oxford English-Chinese Dictionary (6th edition)*, *Contemporary Chinese Dictionary (6th edition)*, *Collins Cobuild Advanced Learner's English Dictionary* and *Chinese Characters Analysis Dictionary of Form and Meaning*. The former two are historical dictionaries and are thus used to identify the old meanings. The latter two are corpus-based dictionaries, focused on contemporary English and Chinese, and thus pay special attention to metaphors. After consulting the dictionaries and the criteria for basic meanings of MIP, we found that the established meaning for *straight* is "not in a curve", for *zhi* "not curving". We then compared the contextual meaning of *zhi* and *straight* in the sentences for the basic meaning. If the contextual meaning of the given instances of *straight* and *zhi* contrasted with the basic meaning, it was marked as metaphorical.

4. STRAIGHT Schema and Its Variants

4.1 The prototypical STRAIGHT schema

Unlike mental images, which are detailed and involve recalling visual memory, image schemas are schematic and therefore abstract in nature (Green & Evans, 2006, p. 185). Cienki (1998) proposed the prototypical STRAIGHT schema according to Leyton's principles by his exploration of symmetry and asymmetry in perception and cognition (1992). Leyton's principles state that the stable nature of a straight form is in perception and straight represents one kind of prototypical symmetric form. It serves as a standard of exactness and a means to judge other things. This makes sense given its prototypical status (Cienki, 1998, p. 11).

Given that a vertical straight form, or any other oblique straight forms, may involve resistance against the force of gravity, a horizontal straight line is a more natural and stable way of presentation for the schema. Therefore, the simplest form of

a prototypical STRAIGHT schema is a horizontal straight line (as shown in Figure 1). All extended senses of straight are based on this primary schema.

Figure 1. The STRAIGHT image schema

4.2 Common variants in Chinese and English

4.2.1 STRAIGHT-PATH schema

The first common variant of the STRAIGHT schema is formed by blending with a PATH schema. The PATH schema (Johnson, 1987, pp. 113-117) contains three parts: (a) a source, or starting point; (b) a goal, or end-point; and (c) a sequence of contiguous locations connecting the source with the goal. Paths are routes for moving from one point to another. When the STRAIGHT schema combines with the PATH schema, the default of the component, the path, is considered as being straight and the straightness of the path is salient. It is shown in the following figure:

Figure 2. The STRAIGHT-PATH schema

A ●————————➤● B

Compared with the prototypical schema, an obvious feature of this schema is that the schema is internally complex. One travels, starting from point A, and moves along a straight path to point B. The different components of the schema can be profiled by the use of different lexical items.

The following instances can be understood in terms of the STRAIGHT-PATH schema:

在 这 段 大英帝国 杀 入 **直** 路 的 日子
(*zai zhe duan dayingdiguo sha ru zhi lu de rizi*)
(in this part British Empire kill in straight road of day)
"in this period the British Empire took an advantageous position"

Married life is a long, **straight**, and dusty road to the grave.

4.2.2 STRAIGHT-OBJECT schema

OBJECT schema is missing in Johnson's list, but it appears in Green and Evans' list of EXISTENCE image schemas. There are various objects in our real world, such as an apple, a table, a tree, a car or a house. In the interaction with the environment, we gradually perceive the concept of OBJECT which has a certain size and weight. When the STRAIGHT schema superimposes on the OBJECT schema, the schema is a straight object. It is an object, and its body is straight, as shown in Figure 3.

Figure 3. The STRAIGHT-OBJECT schema
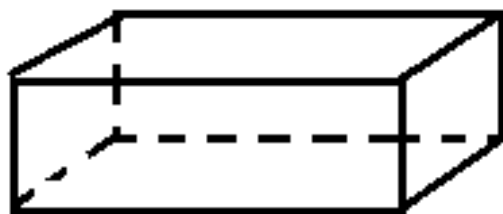
The following instances can be understood in terms of the STRAIGHT-OBJECT schema:

她　是　**直**　筒子　脾气
(*ta　shi　zhi　tongzi　piqi*)
(she　is　straight　tube　temperament)
"she is frank and outspoken"

conservative **straight** media

4.2.3 STRAIGHT-LINK schema

The second type of variants of the STRAIGHT schema is formed by combining with the LINK schema. In Chinese, a usage of *zhi* expresses the sense of LINKAGE, such as genetic connection and administration network. In English *straight* also denotes

the sense of LINKAGE, such as activities involving two participants. The LINK schema makes possible our perception of similarity. Those shared features of two or more objects are their cognitive links in our understanding (Johnson, 1987, pp. 118-119). Our lives are full of linkages. We have physical linkage with our biological mothers because they nourish and sustain us by umbilical cords. Holding hands is a concrete linkage for spatial contiguity and closeness; it is not merely physical and spatial linking between body parts and physical objects, but also non-physical and abstract linking to our society and between a series of events. Two events are linked together by temporal and casual connection. The simplest manifestation of the internal structure of the LINK schema consists of two entities (A and B) connected by a bonding structure (Johnson, 1987, p. 118). When the LINK schema is superimposed on the STRAIGHT schema, the bonding structure linking two entities becomes a straight line as shown in Figure 4.

Figure 4. The STRAIGHT-LINK schema

The following instances can be understood in terms of the STRAIGHT-LINK schema:

直 系 亲 属
(*zhi   xi   qin   shu*)
(straight tie   relative)
"blood relative"

部 **直**
(*bu   zhi*)
(ministry   straight)
"institution under the management of ministries"

straight choice

4.3 Unique variant in Chinese: STRAIGHT-SCALE schema

SCALE schema is based on the "more" or "less" aspect of human experience. People use the SCALE schema to understand quantitative amount and qualitative degree. Through the interaction, we experience our world as populated with discrete objects that we group in various ways and substances whose amount we can increase and decrease. We also experience objects and events as having certain degrees of intensity. We see our world as a massive expanse of quantitative amount and qualitative degree or intensity (Johnson, 1987, p. 122). Both the quantitative and qualitative aspects of our experience give rise to the SCALE schema. Johnson (1987, pp. 122-123) suggested that SCALE schema has some features: (a) it has a fixed directionality; (b) scales have a cumulative character of a special sort; (c) scales are typically given a normative character; (d) they can be either closed or open; (f) it is possible to impose numerical gradients on a scale. When the SCALE schema superimposes on the STRAIGHT schema, it becomes a straight line with several vectors pointing to a certain direction (as shown in Figure 5).

Figure 5. The STRAIGHT-SCALE schema

The following instances can be understood in terms of the STRAIGHT-SCALE schema:

[数量] **直**　　线　　上　　升
　　　(*zhi*　*xian*　*shang*　*sheng*)
　　　(straight　line　up　rise)
　　　" [quantity] straight climb"
[数量] **直**　　线　　下　　降
　　　(*zhi*　*xian*　*xia*　*jiang*)

(straight line　down　descend)

"[quantity] plummet"

5. Metaphorical Extensions of STRAIGHT Schema

5.1 The metaphorical extensions of *zhi*

Zhi (直) is a hieroglyphic character, indicating the action of looking. *Zhi* did not originate as a spatial concept. This is reflected in the earliest pictographic characters inscribed on oracle-bones excavated from Yin (殷, the capital of the Shang Dynasty). The earliest pictographic version of *zhi* is ✍. *Zhi* has a symbolic structure: Its primitive form is a vertical line standing on two eyes, which means looking straight upwards or ahead. It takes its shape from 目(*mu*, eye) and 丨(*gun*, linking up the upwards and the downwards). The modern form of *zhi* is a cross above an eye. The meaning of the form still reflects the action of looking at something without any obstruction.

In the corpus data, we found that *zhi* metaphorically extends into seven target domains, namely TIME, EVENT, RELATION, MORALITY, DISCOURSE, INTUITION and TRUTH. The percentage of the detected metaphorical extensions is presented in Table 2.

Table 2. The metaphorical extensions detected for *zhi*

Rank	Target Domain	Metaphorical extensions	Frequency	Percentage in metaphorical entities	Percentage in the extracted corpus
1	**TIME**	AN UNINTERRUPTED SEQUENCE IS STRAIGHT; CONTINUOUS ACTION IS MOTION ALONG A STRAIGHT PATH; IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH	12640	77.23%	72.00%
2	**EVENT**	UNCOMPLICATED ACTION IS MOTION ALONG A STRAIGHT PATH	1554	9.49%	8.85%

3	**RELATION**	DIRECT LINKAGE IS A STRAIGHT LINE	926	5.64%	5.27%
4	**DISCOURSE**	TO SPEAK IN A MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH;	462	2.82%	2.63%
		MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH			
5	**MORALITY**	MORAL BEHAVIOR IS STRAIGHT	346	2.11%	1.97%
6	**INTUITION**	INTUITION IS MOTION ALONG A STRAIGHT PATH	316	1.93%	1.79%
7	**TRUTH**	TRUTH IS STRAIGHT	123	0.75%	0.79%
/	**Total**	/	16367	100%	93.45%

5.1.1 TIME

The first and most important domain of metaphorical *zhi* is TIME. The domain of TIME can be roughly divided into two sub-domains: CONTINUITY and IMMEDIATENESS.

• CONTINUITY

Almost two-thirds of the instances within TIME domain belong to the sub-domain CONTINUITY. When *zhi* is used in this domain, it means happening or existing for a period of time without interruption. The following examples refer to continuity of an action lasting for a period of time:

(1) **直**到此时 (*zhi dao ci shi*, straight arrive this time, until now)

(2) **直**至天明 (*zhi zhi tian ming*, straight till day light, until the break of dawn)

In (1) and (1), *zhi* clearly shows a tendency to collocate with nouns which indicate a point of time. Gluckberg, Keysar and McGlone (cited in Zhou, 2001, p. 98) claimed that a common feature of the human mind is to systematically use the concept of space to express the concept of time. The conceptualization of time is common in cultures involving the metaphor TIME IS A MOVING OBJECT (Lakoff

& Johnson, 1980, pp. 41-45). The concept of time is structured in terms of motion and space. The default assumption is that this motion is straight (Cienki, 1998, p. 122). The aspect of continuity within STRAIGHT is salient when two metaphorical aspects of TIME are highlighted: its motion is along a straight line, unbroken and continuous; it is directional that a series of entities are added up through time. As in (1) and (2), the concept of time is conceptualized as a moving object, while its motion is along a straight path without interruption. These metaphorical uses are based on the STRAIGHT-PATH schema. These examples are related to the metaphor AN UNINTERRPUTED SEQUENCE IS STRAIGHT.

(3) 一**直**在想 (*yi zhi zai xiang*, one straight at think, keep thinking)

(4) 热泪**直**流 (*re lei zhi liu*, hot tear straight flow, keep weeping)

(5) 心呼呼**直**跳 (*xi huhu zhi tiao*, heart keep straight jump, the heart keeps beating)

(6) 热气**直**冒 (*re qi zhi mao*, hot steam straight exude, the steam keeps coming out)

In (3) to (6), *zhi* obviously shows a tendency to collocate with verbs that indicate a continuous action. The phrase in (3) 一直 (*yi zhi*) means "all the time". As Chinese characters are pictographs, the shape of the character 一 (*yi*) reflects how the people conceptualize continuance in time: moving along a straight path. While in (4) to (6), the actions of weeping, heart beating and steaming are uninterrupted and continuous within a period of time. These metaphorical uses are based on the STRAIGHT-PATH schema. These cases relate to the metaphor CONTINUOUS ACTION IS MOTION ALONG A STRAIGHT PATH.

• IMMEDIATENESS

The instance of IMMEDIATENESS constitutes almost one-third of the domain. When *zhi* is used in this domain, it means happening or done without delay, as shown in the following examples below:

(7) **直**接拒绝 (*zhi jie ju jue*, straight link refuse, refuse immediately)

(8) 径**直**上楼 (*jin zhi shang lou*, path straight go floor, go upstairs immediately)

(9) **直**送急诊室 (*zhi song ji zheng shi*, straight send emergency room, send to the emergency room immediately)

The *zhi* in the examples carries the sense of "without delay, at once". This use of *zhi* corresponds to the conceptualization of time as a moving object. In (7) to (9) the actions are done with no other action intervening along the metaphorical path of time between the present and the time of the action. Particularly in (9), the phrase 径直 (*jin zhi*) is obvious linguistic evidence to prove the concept of immediate action as moving along a straight path. These metaphorical uses are based on the STRAIGHT-PATH schema and relate to the metaphor IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH.

5.1.2 EVENT

The domain of EVENT can be roughly divided into five sub-domains: POLITICAL ACTIVITIES, MEANS OF TRANSPORTATION, SCIENTIFIC TECHNOLOGY, ECONOMIC ACTIVITIES, and CONTINUITY. When *zhi* is used in this domain, the meaning is "happening or done without involving other people, actions in between". The following special metaphorical extensions are detected among those instances:

POLITICAL ACTIVITIES

(10) 直选 (*zhi xuan*, straight vote, direct election)

(11) 直补 (*zhi bu*, straight supply, direct subsidy)

(12) 直报 (*zhi bao*, straight report, direct report)

TRANSPORTATION

(13) 直飞 (*zhi fei*, straight fly, direct flight)

(14) 直达 (*zhi da*, straight arrive, nonstop)

(15) 直通 (*zhi tong*, straight to)

(16) 直快 (*zhi kuai*, straight fast, express)

ECONOMIC ACTIVITIES

(17) 直营店 (*zhi ying dian*, straight sell shop, direct-sale shop)

(18) 直传销 *(zhi chuan xiao*, straight spread sell, direct selling)

(19) 直供 (*zhi gong*, straight supply)

SCIENTIFIC TECHNOLOGY

(20) 直升飞机 (*zhi sheng feiji*, straight rise plane, helicopter)

(21) 直流电 (*zhi liu dian*, straight flow electricity, direct current)

As the instances above reveal, there is no real path to follow. Instead, these events follow a metaphorical path. The motion towards a goal is not significantly altered by changes in direction or breaks in continuity, but by directly reaching the goal. With regard to political activities, the *zhi* in (10) to (12) indicates that the political events only relate to two agencies whose connection is directly linked. As for the *zhi* used in transportation, (13) to (16) are means of transportation that do not stop between the starting place and the destination. The *zhi* in (17) to (19) are marketing strategies within which a company sells its products directly to consumers other than resellers, such as department stores and third-party websites. These metaphorical uses are based on the STRAIGHT-LINK schema. The *zhi* in (20) indicates a helicopter which can take off and land vertically. This metaphoric use is based on the STRAIGHT-VERTICALITY schema. The *zhi* in (21), based on the STRAIGHT-PATH schema, reflects those electric currents flow in a constant direction. These cases relate to the metaphor UNCOMPLICATED ACTION IS MOTION ALONG A STRAIGHT PATH.

5.1.3 RELATION

(22) 直系亲属 (*zhi xi qin shu*, straight tie relative, blood relatives)

The meaning of 直系亲属 (*zhi xi qin shu*) is blood relatives, which is the relationship between members of the same family. The meaning can be understood on the basis of STRAIGHT-LINK schema. Two members of the same family are seen as two points of a link, and the relationship is construed as a straight line that links the two points. Traditional Chinese society is family-oriented. Blood ties are the link between family and state, and the foundation of human relationships in a feudal society. The Confucian school built its ideological system upon this basic interpersonal relationship. In Confucian *zhi* is understood primitively in terms of blood tie relationships (Huang, 2007, p. 18). In his view, a state is composed of all the families in its territory, and citizens should regard the state as their family. In addition to familial relationships, *zhi* is commonly used to describe direct connections in administrative management, as in the following examples:

(23) **直**辖市 (*zhi xia shi*, straight govern city, municipality directly under the Central Government)

(24) 中**直** (*zhong zhi*, center straight, under the management of the Central Government)

(25) 省**直** (*sheng zhi*, province straight, under the management of the provincial government)

In (23) 直辖市 (*zhi xia shi*) is a municipality directly under the Central Government. 中直 (*zhong zhi*) and 省直 (*sheng zhi*) are abbreviations for 中央直属机构 (institutions under the Central Government) and 省政府直属机关 (institutions under the provincial government). The administrative relationship in (24) and (25) involves only two agencies, the central/provincial government and an institution. They can be considered as two points at the ends of a link, and their link is an uninterrupted straight line. These cases are related to the metaphor DIRECT LINK IS A STRAIGHT LINE.

5.1.4 DISCOURSE

Zhi commonly occurs in specific terms within the field of discourse.

(26) **直**言 (*zhi yan*, straight speak, outspoken)

(27) **直**书 (*zhi shu*, straight write, write down the truth)

(28) **直**话 (*zhi hua*, straight talk, straight talk)

The *straight* in (26) to (27) does not refer to the shape of discourse, for discourse is such an abstract thing to describe. In the examples, the meaning of *zhi* in the context could be established as "without circumlocution; frankly; candidly". 直言 (*zhi yan*) means giving the speech without hiding the fact. 直书 (*zhi shu*) indicates writing down the truth directly. Likewise, 直话 (*zhi hua*) is an honest conversation. As Cienki (1998) claimed, the default mode of communication is to follow Grice's maxim of informationality, that is, making your contribution as informative as is required. The metaphors within this domain involve telling the truth, being honest. These examples are centered on the metaphor TO SPEAK IN A MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH.

避讳 (*bi hui*, avoid taboo, naming taboo) was a special cultural taboo in China's

ancient society. In order to show respect to people high up in the social ladder, the taboo discouraged the use of the emperor's name and those of his ancestors, the use of the names of one's own ancestors, and the use of the names of respected people. For instance, during the Qin Dynasty, in order to avoid the use of Emperor Shi Huang's given name 政 *(zheng*, policy), the first month of the year 政月 (*zheng yue*, policy month, the administrative month) was rewritten into 正月 (*zheng yue*, the upright month). The naming taboo of using emperors' names was reinforced by law and punishments. When used in the field of discourse, *zhi* can be evaluated as negative and seen as an impolite manner, as shown in the following cases:

(29) **直**呼其名 (*zhi hu qi ming*, straight call his name, to call somebody by name)

5.1.5 MORALITY

(30) 正**直** (*zheng zhi*, correct straight, integrity)
(31) 耿**直** (*geng zhi*, bright straight, candidness)
(32) **直**率 (*zhi shuai*, straight willful, frankness)

In (30) to (32), *zhi* obviously carries the meaning of moral soundness. A morally virtuous person is expected to be honest, firm and straightforward. Behavior that is undivided in one society's moral principles is *zhi*. Though *zhi* is a philological concept of truth in ancient Chinese philosophy, ancient philosophers tended to discuss truth in terms of morality as truth is a crucial ingredient within morality (Song, 2009, p. 48). The word *zhi* and the word 德 (*de*, morality) derive from the same character. The oracle *de* could be pronounced as *zhi*. 以直报怨 (*yi zhi bao yuan*, use straight repay resentment, return good for evil) in *The Analects of Confucius* was later rewritten as 以德报怨 (*yi de bao yuan*, use morality repay resentment, return good for evil). In pre-Qin literature, *zhi* was frequently used to describe the true nature of humans (Song, 2009, p. 49). Confucius believed that the concept of *Zhi* is "an honest demeanor and personality" (Feng, 1982, p. 10). It is one's real disposition, a natural flow of true feelings (Huang, 2007, p.18). In his view, *Zhi* is the human's basic character and is crucial for the process of growth (Zhou, 2005, p. 40). *Zhi* makes one's character noble. Thus, when a noble person deals with interpersonal relationships, he is guided

by *zhi*. *Zhi* is one of the expectations and merits Confucius bestowed on his disciples as well as humans. This metaphoric use is based on the STRAIGHT-OBJECT schema which is related to the metaphor MORAL BEHAVIOR IS STRAIGHT.

5.1.6 INTUITION

(33) 直观 (*zhi guan*, straight watch, perceptual intuition)

(34) 直觉 (*zhi jue*, straight feeling, intuition)

In (33), the original meaning of *zhi* derives from the action of looking at something without any block, while *guan* means the action of looking. In (34), *jue* is to perceive something by a physical sensation. In these examples, 直观 (*zhi guan*) and 直觉 (*zhi jue*) mean instinctive knowing without the use of a rational process. One possible explanation of the metaphorical use is that eyes are the most important sensory organ to perceive the external world, and the pictographic perception is very direct. *Zhi* collocates with sense words to describe human intuition. Interestingly, the English word *intuition* derives from the Latin *intueri* which means "to look upon", while the original meaning of *zhi* is "to look at something without any block". As these words evolved from cognitive concepts, users of these languages notice the important role of human visual perception. The word *zhi* emphasized a basic viewpoint of truth in ancient China: truth is the product of perception. Truth is not an abstract concept, but the fact that people can see with their own eyes. Truth is perceived and human perception is an ability to find truth (Song, 2009, p. 48). The recurrent metaphors are based on bodily experience. This metaphorical use is on the basis of STRAIGHT-PATH schema which entails the metaphor INTUITION IS MOTION ALONG A STRAIGHT PATH.

5.1.7 TRUTH

(35) 理直气壮 (*li zhi qi zhuang*, truth straight breath strong, be courageous with sufficient reasons)

(36) 是非曲直 (*shi fei qu zhi,* true false curved straight, the truth and falsehood)

In Chinese, truth is commonly perceived as objects as in idioms (35) and (36). The literal meaning of (35) is that when truth is straight one's breath is strong. The implied meaning is that one feels courageous if he has sufficient reasons to support his standing point. The idiom (36) is a combination of a pair of antonyms, true versus false, and curve versus straightness. The implied meaning of (36) is to clarify right and wrong. Truth is conceptualized as a straight object. Its linear, orderly properties are mapped into the domain of truth. By investigating *The Analects of Confucius*, Song (2009, pp. 43-50) found that *zhi* is the primitive form of the concept of TRUTH in Chinese linguistic philosophy. In classical Chinese, the word *zhi* has two implications of truth, "right" and "truth". There is a famous literary quotation in *The Commentary of Zuo*, 师直为壮 (*shi zhi wei zhuang*, army straight is strong, an army fighting for a just cause has high morale) which is the original reference for (35). 理直 (*zhi li*) is exactly 直理 (*li zhi*, straight truth). *Zhi* stands in stark opposition to its antonym 曲 (*qu*, false). The metaphorical use of *zhi* is on the basis of STRAIGHT-OBJECT schema. These examples are related to the metaphor TRUTH IS STRAIGHT.

5.2 Metaphorical extensions of *straight*

Straight originated as a purely spatial concept. It derives from the adjective use of the past participle of the Old English *streccan* "to stretch", which contains the meaning "direct, undeviating, not crooked".

In the corpus data, we found that *straight* metaphorically extends into twelve target domains, namely EVENT, TIME, TRUTH, SOCIAL NORM, DISCOURSE, CONTROL, MORALITY, HOMOGENEITY, ARTS, and CHOICE. The percentage of the metaphorical extensions detected is presented in Table 3.

Table 3. The metaphorical extensions of *straight*

Rank	Target domain	Metaphorical extensions	Frequency	Percentage in metaphorical entities	Percentage in the extracted corpus
1	**EVENT**	AN UNINTERRUPTED SEQUENCE IS STRAIGHT	747	31.9%	18.63%

2	**TIME**	AN UNINTERRUPTED SEQUENCE IS STRAIGHT; IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH	704	30.11%	17.56%
3	**TRUTH**	THOUGHT IS MOTION ALONG A STRAIGHT PATH; TRUTH IS STRAIGHT	316	13.51%	7.88%
4	**SOCIAL NORM**	SOCIAL NORM IS STRAIGHT; TO BE CONVENTIONAL IS MOTION ALONG A STRAIGHT PATH	178	7.62%	4.44%
5	**DISCOURSE**	TO SPEAK IN A MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH; MAXIMALLY INFORMATIVE SPEECH IS A STRAIGHT OBJECT	138	5.9%	3.44%
6	**CONTROL**	SERIOUSNESS IS STRAIGHT	93	3.97%	2.32%
7	**MORALITY**	SIMPLICITY IS STRAIGHT; MORAL BEHAVIOR IS MOTION ALONG A STRAIGHT PATH	74	3.16%	1.85%

8	**HOMOGENEI-TY**	UNCOMPLICATED ACTION IS MOTION ALONG A STRAIGHT PATH; UNALTERED IS STRAIGHT;	68	2.9%	1.69%
9	**LAW**	LEGAL IS STRAIGHT	9	0.38%	0.22%
10	**ARTS**	SIMPLICITY IS STRAIGHT	8	0.34%	0.20%
11	**CHOICE**	ALTERNATIVE CHOICE IS STRAIGHT	3	0.08%	0.07%
	Total	/	2338	100%	58.42%

5.2.1 EVENT

The most frequently used metaphorical extensions of *straight* is EVENTS.

(37) Santos is going **straight** to jail.

(38) No law bans these officials from moving **straight** from government into industry.

As there might be a real path to go from one place to the destination directly, in (37), a criminal can go directly to prison. However, even though the path someone follows may involve some real turns, we may describe it as *straight* if there were no stops or detours involved. This is the use of the metonymy of STRAIGHT MOTION STANDS FOR MOTION WITH NO SIGNIFICANT DETOURS (Cienki, 1998, p. 123). As shown in (38) there is a metaphorical, as opposed to concrete, path for the events to follow. The motion towards a goal is not significantly altered by changes in direction or breaks in continuity, but rather by reaching the goal directly. These metaphorical uses are based on the STRAIGHT-PATH schema. These cases are derived from the metaphor UNCOMPLICATED ACTION IS MOTION ALONG A STRAIGHT PATH.

5.2.2 TIME

The domain of TIME can be roughly divided into two domains: CONTINUITY and IMMEDIATENESS.

• IMMEDIATENESS

(39) And I just knew **straight** away that I wasn't getting any responses whatsoever.

The *straight* in the examples carries the sense of immediateness. This use of straight corresponds to one conceptualization of time common in western cultures involving the conceptual metaphor TIME IS A MOVING OBJECT (Lakoff & Johnson, 1980, pp. 41-45). The default assumption is that this motion is STRAIGHT (Cienki, 1998, p. 122). In (39) the action performed *straight away* occurs with no other action intervening along the metaphorical path of time between the present and the time of the action. This metaphorical use is based on the STRAIGHT-PATH schema. These cases relate to the metaphor IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH.

• CONTINUITY

When two metaphorical aspects of TIME are highlighted: that it is a straight line, unbroken and continuous and that it is directional in the sense that a series of entities are added up through time, the aspect of continuity of STRAIGHT is salient. As in example (40):

(40) I drank three nights **straight** after the game.

The sense of continuity is hinted at by the expression of a lasting period of time, as *three nights* in (40). This metaphorical use is based on the STRAIGHT-OBJECT schema. These examples relate to the metaphor AN UNINTERRUPTED SEQUENCE IS STRAIGHT.

5.2.3 TRUTH

Truth is often connected with logical thought. As Sweetser points out (cited in Cienki, 1998, p. 121), thought processes are often conceived of metaphorically as motion through a mental landscape and there is a culturally shared metaphor THOUGHT IS

MOTION ALONG A PATH. Consistent with this model, logical thought is understood metaphorically as motion along a straight path.

(41) We don't have this idea **straight**.

(42) I think we should get the facts **straight**.

(43) I hate it with a passion so overwhelming I can't think **straight** once it arrives.

In examples (41) to (43), *have an idea straight*, *get a fact straight* or *think straight* means to think in a logical manner or to understand something correctly. This metaphorical use is based on the STRAIGHT-PATH schema, and the *straight* in these examples derive from the metaphor THOUGHT IS MOTION ALONG A PATH. While *truth* is conceptualized as a straight object, putting an object in a logical, linear, straight order also maps into the domain of thought, as in example (44):

(44) Let me just make it **straight** in my own mind.

5.2.4 SOCIAL NORM

Straight in this domain commonly refers to tending to follow what is traditional or being considered acceptable by society in general:

(45) So you're telling me that you think this woman can get **straight** and lead a normal life?

In (45) *to get straight* has the contextual meaning of "preference to traditional styles and values" which corresponds to *lead a normal life*. These metaphors either see social norm as an object, which can be made straight, or a path, which is straight. These metaphorical uses are based on the STRAIGHT-OBJECT schema and the STRAIGHT-PATH schema. These cases relate to the metaphor SOCIAL NORM IS STRAIGHT and TO BE CONVENTIONAL IS MOTION ALONG A STRAIGHT PATH.

The use of *straight* can be extended to the domain of sex, as is in the following cases:

(46) And what you do to **straight** people, you do to gay people.

(47) GLSEN (Gay, Lesbian, and **Straight** Education Network)

In (46) and (47), being *straight* refers to the opposite of being gay. If someone is described as *straight*, it means they are heterosexual rather than homosexual. Given the fact that sexual orientation is an emotional and physical preference which has little to do with the shape of straight, the *straight* in these cases is highly metaphorical. In most cultures the primitive and conventional sexual relationship is between men and women. Being *straight* in sexual orientation is being sexually conventional. *Straight* refers to something that obeys the norm. This metaphorical use is based on the STRAIGHT-OBJECT schema. This specific meaning of *straight* is related to the metaphor SOCIAL NORM IS STRAIGHT.

5.2.5 DISCOURSE

The following special metaphorical extensions are detected in the COCA:

(48) I'm going to tell you **straight** out.

(49) Compassion and concern give way to **straight**, honest talk.

(50) no vagaries and no shadings to interfere with definitive, **straight**, orderly answers to questions

Interestingly, the nature of discourse is understood in terms of shape here. A talk can be straight and the people involved in a talk prefer a *straight talk* and prefer to hear a *straight answer*. As Sweetser discussed, the default mode of discourse is not joking, politeness or frame-bargaining. Grice's maxim of informationality—making your contribution as informative as is required—is seen as a general cultural model. STRAIGHT in the field of discourse involves telling the truth, being honest, but in a polite manner with candidness. In (48), motion along a straight path in one direction metaphorically maps in the discourse domain, and it becomes the act of speaking in a maximally informative way. This metaphorical use is based on the STRAIGHT-PATH schema. These cases relate to the metaphor TO SPEAK IN A MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH. While this metaphor concerns speech as a motion event, others as in (49)

highlight speech as an object. The *talk*, *answers* are construed as objects in (50). This metaphorical use is based on the STRAIGHT-OBJECT schema. These cases relate to the metaphor MAXIMALLY INFORMATIVE SPEECH IS A STRAIGHT OBJECT.

5.2.6 CONTROL

Some of the STRAIGHT metaphors in English relate to order and control of one's position, motion, and other aspects of behavior.

(51) conservative **<u>straight</u>** media

(52) Senior Indian strategic thinkers come to Washington, and with a **<u>straight</u>** face.

In the instances above, *straight* carries the meaning of "serious". Given that normal action, speech, and thought are characterized metaphorically as a straight object, a coherent metaphor is that SERIOUSNESS IS STRAIGHT. This metaphorical use is based on the STRAIGHT-OBJECT schema. *Conservative straight media* refers to media which tends to be geared to the American political right in content. One possible explanation for *straight face* is that compressing one's lip in a straight line can be expression of maintaining one's self-control. The expression *straight face* probably developed from the metonymy of straight lip to a straight face (Cienki, 1998, p. 125).

5.2.7 MORALITY

In the COCA, some of the metaphorical expressions of *straight* are concerned with morality:

(53) I look back at what it means to be morally **<u>straight</u>**.

(54) This is a cybercritter that can't stick to the **<u>straight</u>** and narrow.

In all the instances, *straight* has the contextual meaning of "morally virtuous". In example (53), the meaning of *straight* in the context could be established as "morally honorable". To follow *the straight and narrow* as in (54) is to lead a proper, honest and moral life. This metaphorical use of STRAIGHT is based on the STRAIGHT-OBJECT schema.

The following cases relate to the metaphor of MORAL BEHAVIOR IS MOTION ALONG A STRAIGHT PATH.

(55) BE **STRAIGHT** WITH YOUR SPOUSE

(56) We want an honest, **straight** guy who can feed and clothe her.

STRAIGHT as a source domain for metaphors of honest is obvious in COCA. The meaning of *straight* as "honest, respectable and reliable" is clear in instances (55) and (56). Being honest with one's spouse is an expected social behavior as well as a reliable statutory guardian to a child.

5.2.8 HOMOGENEITY

A substance that is homogeneous in material and texture is described as *straight:*

(57) Biralbo was drinking iceless **straight** bourbon at the Lady Bird bar.

(58) E-mail: openforumdenverpost.com (only **straight** text, not attachments)

Bourbon in example (57) is a kind of whiskey named after the area of its production. *Straight bourbon* refers to a pure undiluted alcoholic drink. The *straight* in (58) implies a requirement that there should be no attachments in the E-mail. This metaphorical use is based on the STRAIGHT-OBJECT schema. These are based on the metaphor UNALTERED IS STRAIGHT.

Some metaphors based on STRAIGHT refer to being consistent, as in the following example:

(59) She was a **straight** A student, class valedictorian.

In all these cases, *straight* has the contextual meaning of "consistency". *Straight A* in (59) literally means a student achieves A grade in all the courses they have taken. A student achieving straight A refers to doing continuous work to achieve this superior scholastic accomplishment. All of these correspond to the definition of *straight* in OED as "continuous and unbroken". This kind of metaphorical use is based on the STRAIGHT-OBJECT schema. These cases are based on the metaphor AN UNINTERRUPTED SEQUENCE IS STRAIGHT.

5.2.9 LAW

As the expected standards of behavior in a society are solidified, laws (and legal behavior) are also metaphorically construed as STRAIGHT.

>   (60) Commissioner, you're not being **straight** here.
>   (61) Kunstler claimed these supposedly corrupt cops had used Davis, and when he decided to go **straight** they tried to kill him.

STRAIGHT extends metaphorically to the field of law. In (60) being just, fair and impartial is a social norm in settling lawsuits. The commissioner failed to keep the standard behavior in the event, so his action is described as *not straight*. The illegal act in (61) is corruption and the man named Davis made up his mind to stop violating the law. His action is to *go straight*. These examples are related to the metaphor LEGAL IS STRAIGHT.

5.2.10 ARTS

Straight occurs metaphorically in specific terms in the field of dance:

>   (62) Two basic War Dance types developed in the southern Plains: The Fancy Dance and the **Straight** Dance.

In (62), the *Straight Dance* is a term for a traditional war dance of Native American pow wow. To understand this example, we have to take a look at the act of the Straight Dance. The description provided by Wikipedia is this: "The dance resembles a hunting or warring party and therefore the dancer must not dance backwards as that would symbolize a retreat from the enemy. Instead they always dance clockwise around the circle."

The *straight* in the *Straight Dance* is not identified as its literal meaning, moving in a straight line. Instead of dancing along a straight line or forming a straight shape, dancers tend to constitute a circle and dance clockwise. Compared with another basic war dance, Fancy Dance, which is "flashy, colorful and highly energetic", the Straight Dance is regarded as being more simple, dignified and formal. In these examples, position and movements of dances are understood in relation to the metaphors

MOVING FORWARD IS STRAIGHT and SIMPLICITY IS STRAIGHT.

(63) opera, ballet, **<u>straight</u>** plays, musicals.

Straight play in (63) is used in contrast to a "musical" and specifically refers to a non-musical play. One possible explanation for the use of *straight* is that *straight* refers to simplicity, for a non-musical play requires relatively less visual assistance than a musical play. The metaphor relates to SIMPLICITY IS STRAIGHT.

5.2.11 CHOICE

(64) Dole wants a **<u>straight</u>** fight with Pat Buchanan.

(65) Stable club delivers extremely **<u>straight</u>** ball flight and great forgiveness.

(66) He would play the role of Britt Reid, millionaire-cum-masked crime fighter, completely **<u>straight</u>**.

The *straight* in the three instances above refers to a fight involving only two fighters. This relates to LINK schema. Two parts form a linkage directly by a straight relation, not involving other participants. These cases relate to the metaphor DIRECT LINKAGE IS STRAIGHT.

Although only three examples were found, further Internet research revealed that when *straight* collocates with choice, *straight* refers to a choice only involving two things, as in (67).

(67) A **<u>straight</u>** choice David Cameron writes in the Telegraph: "This is the straight fight next May: The Conservatives or Labour. Me, or Ed Miliband."

5.3 Comparison of the metaphorical extensions of *zhi* and *straight*

One of the aims of this study is to compare the metaphorical uses of *zhi* and *straight*. In this corpus-based comparison of metaphors of STRAIGHT in English and Chinese, both similarities and differences were found. *Zhi* and *straight* all have a spatial meaning, the shape of a straight line. The question is whether the similarity is also reflected in the metaphorical uses of *zhi* and *straight*.

If we compare the findings listed in Table 2 and Table 3, some general observations can be made:

(1) The percentage of *zhi* with metaphorical extensions was 93.45%, which is much higher than the 58.42% of *straight*. This demonstrates from a statistical perspective that *zhi* was used metaphorically more often than *straight*.

(2) According to these tables, the five target domains, namely TRUTH, MORALITY, DISCOURSE, EVENTS, and TIME, are found in both Chinese and English. An overview of the comparison of *zhi*'s and *straight*'s target domains is presented in Table 4. Although Chinese and English are different languages associated with distinct cultures, *zhi* and *straight* (two correspondent words referring to the concept of STRAIGHT) mapped onto five common target domains produce remarkably similar metaphorical extensions. Here arises another question: are there in fact differences between *zhi* and *straight* in some domains? By comparing the statistics in Table 2 and Table 3, we observed that:

(3) The target domain ranked first in terms of frequency in Chinese was the domain of TIME, which ranked second in English. TIME held an overwhelming percentage of 72% in the Chinese corpus. *Zhi* is mainly used in Chinese to indicate time. However, when *zhi* carries the meaning of time, it is always collocated with particular words to form a fixed expression. For instance, *yi* (一) is collocated with *zhi* to express "last a period of time" and *zhi* is collocated with *dao* (到) to mean "until". When *straight* is metaphorically used to express time, sometimes it may not have to collocate with other words. The metaphorical extensions AN UNINTERRUPTED SEQUENCE IS STRAIGHT and IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH occurred in both languages. These metaphorical extensions related to the STRAIGHT-PATH schema. The metaphors and the image schema indicate that both *zhi* and *straight* tend to use a dynamic model to understand the passing of time. Both Chinese and English tend to conceptualize time as motion along a straight path.

Table 4. The target domain of *zhi* and *straight*

	Target domain	*zhi*	*straight*
1	RELATION	+	—
2	INTUITION	+	—
3	TRUTH	+	+

4	MORALITY	+	+
5	DISCOURSE	+	+
6	TIME	+	+
7	EVENTS	+	+
8	SOCIAL NORM	—	+
9	CONTROL	—	+
10	ARTS	—	+
11	CHOICE	—	+
12	LAW	—	+
13	HOMOGENEITY	—	+

(4) EVENTS domain ranked the first in English, as high as 18.63%, while it held second place in Chinese, making up 8.85% of the Chinese corpus. *Straight* had an obvious tendency to be metaphorically used to describe the state of events. UNALTERED IS STRAIGHT, AN UNINTERRUPTED SEQUENCE IS STRAIGHT and IMMEDIATE ACTION IS MOTION ALONG A STRAIGHT PATH occurred in English as the metaphorical extensions, whereas in Chinese the only metaphorical extension was UNCOMPLICATED ACTION IS MOTION ALONG A STRAIGHT PATH. *Straight* used both static and dynamic models to interpret events, but *zhi* only adopted the static model. The STRAIGHT-PATH schema helped to understand events in both languages, while the STRAIGHT-OBJECT schema facilitated English to understand events as well.

(5) *Zhi* and *straight* are both metaphorically applied to the domain TRUTH. While in English this domain came in at third place, TRUTH occupied the bottom in the Chinese list. However, their metaphorical extensions are different, TRUTH IS STRAIGHT is presented in both English and Chinese while THOUGHT IS MOTION ALONG A STRAIGHT PATH only appears in English. TRUTH is viewed metaphorically as a solid, straight object in English whereas Chinese tends to understand truth according to the static mode.

(6) An obvious resemblance exists between *zhi* and *straight* in the domain of DISCOURSE. The metaphorical extensions TO SPEAK IN MAXIMALLY INFORMATIVE WAYS IS TO TRANSFER WORDS ALONG A STRAIGHT PATH and THE MAXIMALLY INFORMATIVE WAY IS TO TRANSFER WORDS ALONG A STRAIGHT PATH appear in both languages. Both languages appeared to

understand discourse in term of the STRAIGHT-PATH schema and dynamic model is pervasive in both. While in Chinese DISCOURSE domain ranked fourth, it fell to fifth place in English.

(7) Morality domain ranked seventh in English and fifth in Chinese. A stark contrast of metaphorical extensions can be seen in this domain. In English the metaphorical extensions were SIMPLICITY IS STRAIGHT and MORAL BEHAVIOR IS MOTION ALONG A STRAIGHT PATH. In Chinese the metaphor was MORAL BEHAVIOR IS STRAIGHT. It seems that Chinese tends to conceptualize MORALITY with regard to the STRAIGHT-OBJECT schema and English uses both the STRAIGHT-OBJECT and STRAIGHT-PATH schema.

In Chart 1 the frequencies of the five common target domains found with *zhi* and *straight* are put together for comparison. It gives us a clear picture of the contrast between the two.

Taking a traditional view, the selection of sources assumed an objective, literal, and preexisting similarity between the source and the target. The cognitive linguistic view holds that the selection of source domains depends on human factors that reflect non-objective, non-literal and non-preexisting similarities between a source and a target domain (Kovesces, 2010, p. 88). Conceptual metaphors arise from a variety of human experiences, including correlations in experience, various kinds of nonobjective similarity and biological and cultural roots shared by two concepts (Kovesces, 2010, p. 79). This would suggest that the potential universality of the metaphors could be motivated by similar direct bodily experience. Metaphors are based on our experience: abstract notions are understood in terms of concrete ones that are typically situated in areas of bodily and physical experience. One person can easily perceive the concept of STRAIGHT by feeling one's limbs, tensing one's muscles and keeping one's limb straight, observing a tree trunk, looking at a horizontal line, or touching a straight wall. Although Chinese and English are spoken in different parts of the world, the experiences of STRAIGHT are identical. Leyton's (1992, pp. 9-10) psychological research findings of the perception of symmetry and asymmetry shed lights on the similar embodiment of STRAIGHT. Straightness is a specific salient value in visual perception and plays a significant role in bodily experience.

Chart 1. The percentages of the common target domains of *zhi* and *straight*
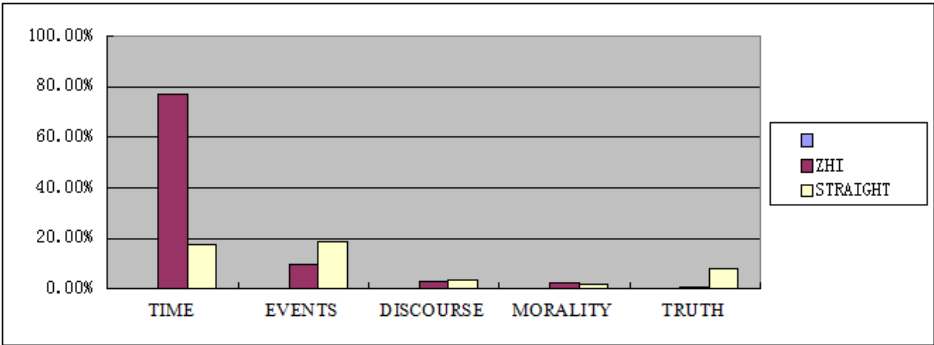
The universality of these STRAIGHT metaphors can be found at the generic level. Cienki (1998, p. 139) observed that many metaphors of straight are coherent with one general metaphor: UNALTERED IS STRAIGHT. This metaphor characterizes the metaphorical straight path or straight form in accordance with American cultural models of speech, thought, time and behavior as the default value and the status quo (Cienki, 1998, p. 140). As the results of the study showed, the STRAIGHT-PATH schema was the most pervasive one applied to understand abstract concepts. Our bodies are normally in straight position when we walk. In our experience of bodily motion, straightness characterizes uncomplicated or default motion, as a straight line is the shortest path between two points (Denayer, 2011, p. 69). This is the basis for the STRAIGHT-PATH metaphors. These metaphorical uses can be found both in Chinese and English.

As for the different domains *straight* and *zhi* mapped onto, we observed from Table 6 that:

(8) The target domains of RELATION and INTUITION only exist in Chinese and the target domains of SOCIAL NORM, CONTROL, ARTS, CHOICE, HOMOGENEITY and LAW only appear in English. The STRAIGHT schema has wider metaphorical extensions in English than it does in Chinese. Broader culture context brings about cultural variation in metaphor (Kovesces, 2010, p. 218).

The origin of *zhi* and *straight* is one of the causes for different target domains. The original meaning of *zhi* is "to look at something without block", referring to the visual action and closely relating to visual sense. Vision is of great importance in human perception. In Leyton's (1993) study, the role of straight lines in our visual perception is emphasized. As straightness is a salient visual value, straight lines are perceived

more quickly than bent or curved lines. Thus, the source domain ZHI maps onto the target domain INTUITION. *Zhi* highlighted an essential notion in ancient Chinese philosophy about truth: truth is the result of human perception. *Zhi* also underlined the important role of perception in problem solving. In ancient Chinese philosophy the views of truth reflected in *zhi* is intuitionism, not logicism, which stands in stark contrast to ancient Western philosophy (Song, 2009, p. 48). *Straight* evolved from the Old English *streccan*, which means "to stretch". To stretch is to put your arms and legs out straight. The process of stretching involves controlling one's body by tightening muscles. For instance, when we walk we are in a straight position for the majority of our life. The important role of straightness in our bodily experience is highlighted. The source domain STRAIGHT maps onto the target domain CONTROL. According to Leyton's Symmetry Principle, symmetry is associated with the norm and default state while asymmetry points to a change. Straightness is the norm while crookedness is not. Being conventional implies an avoidance of change in every aspect. The source domain STRAIGHT maps onto the target domain SOCIAL NORM. The recurrent metaphors are related to bodily experience.

Different cultural traditions are another reason for the dissimilarities. As Johnson (1993, p. 4) states, there is a cultural model of moral law that is a part of American culture which is grounded in Judeo-Christian tradition according to which moral reasoning involves applying moral laws or rules. Thus, many people make decisions about moral issues by trying to conform to moral laws which they perceive as absolute. In a natural environment, exact straight forms are less common than non-straight forms, while straight forms are much more common in the man-made environment. By doing so, we exert control over nature and reach a state of order. More abstractly, man-made institutions like law system are ways to impose order (Denayer, 2011, p. 71). The source domain STRAIGHT maps onto the target domain LAW. Specifically, in Chinese the source domain STRAIGHT maps onto the target domain RELATION. Traditional Chinese culture motivates this use of metaphor. In the feudal society, the basic social unit is the family, thus most interpersonal relationships bond with blood ties. The society is family-oriented and the Confucian school began its ideological system from this basic blood tie relationship. The meaning of close relationship can be found in various expressions containing *zhi*. Two members in a family or two institutions are seen as two points, and the blood tie or

administrative relationship is considered metaphorically as a straight line linking the two points.

Borrowing from other cultures and innovative use are other ways to expand metaphor extensions. Straight Dance is a style of native American pow wow dancing. "Never dance backward" is the key rule of the dancing and people used to call the rule *straight*. This metaphorical use of *straight* in American English came from the native American use of language, which did not directly link to the bodily experience or culture of English language users. By means of borrowing, the source domain STRAIGHT mapped onto the target domain ART. Deignan (2005, p. 40) set the rule for finding innovative metaphor: any sense of a word that is found less than once in every thousand citations of the word can be considered either innovative or rare. We found three instances in the corpus referring to activities that involve only two participants and classified them into the target domain of CHOICE. As for this metaphorical use of *straight*, the user highlighted the components of a straight form, two points at the end of a straight form. Two participants were seen as the very two points to understand the metaphors related to alternative choice.

6. Conclusion

This paper explored STRAIGHT image schema and its variants between Chinese and English within a cognitive linguistic framework. Similar bodily experiences are the most fundamental motivation for the prototypical STRAIGHT schema. The detailed comparative analysis of the corpus data of *zhi* and *straight* showed that they occur metaphorically in many different domains. The meaning of *zhi* and *straight* in a certain phrase was often strongly connected to the specific collocation it participated in. The conventional meaning associated with a particular word is a prompt for the process of meaning construction. In this way the metaphorical projections are not arbitrary and they influence human reasoning.

7. Further Research

The complete analysis of *zhi* and *straight* has provided us with some insights as regards STRAIGHT in Chinese and English, but these are insufficient to account for a

representative reconstruction of the culture model for STRAIGHT. As a consequence, in further research a more detailed analysis of lexicon for STRAIGHT should be considered. Among the lexemes that could be engaged in the further study, a few central ones should be highlighted: Chinese 端 (*duan*, upright), 行 (*hang*, line), 横 (*heng*, horizontal), 竖 (*shu*, vertical), 正 (*zheng*, upright) or 立 (*li*, erect); English *erect*, *plain*, *even*, *horizontal*, *level*, *upright*, or *vertical* to name a few. By contrast, this study opens the door for the analysis of the opposite form and experience of STRAIGHT. In the study of straightness, it can be contrasted with the descriptions of curve, crookedness and unevenness. Some of the lexis that could be engaged in the further study, like Chinese 曲 (*qu*, curve), 弯 (*wan*, crooked), 歪 (*wai*, askew), English *bent*, *curve*, *twist* or *zigzag*.

Notes

1   The corpus can be accessed at http://ccl.pku.edu.cn:8080/ccl_corpus/.

2   The corpus can be accessed at https://www.english-corpora.org/coca/.

References

Cienki, A. (1998). STRAIGHT: An image schema and its metaphorical extensions. *Cognitive Linguistics,* (9), 107-149.

Deignan, A. (2005). *Metaphor and corpus linguistics*. Amsterdam/Philadelphia: John Benjamins.

Denayer, K. (2011). *Metaphorical extensions of the spatial adjectives crooked, square and round* (Master thesis, University of Gent).

Dewell, R. (2005). Dynamic patterns of CONTAINMENT. In B. Hamper (Ed.), *From perception to meaning: Image schemas in cognitive linguistics* (pp. 369-393). Berlin/New York: Mouton de Gruyter.

Evans, V., & Green, M. (2006). *Cognitive linguistics: An introduction*. Edinburgh: Edinburgh University Press.

Huang, Y. (2007). Confucius' view of "chih" and its contemporary value. *Journal of Nanchang University,* (4), 18-22.

Johnson, M. (1987). *The body in the mind: The bodily basis of meaning, imagination, and reason*. Chicago: The University of Chicago Press.

Kovecses, Z. (2010). *Metaphor*. Oxford: Oxford University Press.

Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind*. Chicago: The University of Chicago Press.

Leyton, M. (1992). *Symmetry, causality, mind*. Cambridge, MA: MIT Press.

Pragglejaz Group. (2007). MIP: A method for identifying metaphorically used words in discourse. *Metaphor and Symbol,* (1), 1-39.

Song, J.-L. (2009). The linguistic philosophical explanation of ZHI: An original concept of truth in classic Chinese philosophy. *Culture of Chinese Character,* (2), 43-50.

Zhou, H.-C. (2005). The philosophical meaning of ZHI in *The Analects of Confucius*. *History of Chinese Philosophy,* (3), 39-46.

(Copy editing: Alexander Brandt)

About the author

Yingjie Li (qbx20190049@yjs.fjnu.edu.cn) is a lecturer at Guizhou University of Finance and Economics, China. Her research fields include image schema, cognitive metaphor, and corpus linguistics.