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Primary metaphors: Importance as size and weight in a comparative perspective

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ABSTRACT

This is a linguistic study of two primary metaphors with the same target-domain concept, *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT,"* in English and Chinese. It is suggested that these two primary metaphors are derived from the *OBJECT* image schema, abstracted from our embodied, sensorimotor experience, especially our visual and tactile perception, in dealing with physical objects in everyday life. The study focuses on size and weight adjectives in both languages and on linguistic evidence in two areas: their lexicalizations of the importance senses as found in the dictionaries, and their roles in the instantiation of the two primary metaphors in natural discourse as found in the corpora. Our further analysis also shows that the primary metaphors can be manifested without explicit use of size and weight words when relevant conceptual frames in the source, evoked by other words or images, are mapped onto the target domain, thus activating the relevant region of our encyclopedic knowledge and triggering off the primary metaphors in our conceptual system. We also construct a hypothetical mapping scheme for primary metaphors based on the *OBJECT* image schema, in which *OBJECT* is mapped onto its target via three of its fundamental dimensions: *SIZE, WEIGHT*, and *SOLIDITY*. It is hoped that this mapping scheme will benefit future comparative studies of primary metaphors across languages and cultures in a more systematic way.

Introduction

According to conceptual metaphor theory (CMT) of Cognitive Linguistics, a conceptual metaphor is a partial mapping, with a set of correspondences, across two conceptual domains, a source domain and a target domain, such that we can reason and talk about the target domain in terms of the knowledge and language associated with the source domain (Lakoff, 1993; Lakoff & Johnson, 1980). A later version of CMT distinguishes between complex metaphors and primary metaphors (Grady, 1997a, 1997b, 1999, 2005; Lakoff & Johnson, 1999, 2003; see also Lima, 2006; Valenzuela, 2009). Complex metaphors are conceptual patterns that can be decomposed into more basic metaphorical mappings called primary metaphors. Primary metaphors, on the other hand, are based on direct correlations between two distinct dimensions of our recurring embodied experiences in specific scenarios known as primary scenes (Grady, 1997a; Lakoff, 2012). In other words, primary metaphors, with their simple mapping schemes, directly link two kinds of experience: sensorimotor experience (e.g., *WARMTH, CLOSENESS*) and subjective experience (e.g., *AFFECTION, INTIMACY*) that co-occur regularly in specific situations, giving rise to a mental connection between two conceptual domains. Thus, for instance, when parents hold their children affectionately, the experiences of affection and warmth correlate, yielding the primary metaphor *"AFFECTION IS WARMTH."* Also,

people in an intimate relationship are often in close proximity with each other, thus giving rise to the primary metaphor *"INTIMACY IS CLOSENESS,"* grounded again in the recurrent experiential correlation. This kind of experiential correlation, typically characteristic of primary metaphors, is referred to in CMT as metonymic basis, or metonymic motivation, of conceptual metaphors (see, e.g., Barcelona, 2000; Radden, 2000). This is because, in traditional terms, metonymy is based on the relationship of association or adjacency between the two elements involved.

According to the more recent neural theory of metaphor, or neural theory of thought and language (NTTL) in general, primary metaphors emerge from repeated simultaneous activations of the two brain regions, which lead to the connections of these two distinct neural areas via neural mapping circuits, as the source and target domains of primary metaphors (Lakoff, 2008, 2012). It is hypothesized that primary metaphors tend to be more widespread, or even universal, because they are rooted in embodied experiences common among different cultures. In contrast, complex metaphors are less likely so because they can be composed of primary metaphors in combination with different cultural frames and beliefs, which will give rise to different metaphor systems (Lakoff, 2008).

Since the construct of primary metaphor was incorporated into CMT two decades ago, it has been applied to research in different disciplines. For instance, it has been employed to analyze how abstract ideas are expressed metaphorically with particular filming techniques and designs in feature films and TV commercials as part of multimodal communication (e.g., Forceville & Renckens, 2013; Ortiz, 2010, 2011, 2014; Winter, 2014; Yu, 2011a, 2011b). It has been utilized to study the political philosophy of a Korean ruler in history (Lovins, 2012) and the theorization of social organizations (Cornelissen & Kafouros, 2008). It has been applied even to the studies of user interface design of interactive products (Hurtienne, 2009; Hurtienne et al., 2010).

In more than the past decade, some psychologists, especially social psychologists, have carried out a large number of experimental studies that confirm various experiential correlations as being psychologically real. Such correlations between two kinds of embodied experience include those between valence and verticality (Casasanto & Dijkstra, 2010; Crawford, Margolies, Drake, & Murphy, 2006; Meier & Robinson, 2004), valence and size (Meier, Robinson, & Caven, 2008), valence and cleanness (Lee & Schwarz, 2010; Schnall, Benton, & Harvey, 2008; Zhong & Liljenquist, 2006), affect and brightness (Meier, Robinson, & Clore, 2004; Meier, Robinson, Crawford, & Ahlvers, 2007), power and verticality (e.g., Meier & Dionne, 2009; Schubert, 2005), power and size (Schubert, Waldzus, & Giessner, 2009), conceptual similarity and spatial proximity (Casasanto, 2008), social relation and physical temperature (IJzerman & Semin, 2009, 2010; Williams & Bargh, 2008b; Zhong & Leonardelli, 2008), social relation and spatial distance (Williams & Bargh, 2008a), importance and weight (Ackerman, Nocera, & Bargh, 2010; Jostmann, Lakens, & Schubert, 2009; Schneider, Rutjens, Jostmann, & Lakens, 2011), difficulty and weight (Gibbs & De Macedo, 2010), and so on. Relevant studies were also reviewed, for instance, by Crawford (2009), Landau, Meier, and Keefer (2010), and Meier and Robinson (2005). While the results of these experimental studies lead to somewhat different interpretations, they, in general, are seen as lending support to the theory of primary metaphor as a grounded, embodied theory of human cognition, according to which thinking abstractly involves mental simulation of bodily experiences in metaphorical terms (e.g., Gallese & Lakoff, 2005; Gibbs, 2006a, 2006b; Gibbs, Lima, & Francozo, 2004; Lakoff, 2008, 2012; Matlock, 2004; Zwaan, 2009; Zwaan & Taylor, 2006). Although proposed as a critical construct in CMT two decades ago, as some studies have suggested, primary metaphor's exact nature and behavior, its cognitive function and effect, and its usefulness for application, as well as its relations with experiential correlations, are still not so clear and therefore call for further research (see, e.g., Chandler, Reinhard, & Schwarz, 2012; Hutchinson & Louworse, 2013; Lakens, Semin, & Foroni, 2011, 2012; Lima, 2006; Louwerse, 2008; Madsen, 2016; Rydning & Lachard, 2011; Sullivan, 2013b, 2015).

From our vantage point, in particular, there have not been many systematic linguistic studies of primary metaphors, especially from a cross-linguistic perspective. The questions of whether, and to what extent, primary metaphors are more likely to be universal across languages and cultures, and of how they manifest themselves linguistically, and how they are related to one another, in various

Table 1. Two primary metaphors of *IMPORTANCE* with opposing values.

Primary metaphors	*"IMPORTANCE IS SIZE"*	*"IMPORTANCE IS WEIGHT"*
Positive versions	*"IMPORTANT IS BIG"*	*"IMPORTANT IS HEAVY"*
Negative versions	*"UNIMPORTANT IS SMALL"*	*"UNIMPORTANT IS LIGHT"*

languages, remain to be answered. In this article we present a cognitive semantic study of two interrelated primary metaphors, which both have *IMPORTANCE* as their target concept, and which each have two parametric versions with opposing values as shown in Table 1. According to Grady (1997a), the experiential motivation of these two primary metaphors is the correlation between the size or weight of objects and the value they represent as we interact with them. Thus, for instance, the English word *size* can refer to the quality or status of a person or thing especially with reference to importance (online *Merriam-Webster*), and *weight* can refer to the importance attributed to something (online *Oxford*). For our study, our general research question is: How are these primary metaphors manifested linguistically in English and Chinese, the two genetically unrelated languages?

According to CMT (Lakoff, 1993), conceptual metaphors are manifested linguistically at two different levels. At the lexical level, lexical items from the source domain may or may not have conventionally lexicalized senses in the target domain. Even if they do not, the knowledge structures associated with them can still be mapped by conceptual metaphors onto the target domain as inference patterns at the level of discourse. For our study, therefore, we formulate two more specific research questions: (a) To what extent in the two languages under study do lexical items in the source domain have conventionally lexicalized senses in the target domain? (b) How are lexical items from the source domain used with target-domain senses in natural discourse in the two languages under study?

We attempt to answer these two questions in the next two sections with regard to English and Chinese separately. We will then carry out some further analysis in the fourth section. In this section we will also attempt to propose a hypothetical mapping scheme based on the *OBJECT* image schema in hopes that it will benefit future studies of primary metaphors. We will reach a brief conclusion in the final section.

Importance as size and weight in English

In order to find out to what extent source-domain words have conventionally lexicalized senses in the target domain in English, we relied on two online English dictionaries: *Merriam-Webster* and *Oxford*. For our study, we chose some common English adjectives of size as listed in Table 2. In this table, the spatial senses related to "size" are listed as "1" whereas the abstract senses related to "importance," if any, are listed as "2." We modified some definitions to save space, retaining only the parts most relevant to "size" and "importance." In *Merriam-Wester*, which provides definitions of different kinds, simple and full, and those defined for children and English learners, we looked through all of them and listed in Table 2 what we think are relevant to our discussion. As Table 2 shows, both positive and negative adjectives of size have conventionally lexicalized senses of "importance" to a large extent, at 75%. Only *huge* in *Webster*, *large* in *Oxford*, and *tiny* in both of them do not have such senses listed. It can be assumed, however, that their "importance" senses are realized, in each case, in discourse by being (near) synonyms of the other three adjectives. It is worth mentioning that *slight*, primarily an adjective in lexical category, has also been converted to a transitive verb, as is shown in its definition 3. Although the *Oxford* definition is somewhat different from the corresponding one in *Webster* in that the word *unimportant* is not explicitly used in it, it is still listed here in the table because the two definitions may be more or less equivalent in sense.

In the following, we cite examples from the Corpus of Contemporary American English (COCA) to show how these adjectives of size are used with the sense of importance in actual discourse. The

Table 2. Relevant "size" and "importance" senses of some common English adjectives in online *Merriam-Webster* and *Oxford*.

Words	Webster	Oxford
big	1. large or great in dimensions or bulk; large in size 2. of great importance or significance; important or significant	1. of considerable size 2. of considerable importance or seriousness
large	1. exceeding most other things of like kind especially in size; great in size: BIG 2. not limited in importance	1. of considerable or relatively great size
great	1. notably large in size: HUGE; very large in size; very big 2. very important	1. of an extent considerably above average 2. important or most important
huge	1. very large; of great size or area	1. extremely large 2. of great importance or seriousness
small	1. little in size 2. not very important	1. of a size that is less than normal or usual 2. unimportant; insignificant
little	1. not big; small in size: TINY 2. small in importance: TRIVIAL	1. small in size 2. relatively unimportant or trivial
slight	1. having a slim or delicate build 2. deficient in importance: TRIVIAL 3. treat as unimportant: make light of	1. (of a person) not sturdy; thin or slender 2. rather trivial 3. Insult (someone) by treating or speaking of them without proper respect or attention
tiny	1. very small	1. very small

three examples in (1) contain *big*, which can be seen as the prototype of adjectives denoting the positive value of size.

(1) a. ... some of the commentators are saying this may be as important as two other **big** events in modern Greece history ...
   b. Saving our city's trees is very important—a **big** part of effective urban planning.
   c. This is a **big** issue, of equal importance to health security, energy security, and national security.

In all three examples the word *big* instantiates the underlying primary metaphor, *"IMPORTANT IS BIG."* In fact, such instantiations are also found in some idiomatic expressions that have relatively high frequencies in COCA, such as *big deal* "something of special importance" (5,893 singular + 105 plural), *big fish* "a well-known or important person" (778 singular + 8 plural), and *big shot* "a powerful or important person" (341 singular + 222 plural).

(2) a. Foreign policy may not be a **large** issue in the U.S. campaign.
   b. He had always been proud of his brother's achievements and was glad to be there to witness this **great** occasion.
   c. "This could be a **huge** decision," said Shea Denning...

The three examples in (2) show how *large, great*, and *huge*, as words of positive size, can mean "important" in natural discourse regardless of whether their "importance" sense is conventionally lexicalized as provided in the online *Webster* or *Oxford* (see Table 2). In the next three examples in (3), the adjective *small* can be seen as instantiating the negative version of primary metaphor, *"UNIMPORTANT IS SMALL."*

(3) a. Within the Bush cabinet, Paul O'Neill had a **big** title and a **small** role.
   b. These were **small** points, probably insignificant, but they bothered him.
   c. ... I fear that my sister-in-law has bothered you needlessly with the **small** matters of my household.

Table 3. Relevant "weight" and "importance" senses of three English adjectives in online *Merriam-Webster* and *Oxford*.

Words	Webster	Oxford
weighty	1. having a lot of weight: HEAVY (a *weighty* book) 2. of much importance or consequence (*weighty* issues)	1. weighing a great deal; heavy (a *weighty* tome) 2. of great seriousness and importance (*weighty* considerations)
heavy	1. having a lot of weight (*heavy* metals) 2. important and serious (a *heavy* politician)	1. of great weight (a *heavy* load) 2. very important or serious (a *heavy* discussion)
light	1. having little weight; not heavy 2. of little importance: TRIVIAL	1. of little weight; not heavy (*light* as a feather) 2. not important (make *light* of = treat as unimportant)

Also, *small* is found in some idiomatic expressions, in which it means "unimportant," such as *small potato* "one that is of trivial importance" (143 plural + 14 singular) and *small beer* "something of small importance" (18 singular + 2 plural). The examples in (4) show how *little, slight*, and *tiny* can instantiate *"UNIMPORTANT IS SMALL."*

    (4) a. All of the **little** things really do add up to make a big difference.
        b. A few patients with brain stem attacks have emotional lability. The **slightest** thing can make them laugh or cry…
        c. He remembers reading somewhere that the **tiny** unimportant details are what convince us…
        d. I would like to make sure that Dr. Bland is not **slighted** in her accomplishment.

As shown in the two online dictionaries, the adjective *little*, when meaning "lacking importance," has a number of synonyms such as *insignificant, inconsiderable, inconsequential*, and *negligible*. All of them are related to *unimportant*, more or less closely. Similar observation can apply to *slight* and *tiny*, too. In (4c), where *tiny* occurs in conjunction with *unimportant*, can be seen as a case in which two synonyms are used together for emphasis. Example (4d) is one in which *slight* has undergone the morphological process of conversion and is used as a transitive verb meaning "treat as unimportant" (i.e., definition 3 in Table 2).

Now, we turn to the source domain of *WEIGHT*. For our study, we selected three common weight adjectives, two positive and one negative, as listed in Table 3. In this table, all three adjectives have conventionally lexicalized senses in the metaphorical target domain of *IMPORTANCE* (i.e., with a 100% rate of metaphorical extension in this particular direction).

In the following, we cite some examples from COCA to show how these weight adjectives are used in natural discourse to mean "important." The three examples in (5) contain the three adjectives in Table 3, respectively.

    (5) a. A blog is just a stack, an undifferentiated stack of news. You can't tell the trivial from the **weighty.**
        b. But he admits to realizing that the job of president comes with unimaginably **heavy** responsibilities.
        c. He limited himself to **light** conversation, interspersed with compliments.

It is worth pointing out that the primary metaphor *"IMPORTANCE IS WEIGHT"* is manifested in more varied linguistic forms, as illustrated by the examples in (6)

    (6) a. Therefore, these results **provide added weight** to our findings…
        b. When parents buy a house, some aspects of their children's future **weigh heavily** in their decision.
        c. They were worried that Kaczynski's mental illness would be **taken heavily** into account by jurors considering whether to sentence him to death or to a lesser penalty.

    d. …Cecil inevitably put on one of the old classical **heavies** like Mozart or Beethoven in hopes of calming her down.

    e. George Clooney may be one of Hollywood's biggest **heavyweights** but, even he couldn't get his pals up to standing up against the Sony hackers.

In (6a) it is the nominal form *weight* that is used in the collocation *provide added weight*, where *weight* means "importance." Similar collocations include *carry (…) weight, add (…) weight*, and *attach (…) weight*. In (6b), the verbal form *weigh*, which means "to merit consideration as important," is used in collocation with the adverb *heavily*, and together they carry the meaning that some aspects of their children's future are taken as very important in the parents' decision on buying a house. A similar interpretation can be made on the collocation *be taken heavily into account* in (6c). In (6d) and (6e) the nominal forms of *heavies* and *heavyweights* both refer to very important and powerful people.

  (7) a. I do not **make light of** poverty; there is too much of it in this city and in this country.

    b. Many ministries were led by political **lightweights** who were appointed solely to keep Chatichai's coalition together.

    c. …because it's a most important decision; certainly not one to be **taken lightly**…

The examples in (7) contain the adjective *light* and its corresponding adverb *lightly*. In (7a) the idiomatic collocation *make light of* means "treat as unimportant." In (7b) the compound noun *lightweights* refers to "people who have little importance or power." In (7c), the collocation *be taken lightly* means "be treated carelessly" or "not to be treated seriously." In this case, the metaphorical sense of importance is just related in that, when something is not treated seriously, or is treated carelessly, it is because it is taken as something unimportant in the first place.

As we have seen in this section, some common English adjectives of size and weight have mostly lexicalized their senses of importance. Those that have not can have their "importance" senses realized in discourse as synonyms of those that have. Thus, our linguistic study in English, both at the lexical level with the help of online English dictionaries and at the level of natural discourse with examples cited from COCA, confirms the linguistic manifestation of the primary metaphors "*IMPORTANCE IS SIZE*" and "*IMPORTANT IS WEIGHT*" in English. At this point, we want to turn to Chinese for a comparative perspective.

Importance as size and weight in Chinese

For a comparative study in Chinese, we rely on three authoritative dictionaries to find out to what extent Chinese adjectives of size and weight have lexicalized senses in the domain of importance. The first of these three is an online dictionary: 汉语大辞典*Hànyǔ Dà Cídiǎn* "The Grand Dictionary of Chinese Language" (HYDCD, 2002). This is by far the most comprehensive Chinese dictionary of the three (and its hard-copy counterpart 汉语大词典 is massive with 12 volumes). The second is the Chinese-English edition of 现代汉语词典*Xiàndài Hànyǔ Cídiǎn* "The Contemporary Chinese Dictionary (Chinese-English Edition)" (XDHYCD, 2002). This is a bilingual dictionary with all the Chinese definitions and examples translated into English. The third and last one is 新时代汉英大词典 *Xīn Shídài Hàn-Yīng Dà Cídiǎn* "New Age Chinese-English Dictionary" (XSDHYDCD, 2004), which has all the words defined in English and Chinese examples translated into English.

We found that only two pairs of basic antonyms, one in the source domain of SIZE and one in that of WEIGHT, are relevant to our study while others, which do not have lexicalized senses listed in the three dictionaries, can have relevant metaphoric senses in certain compounds and idioms, by being near synonyms of the two pairs of adjectives. The two pairs of antonyms and their relevant senses are provided respectively in Table 4 and Table 5, where the English translations under

Table 4. Importance-related senses listed in the three dictionaries for the adjectives of size.

Words	HYDCD	XDHYCD	XSDHYDCD
大 dà	1. 指面积、体积、容量、数量、强度、力量超过一般或超过所比较的对象，与"小"相对 "of area, size, volume, quantity, strength, or force, more than average or by comparison, as opposed to 'small'" (i.e., big; large; great)	1. 在体积、面积、数量、力量、强度等方面超过一般或超过所比较的对象 (跟"小"相对) "big, large, or great in volume, area, quantity, force, strength, etc. (as opposed to 'small')"	1. big; large; great
	2. 性质重要 "important in nature"; 重要, 重大 "important; main; major; significant"		2. main; major; important; general
小 xiǎo	1. 指面积、体积、容量、数量、强度、力量不及一般或不及所比较的对象，与"大"相对 "of area, size, volume, quantity, strength, or force, less than average or by comparison, as opposed to 'big'"	1. 在体积、面积、数量、力量、强度等方面不及一般的或不及比较的对象 (跟"大"相对) "small, little, petty, or minor in volume, area, quantity, strength, intensity, etc. (as opposed to 'big')"	1. small; little; tiny; minor
	2. 性质不重要 "unimportant in nature"		

Table 5. Importance-related senses listed in the three dictionaries for the adjectives of weight.

Words	HYDCD	XDHYCD	XSDHYDCD
重 zhòng	1. 分量较大，与"轻"相对 "heavy; weighty (lit. relatively big in weight), as opposed to 'light'"	1. 重量大 (跟"轻"相对) "heavy; weighty (lit. big in weight) (as opposed to 'light')"	1. heavy; weighty
	2. 重要 "important"	2. 重要 "important"	2. important
	3. 认为重要而认真对待 "take seriously as being important"; 重视 "attach importance to (lit. see as heavy)"	3. 重视 "attach importance to; lay stress on (lit. see as heavy)"	3. attach importance to; lay stress on
轻 qīng	1. 分量小，与"重"相对 "light"; of little weight (lit. small in weight), as opposed to "heavy"	1. 重量小 (跟"重"相对) "light; of little weight (lit. small in weight) (as opposed to 'heavy')"	1. of little weight; light
		2. 不重要 "unimportant; not important; of no significance"	2. not important; be of no significance
	3. 不以为重要 "not take as important"; 轻视 "take lightly; make light of (lit. see as light)"	3. 轻视 "take lightly; attach no importance to; not treat seriously (lit. see as light)"	3. regard as of no importance; make light of; belittle

HYDCD, quite literal on purpose, are our own, and those under XDHYCD and XSDHYCD are adopted from the original bilingual dictionaries.

Let us first look at the pair of size adjectives in Table 4. As shown in the table, both 大 dà "big" and 小 xiǎo "small" have lexicalized senses in the domain of importance, thus meaning "important" and "unimportant," respectively, in HYDCD. In XDHYCD, which is perhaps the most popular and authoritative dictionary for everyday convenient use (with its relatively small size), the senses related to importance are, however, absent for both 大 dà "big" and 小 xiǎo "small." In the third Chinese-English dictionary, XSDHYDCD, there is an asymmetry, that is, "important" is listed for 大 dà "big," but "unimportant" is not listed for 小 xiǎo "small." That is, the lexicalization of "importance" senses of the two basic size adjectives is 50% within the scope defined by the three dictionaries we used.

Now, let us turn to the pair of weight adjectives in Table 5. First, similar to the preceding pair, both 重 zhòng "heavy" and 轻 qīng "light" have acquired their adjectival senses in the domain of IMPORTANCE, thus meaning "important" and "unimportant," respectively, except for 轻 qīng "light" in HYDCD, which lacks the "unimportant" sense listed for it. Additionally, however, this pair of weight adjectives also differs from the pair of size adjectives in an important way. That is, like *slight* in English (see 4d), this pair of adjectives has also converted to transitive verbs (see

definition 3). Thus, 重 *zhòng* "heavy" can mean not only "important," but also "attach importance to" (lit. see as heavy) and, similarly, 轻 *qīng* "light" can mean both "unimportant" and "take lightly" or "make light of" (lit. see as light). That is to say, with the scope provided by the three dictionaries we used, the lexicalization rate of the "importance" senses for the pair of weight adjectives is over 83% or almost 92%, depending on whether the verbal senses are taken into account or not, in comparison with 50% for the size adjectives. The increase is not surprising considering the following fact. In contemporary Chinese, the basic word for "important" is 重要 *zhòngyào*, which is a compound composed of two elements that literally mean "heavy" and "important; significant; essential," respectively. Another near synonym is 重大 *zhòngdà* "of great importance; significant," which is usually limited to modifying or predicating something abstract, and it is also a compound composed of two elements that literally mean "heavy" and "big." In other words, "heavy" occurs in both words whereas "big" occurs in one. In these cases, the primary conceptual metaphors *"IMPORTANCE IS WEIGHT"* and *"IMPORTANCE IS SIZE"* are already manifested at the level of morphology, within the words themselves.

Having laid out the lexical evidence from the dictionaries, we will cite some examples below from the Center for Chinese Linguistics (CCL) corpus to show how the primary metaphors under study are realized in actual discourses.

(8) a. 对许多中国城市家庭来说，孩子接受优质教育是**头等大事**，花多少钱都舍得。

For many urban families in China, children receiving high-quality education is the **thing of primary importance** (lit. the **head-class big thing**), and they are therefore willing to spend whatever it costs.

b. 凤凰卫视对于全球华人的**大事小情**，包括他们的危难、灾害，往往给予最大的关注。

The Phoenix (Satellite) TV often pays the most (lit. biggest) attention to the affairs, **big or small**, of the Chinese in the whole world, including their dangers and disasters.

c. 在日常生活中，我们经常见到一些老年人对家庭的**大小事情**格外关注，而且事无**巨细**都得操心。

In everyday life, we often see some senior people paying special attention to all familial affairs, **big and small**, and worrying about everything, be it **huge or tiny**.

As in (8a), "the thing of primary importance" is literally "the head-class big thing." Anything that is "big" is important, and "head" is a primary part of the human body. Therefore, a "big thing" that belongs to the "head class" is of primary importance. In both (8b) and (8c), the "size" of the things or affairs refers to the status of their importance. That is, if they are "big," they are important, and if they are "small," they are not important or unimportant. It is worth noting that in (8c) 巨 *jù* "huge" and 细 *xì* "tiny" make another pair of antonyms of size. They do not have lexicalized senses of importance listed in the dictionaries, but they have clear metaphorical senses of importance conventionalized in language use, especially in the idiomatic collocation 事无巨细 *shì wú jùxì* "anything important or trivial" in (8c).

(9) a. 他的小说讲的都是无权无势的**小人物**对抗有权有势的**大人物**……

His novels focus on the stories in which **small people** without power or status resist **big people** with power and status…

b. 关键是方法，**小鱼**不放，**大鱼**更要抓好，考前半月**抓大放小**……

The key is strategy. While **small fish** should not be let go, **big fish** must be grasped tightly. With half a month left before the examination, one should **grab the big and lay down the small**…

c. 商业的竞争，除了物美价廉服务好外，购物环境也是不可**小视**的。

In business competition, other than excellent quality, reasonable price, and good service, shopping environment cannot be **slighted** (lit. **seen as small**) as well.

In (9a), "small people" refers to people of no importance whereas "big people" refers to very important people, or "VIP" as is often called. Example (9b) discusses the strategy to prepare for a major exam. "Small fish" refers to less important materials whereas "big fish" refers to more important ones. When within the last two weeks before the exam, one should "grab the big and lay down the small," that is, focusing on the more important materials while leaving less important ones aside. In (9c), 小视 *xiǎoshì* "slight" is a verb, which literally means "to see as small" (i.e., to take somebody or something as unimportant). This verb also has some synonyms: 小看 *xiǎokàn*, 小瞧 *xiǎoqiáo*, 小觑 *xiǎoqù*, which all literally mean "to see as small."

The examples in (10) below all contain four-character idioms.

(10) a. 谦虚的人既不**自高自大**，也不妄自菲薄，总是满怀信心地努力进取。

Modest people will never be **self-important** (lit. **self-tall and self-big**) or self-belittled, and will always strive forward with full confidence and effort.

b. 这叫作**因小失大**，只见树木，不见森林。

This is called "**losing the big for the small**" (i.e., being wise in trivial matters but not in important ones), or "seeing trees only but not the forest."

c. 因此，呼吁**重视**农户储粮，并非**小题大做**。

Thus, we should call on and **attach importance to** (lit. **see as heavy**) peasant households storing up grain; it is by no means to **make a mountain out of a molehill** (lit. **write a big essay on a small topic**).

d. 你可以觉得自己是**人微言轻**的无名之辈……

You may find yourself to be nobody, a **slight person whose words carry little weight** (lit. **person tiny and words light**)…

As in (10a), a self-important person is one who is "self-tall and self-big," namely, making oneself "taller and bigger" than one actually is. In (10b), "losing the big for the small" means that one has a small gain at the cost of a big loss, or one is wise in trivial matters but not in important ones. Examples (10c) and (10d) manifest both *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT."* In (10c), "write a big essay on a small topic" means "make a trivial thing appear to be important." In this example, the verb 重视 *zhòngshì* "attach importance to" literally means "see as heavy." As in (10d), when someone is "tiny," namely unimportant, what this person says is "light" (i.e., "carrying no weight"). In this example, 微 *wēi* is another adjective of size meaning "tiny." In the four-character idiom cited, it means that the person is of no importance and in a humble position.

The following examples continue to focus on the source domain of weight.

(11) a. 无名小卒甚多，担当如此**重**任者则寥寥无几。

There are so many **small potatoes** (lit. nameless **small pawns**), but very few who can take on such **important** (lit. **heavy**) tasks.

b. 他把许多无足**轻重**的事看得太重要。

He saw many things of little **importance** (lit. **weight**) as too important.

c. 人们常说，做事情要有**轻重**缓急之分。

People often say that when doing things, one should distinguish between the **unimportant** (lit. **light**) and the **important** (lit. **heavy**) and between the unurgent and the urgent.

d. 不要避**重**就**轻**，说那些**鸡毛蒜皮**的小事。

Don't avoid the **important** (lit. **heavy**) and dwell on the **trivial** (lit. **light**), just talking about those **small** (i.e., **trivial**) things of **no importance** (lit. **chicken feather and garlic skin**).

As shown in (11a), tasks that are important are literally "heavy tasks." Besides, people of little or no importance, namely "small potatoes," are "nameless or fameless small pawns." Pawns are of least importance and therefore "small." In (11b), things of little importance are "things of little weight," and such things are not even worth weighing to find out whether they are light or heavy. What (11c) means is that one should prioritize what is important and urgent. As in (11d), "small things" of no importance are called "chicken feather and garlic skin" in Chinese. They are so called probably because chicken feather and garlic skin, while useless in themselves, are also extremely light in weight.

(12) a. ……有些地方只**重视**经济利益，**轻视**社会管理工作……

…some local governments only **attach importance** to (lit. **see as heavy**) economic interests while **making light of** (lit. **see as light**) societal administration…

b. 钱这种东西生不带来死不带去，是人把它整神的，**看重**它是命，**看轻**它是纸。

Money is something that one cannot bring with birth or take away upon death. It is humans who make it godlike. If one **sees it as important** (lit. **sees it as heavy**), then it is one's life; if one **sees it as unimportant** (lit. **sees it as light**), then it is mere paper.

In the two examples in (12), 重 *zhòng* "heavy" and 轻 *qīng* "light" are combined with the verbs of visual perception (视 *shì* "see" in 12a and 看 *kàn* "see" in 12b) to form compound verbs meaning "attach importance to; see as important" and "make light of/see as unimportant."

The last three examples from the CCL corpus are the definitions of three four-character idioms containing 轻 *qīng* "light" and 重 *zhòng* "heavy," as shown in (13).

(13) a. "**轻重**倒置" 谓把重要的和不重要的弄颠倒了。

"*Qīng zhòng dào zhì*" (lit. **light heavy** upside-down placed) means that the order of what is **important** and what is not **important** is reversed

b. "**轻重**失宜"谓对事情的重要与否处置失当。

"*Qīng zhòng shī yí*" (lit. **light heavy** lose appropriateness) means that the **importance** of things is treated inappropriately.

c. "**轻**财**重**义"轻视财利而看重道义。

"*Qīng cái zhòng yì*" (lit. **light** wealth **heavy** morality) means one **makes light of** wealth but **attaches importance to** morality.

The definitions make it very clear that the words of weight are used metaphorically and the target domain is *IMPORTANCE*. Examples (13a) and (13b) are actually synonymous, both meaning that one is confused with the order of importance of things in dealing with them. In (13c), 轻 *qīng* and 重 *zhòng* are used as transitive verbs, meaning "make light of" and "attach importance to" respectively (cf. definition 3 in Table 5). Such cases of morphological conversion are on a par with the English adjective *slight* converted to a transitive verb to mean "treat as unimportant." Our study in this section also confirms the linguistic manifestation of primary metaphors *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT"* in Chinese. We focused on two pairs of antonyms, one of size (i.e., 大 *dà* "big" and 小 *xiǎo* "small") and one of weight (i.e., 轻 *qīng* "light" and 重 *zhòng* "heavy"). Although there are other adjectives of size in Chinese, we have not found any lexicalized senses of importance listed under them in the dictionaries we used. Nevertheless, our examples from the CCL corpus (see 8c and 10d) show that these adjectives of size have metaphorical senses of importance, too, in specific expressions. Besides, the two adjectives of weight have not only lexicalized their "importance" senses, but also converted their lexical categories from adjectives to transitive verbs so that 轻 *qīng* "light" and 重 *zhòng* "heavy" can mean not only "unimportant" and "important," but also "make light of" and "attach importance to," respectively.

Further analysis

In the preceding two sections, we showed that, despite the cross-linguistic variations in details, the primary metaphors *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT"* appear to be manifested in both English and Chinese. In doing so, we utilized linguistic evidence from both dictionaries and corpora. That is, relevant adjectives of size and weight have conventionally lexicalized "importance" senses, in most cases, in the dictionaries we looked into. Furthermore, the examples from the corpora reinforced the existence of the conceptual mappings from *SIZE* and *WEIGHT* to *IMPORTANCE*. In particular, even if their lexicalized senses of importance are not listed in the dictionaries (i.e., *tiny* in English and 巨 *jù* "huge," 细 *xì* "tiny," and 微 *wēi* "tiny"), these words can still instantiate the conceptual mappings of the primary metaphors under study in discourses of actual language use, especially in particular idiomatic collocations. In these two sections, that is, we focused on specific lexical items, if they have lexicalized senses in the target domain, and how their metaphorical target senses are realized in natural discourse.

We must point out, however, that the explicit uses of size or weight words in "importance" senses constitute only part of linguistic manifestation of possible underlying conceptual metaphors. The same conceptual metaphors, in this case, *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT,"* can be instantiated without the use of such words in language, through imagery evoked by other words with the help of our encyclopedic knowledge. In (14) below, we use three examples to illustrate the difference between the two cases.

(14) a. Within the Bush cabinet, Paul O'Neill had a **big** title and a **small** role.
   b. Make a **mountain** out of a **molehill**

(*Webster*: treat a trifling matter as of great importance; *Oxford*: exaggerate the importance of something trivial)

c. 捡了芝麻丢了西瓜

Pick up a **sesame seed** but lose a **watermelon** (i.e., one has a small gain at the cost of a big loss, or one is wise in trivial matters but not in important ones)

In (14a), repeated from (3a), English size adjectives *big* and *small* are used metaphorically in the sense of importance in modifying *title* and *role* respectively. The explicit use of the size words directly evokes the primary metaphor *"IMPORTANCE IS SIZE,"* as illustrated in Figure 1. It can be seen from this figure that (14a) contains two primary metaphors. First, this instance is plugged in the *OBJECT*-dual of the Event Structure Metaphor system, in which *"ATTRIBUTES ARE OBJECTS"* (or, more specifically, *POSSESSIONS*) is a primary metaphor in contrast with its counterpart in the *LOCATION*-dual of the Event Structure Metaphor system, *"STATES ARE LOCATIONS"* (Lakoff, 1993; Lakoff & Johnson, 1999, ch. 11; see also Kövecses, 2010, ch. 11; Yu, 1998, ch. 5). The second primary metaphor is *"IMPORTANCE IS SIZE,"* with its source concept entailed by the *OBJECT* image schema underlying the metaphors. In this particular case, however, *"IMPORTANCE IS SIZE"* is realized with both of its parametric versions: *"IMPORTANT IS BIG"* and *"UNIMPORTANT IS SMALL."* The parentheses in both source and target domains contain the linguistic units in the example that contribute to the metaphorical meaning conveyed. As in the target domain, *ATTRIBUTE* in this particular case refers to two aspects of the official *FUNCTION*, namely its "title" and "role." It so happens that the cabinet position mentioned is important in title but unimportant in its actual role, according to the narrator.

Examples (14b) and (14c) are two proverbial sayings, one from English and one from Chinese. In these two examples, no size or weight words are actually used, but the images evoked for "mountain" versus "molehill" and "sesame seed" versus "watermelon" instantiate both *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT."* The Chinese saying here has more or less the same meaning as conveyed by the idiom in (10b), 因小失大 *yīnxiǎo shīdà* (lit. because of the small, lose the big) "one has a small gain at the cost of a big loss," which includes the size words.

To show how the Chinese proverb in (14c) instantiate the primary metaphors under study, we use a multimodal (visual and verbal) example in Figure 2.[1] In this example, the visual images of "sesame seed" (being held in the hand) and "watermelon" are elaborated by the verbal captions in it, which specify the target concepts. The caption pointed by an arrow line toward the sesame seed says "economic result" and that above the watermelon says "environmental protection." That is, according to this multimodal example, to gain economic result at the cost of environmental protection is "to pick up a sesame seed but lose a watermelon."
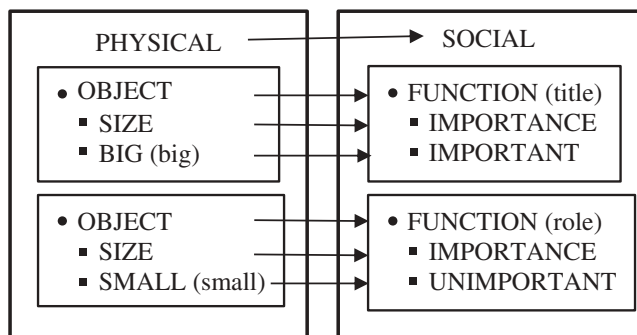

Figure 1. Metaphorical mappings involved in "a big title" and "a small role" in (14a).

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[1]From Baidu Baike. Retrieved from http://baike.baidu.com/item/%E6%8D%A1%E4%BA%86%E8%8A%9D%E9%BA%BB%EF%BC%8C%E4%B8%A2%E4%BA%86%E8%A5%BF%E7%93%9C/3659142?sefr=sebtn

Figure 2. A multimodal illustration of "Pick up a sesame seed but lose a watermelon."

Figure 2 as a multimodal example of particular metaphorical mappings can be analyzed as illustrated in Figure 3, utilizing the construct of conceptual frame, which is a coherent region of our encyclopedic knowledge, where certain concepts are linked together because they are associated in our experience (Croft & Cruse, 2004). Specifically, a frame is a conceptual structure that represents the elements and their relations that constitute it, describing a particular type of situation, object, or event and the participants and props involved in it (Sullivan, 2013a; see also Dancygier & Sweetser, 2014).
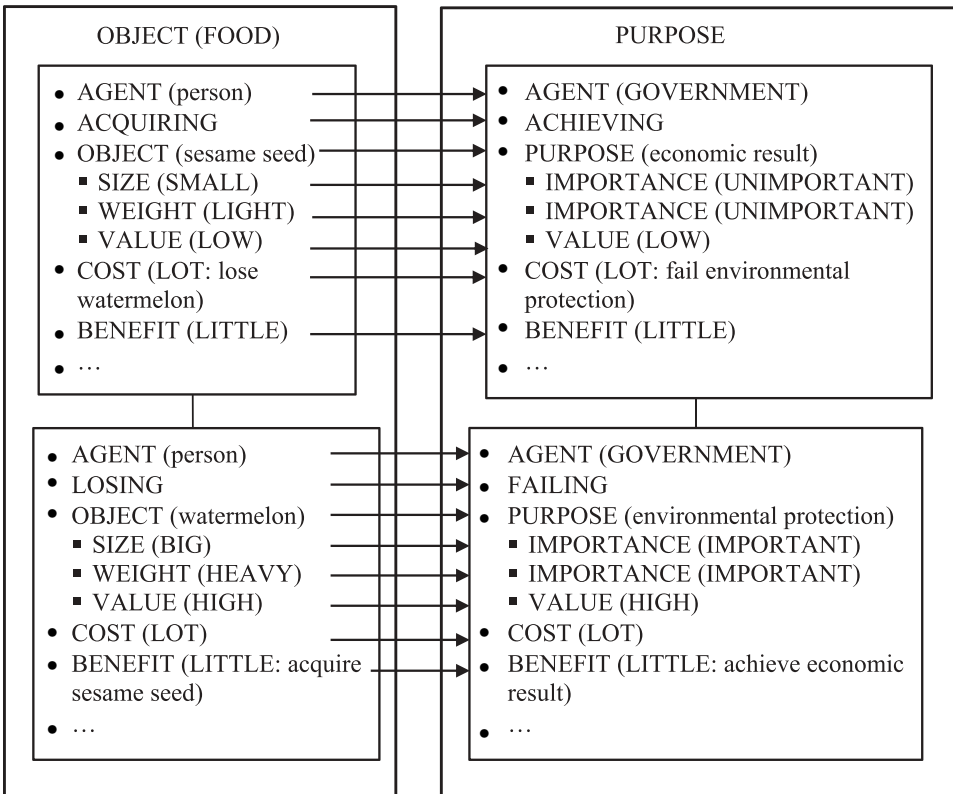

Figure 3. Schematic illustration of the frames and mappings involved in Figure 2.

As shown in Figure 3, the two domains involved for mappings are the source *OBJECT*—whose role, in this case, is filled by *FOOD*—and the target *PURPOSE*. The metaphor maps two connected dynamic frames (for two related events as represented by the two verbal elements "*ACQUIRING*" and "*LOSING*") in the source domain onto the target. Each of these frames involves a list of elements that hold particular relations among them. In the upper frame in the source, for example, there is an agent who acquires an object with its size and weight; as food, the object has its value and there is cost and benefit for acquiring it. The elliptical dots indicate that there can be other possible but less crucial elements involved in the frame. Within each frame, the parentheses represent specific values that fill the roles to their left. These values are assigned in Figure 2 either by visual images and linguistic expressions, rendered in lower case, or by the frames involved as part of our encyclopedic knowledge, rendered in upper case. Thus, the values "person," "sesame seed," and "watermelon" in the source are designated visually, and "economic result" and "environmental protection" in the target are designated verbally. Furthermore, *GOVERNMENT* is assigned by our knowledge, structured in the target frames, that it is the government that is responsible for the maintenance of the balance between economic result and environmental protection. Also, one sesame seed is *LOW* in *VALUE* in itself, especially if compared with a watermelon, which is *HIGH* in *VALUE* in contrast with a sesame seed; therefore, the *BENEFIT* of acquiring a sesame seed is *LITTLE*, and this is especially so if the *COST* is *LOT* by losing a watermelon.

What is of special relevance are the values of *SIZE* (*BIG* and *SMALL*) and *WEIGHT* (*HEAVY* and *LIGHT*). We know, as part of our encyclopedic knowledge, that the watermelon as a kind of fruit is quite big and heavy whereas the sesame seed as a raw material for seasoning oil in Chinese cuisine is very small and light. Their differences in size and weight are particularly conspicuous when they are contrasted with each other, as in the two connected source frames. Thus, evoked here are the two pairs of primary metaphors: "*IMPORTANT IS BIG*" versus "*UNIMPORTANT IS SMALL*," and "*IMPORTANT IS HEAVY*" versus "*UNIMPORTANT IS LIGHT*," which are the focus of our study. It is worth noting that the structures of the frames mapped here are relative to the ideology and value system of the conceptualizer, in this case, someone who attaches more importance to environmental protection than to economic result. As illustrated in Figure 3, the proverbial saying in (14c) and its multimodal example in Figure 2 are both plugged into the *OBJECT*-dual of the Event Structure Metaphor system, which includes such mappings as "*PURPOSES ARE DESIRED OBJECTS*" and "*ACHIEVING A PURPOSE IS ACQUIRING A DESIRED OBJECT (OR RIDDING ONESELF OF AN UNDESIRED OBJECT)*" (Lakoff, 1993; Lakoff & Johnson, 1999).

At this point, we want to take a step back and put the two primary metaphors under study into a broader perspective. To our understanding, "*IMPORTANCE IS SIZE*" and "*IMPORTANCE IS WEIGHT*" are closely related to each other because the two of them, as primary metaphors, are grounded directly in our embodied, sensorimotor experience with physical objects as we interact with them in the physical world. Our interaction with objects in our daily life includes our physical manipulation as well as visual and tactile perception of them. In other words, the experiential basis of these two primary metaphors is the *OBJECT* image schema (see, e.g., Cienki, 1997; Santibáñez, 2002). At a schematic level, the conceptual frame of *OBJECT* includes three essential elements that are intimately related: *SIZE, WEIGHT*, and *SOLIDITY* (i.e., solidness and hardness of objects) as fundamental properties of an object. A physical object is a solid matter that has a size and weight. Given a particular material substance of matter, size and weight are correlated with each other: the bigger the size, the heavier the weight, and vice versa. Further, depending on the substance of the solid, the object can be heavy or light with a given size, and be hard or soft when interacting with external pressures or forces.

With our schematic knowledge about physical objects, we can hypothesize a conceptual mapping scheme for some primary metaphors rooted in the *OBJECT* image schema, as shown in Figure 4. There, the source domain *OBJECT*, as an image schematic domain (Clausner & Croft, 1999), is mapped onto the target concepts through one of its three interrelated, basic aspects, or dimensions, as actual source concepts. These source concepts each have two possible opposing properties as their
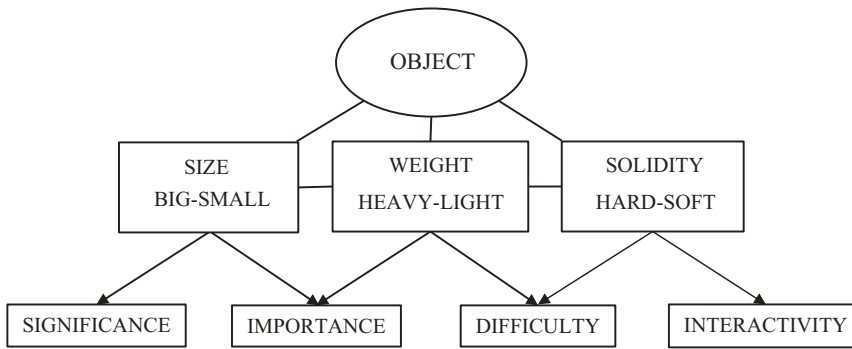
Figure 4. A hypothetical mapping scheme for some primary metaphors based on the *OBJECT* image schema.

parametric values: *BIG* and *SMALL* for *SIZE, HEAVY* and *LIGHT* for *WEIGHT*, and *HARD* and *SOFT* for *SOLIDITY*. In this study of preliminary nature, we limited ourselves to two source concepts, *SIZE* and *WEIGHT*, which share the same target, *IMPORTANCE* (see Table 1).

As shown by the examples of target concepts in this figure, one source concept can be mapped onto more than one target concept, and one target concept can receive mappings from more than one source concept. We must stress that the target concepts listed in Figure 4 are just possible examples; there should be others. For instance, *SIZE* may also be mapped onto *POWER* (i.e., *"POWERFUL IS BIG"* and *"POWERLESS IS SMALL"*), *GOODNESS* (i.e., *"GOOD IS BIG"* and *"BAD IS SMALL"*), or *QUANTITY* (i.e., *"MORE IS BIG"* and *"LESS IS SMALL,"* in conjunction with *"MORE IS UP"* and *"LESS IS DOWN"*), and so on. In this study, we have not touched on *SOLIDITY* as a source concept. As Figure 4 suggests, this source concept can be mapped onto *DIFFICULTY* (i.e., *"DIFFICULT IS HARD"* and *"EASY IS SOFT"*; e.g., *a hard/soft job*), and *INTERACTIVITY* (i.e., *"RESISTENT/CONFRONTATIONAL IS HARD"* and *"RECEPTIVE/ RECONCILIATORY IS SOFT"*; e.g., *a hard/soft-liner*). Of course, it takes further research to find out what other possible target concepts can be added to the list in a particular language and culture, and how such primary metaphorical mappings are related to the ones already in the hypothetical mapping scheme. In so doing, we expand the network of primary metaphors in particular, and of conceptual metaphors in general, by adding new pieces to it that fit the overall puzzle. Further research on commonalities and differences among languages and cultures in primary metaphorical mappings is a good way to study potential cognitive universality and cultural and linguistic diversity.

Conclusion

In this article, we set out to study the kind of conceptual metaphors known as primary metaphors. We focused on two of them with the same target concept: *"IMPORTANCE IS SIZE"* and *"IMPORTANCE IS WEIGHT,"* and wanted to see how they are manifested linguistically in English and Chinese. Our investigation was carried out at two levels: at the lexical level using evidence of lexicalized "importance" senses of size and weight adjectives in the dictionaries, and at the discursive level using sentential examples from the language corpora. It was found that some common words of size and weight have conventionalized senses of importance in both languages, and that those that do not have such senses in the dictionaries have the "importance" senses realized in naturally occurring discourses. Our findings are in general supportive of Svanlund's (2007) claim about graded meta-phorical strength and conventionality with lexical metaphors that instantiate a particular conceptual metaphor across two conceptual domains. In his study, Svanlund found that, while *"IMPORTANCE IS WEIGHT"* exists in Swedish, just as it does in English, the specific lexical items in the source domain of *WEIGHT* that instantiate it are graded in their metaphorical strength and

conventionalized ability to activate the conceptual mapping from *WEIGHT* to *IMPORTANCE*. Thus, for instance, we noticed in our study of Chinese that the metaphorical meaning "important" of some size words were found only in certain idiomatic expressions with rigid collocational patterns, in contrast to the more commonly used size words that have much higher metaphorical strength and occur in much more varied co-occurrence patterns. The findings about the differences in lexical entrenchment of metaphorical expressions lead to questions about the relationship between conceptual and linguistic metaphors. The linguistic patterns that appear to manifest, for example, "*IMPORTANCE IS WEIGHT*" have been found in different languages, such as English, Swedish, and Chinese. Such linguistic patterns appear to reflect, reinforce, and redefine their underlying conceptual patterns in their own conventionalized ways. How bodily, cultural, and linguistic experiences of speakers interact to shape their conceptualizations are topics of further research (see, e.g., Yu, 2017; Yu, Wang, & He, 2016).

While our linguistic study focused on adjectives of size and weight, in the dictionaries or in the corpora, we also showed that the primary metaphors "*IMPORTANCE IS SIZE*" and "*IMPORTANCE IS WEIGHT*" can be instantiated without explicit use of size and weight adjectives. Instead, they can be instantiated through concrete images evoked verbally or visually, with metaphorical mappings casted within the structures of conceptual frames composed of specific elements and relations among them. This finding supports the claim for an extended version of Invariance Hypothesis that conceptual metaphors map frame structures as well image-schematic structures from the source to the target (Sullivan, 2013a). We also hypothesized a mapping scheme, based on the *OBJECT* image schema, for some primary metaphors. This scheme maps *OBJECT* as an image schematic domain through its three fundamental dimensions—*SIZE, WEIGHT*, and *SOLIDITY*—onto the target concepts. Our proposal can be seen as part of the more recent effort to formalize conceptual metaphor theory (see, e.g., Kövecses, 2017; Stickles, David, Dodge, & Hong, 2016; Sullivan, 2013a). It is our hope that this hypothetical mapping scheme will help pave the way for more systematic analyses of primary metaphors across languages and cultures in future studies.

Acknowledgments

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