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Linguistic embodiment in linguistic experience

A corpus-based study

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This chapter is a corpus-based study of the relationship between language and thought in general and linguistic and conceptual metaphors in particular, focusing on instances of linguistic embodiment. It attempts to show, with evidence from relevant linguistic corpora, that salient features in linguistic patterns, both qualitative and quantitative, may affect the underlying conceptual patterns of the language users. Native speakers of that language inherit their linguistic experience as part of their cultural and cognitive heritage. It is possible that they inherit the underlying conceptual patterns through their linguistic experience learning and using linguistic patterns with salient qualitative and quantitative features.

Keywords: linguistic embodiment, linguistic experience, linguistic pattern, conceptual pattern, language and thought, cultural and cognitive heritage, face, heart

1. Introduction

In this chapter I will explore the notion and nature of "linguistic embodiment" (Brenzinger and Kraska-Szlenk, 2014) as part of linguistic experience from the viewpoint of conceptual metaphor theory (CMT) (Lakoff, 1993; Lakoff and Johnson, 1980, 1999). According to this theory, conceptual metaphors are grounded in human embodied experience, but emerge from the interaction between culture and body (e.g., Gibbs, 1999; Kövecses, 2005; Yu, 1998, 2008). The human body, along with bodily experiences, is a salient source domain for conceptual mappings onto the more abstract target domains such as human cognition, emotion, disposition, and so on. Body-part terms found in metaphoric usages in language

constitute linguistic manifestations of underlying conceptual metaphors. That is, linguistic embodiment is a mere reflection of embodied cognition.

For this study, I will look at the relationship between language and thought in terms of linguistic embodiment and embodied cognition from a different viewpoint. I suggest that linguistic manifestations of conceptual metaphors in characteristic patterns are not just a simple consequence of conceptual mappings in thought. Instead, characteristic linguistic patterns in a language influence its speakers' way of viewing the world and their experience in it. They constitute whole-sale packages that the speakers of the language inherit as part of their cultural and cognitive heritage. For that matter, they carry special weight on and for those who carry them (Yu and Jia, 2016). In other words, speakers of a language inherit their linguistic experience as part of their cultural and cognitive heritage, through repeated use of linguistic patterns.

My main point is that linguistic experience of speakers of a language may play a major role in constructing and shaping their conceptual systems, even though this role of language on thought is, for the most part, unconscious. I will illustrate this point by taking a further look at two Chinese body-part terms which I have studied before qualitatively (Yu, 2009a, 2009b): xīn 'heart' and liăn or miàn 'face'. I consider these two party-part terms as cultural keywords in the Chinese language, which can be used as access points for the understanding of Chinese culture (see Wierzbicka, 1992, 1997). As Wierzbicka (1997, p. 1) points out, there is "a very close link between the life of a society and the lexicon of the language spoken by it". In Chinese culture, the face and the heart respectively embody the outer and inner aspects of human life. For a Chinese person, the face represents the locus of one's social life, and the heart the locus of one's mental life. The Chinese terms that encode these two body parts are therefore particularly rich in cultural meaning and, for that reason, deserve special attention in the understanding of Chinese culture (see Yu, 2009a, 2009b)

In this chapter, I will take a corpus-based approach to the study of the Chinese body-part terms for the face and heart in hopes that it will provide a quantitative perspective on the role of linguistic experience. For that purpose, I will also look into an English corpus, not for a direct comparison, but for the establishment of a reference point that may shed some light on the main point of my study. Before I present my own corpus-based study, I will first review some relevant views on the relationship between language, thought, and culture in the field of metaphor studies.

2. Language and thought in metaphor studies

In this section, I will look at some views on the relationship between language, thought, and culture in the studies of metaphors, both linguistic and psychological. To illustrate the views of CMT, I will use a figure (Figure 1) which I cite from my chapter (Yu, 2017) in *Advances in Cultural Linguistics* (Sharifian, 2017a). As shown in this figure, metaphor involves three levels of phenomena. Primarily, metaphors exist at the conceptual level, namely, *conceptual metaphors*, consisting of mappings between two conceptual domains, the source and target domains, so that the conceptual structures and inferential patterns of the source domain are projected into the target domain. Thus, the target domain is conceptualized metaphorically in terms of the source domain. That is, metaphor is primarily a matter of thought. It is how we think and reason about abstract concepts. For instance, our body constitutes a common source domain of conceptual metaphors for the understanding of our mind, hence, the overarching conceptual metaphor MIND IS BODY.

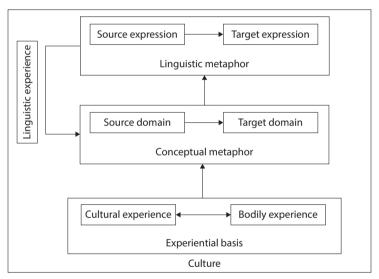


Figure 1. Three levels of phenomena for conceptual metaphor (Yu, 2017, p. 82)

Conceptual metaphors are manifested linguistically when we talk about what we think. Linguistic instantiations of conceptual metaphors are known as *linguistic metaphors*, which are perceptible at the surface level when we communicate in our language. Linguistic metaphors consist in particular linguistic patterns that manifest the underlying conceptual metaphors. When this happens, linguistic expressions, including lexical items and other linguistic units, which are primarily associated with source domains, are deployed to express target-domain concepts

(Lakoff, 1993). Prompted by the MIND IS BODY metaphor, for instance, body-part terms are utilized in the expression of more abstract states, processes, and traits associated with cognition, emotion, disposition, and so on. Thus, language serves as a window into the mind, and systematic description and analysis of linguistic patterns can lead us toward the understanding of the possible function, composition, and construction of our conceptual system that is otherwise hidden in the dark.

According to the earlier views of CMT (Lakoff, 1993; Lakoff and Johnson, 1980), conceptual metaphors are not arbitrary, but are grounded in their experiential basis, especially bodily experience. Since humans across various cultures share many basic embodied experiences, it follows that many conceptual metaphors, which are supposed to be grounded in those common embodied experiences, are universally shared. While earlier CMT views never ignored the role of culture in the emergence of conceptual metaphors, it is fair to say that more emphasis was placed on universal rather than culture-specific aspects of metaphors. Such an emphasis drew a considerable amount of criticism from scholars both within and beyond Cognitive Linguistics (see Gibbs, 2011, 2014, 2017 for relevant reviews). The subsequent cross-linguistic and cross-cultural studies, however, led to a more balanced view that conceptual metaphors emerge from the interaction between culture and body (see, e.g., Brenzinger and Kraska-Szlenk, 2014; Frank et al., 2008; Gibbs, 1999; Kövecses, 2005; Maalej and Yu, 2011; Yu, 2008, 2009a, 2009b; Zeimke et al., 2007). While humans across cultures indeed share the basic structure of the body along with many basic bodily experiences, their understandings of the body and bodily experiences may be quite different, shaped in differing molds of cultural models (Yu, 2014). That is, the interaction between cultural and bodily experiences gives rise to a broad, colorful spectrum of conceptual metaphors, of which some may be potentially universal or widespread whereas others are certainly culture-specific.

More recently, metaphor research, especially in the field of psychology, has arrived at the conclusion that repeated use of linguistic metaphors in a particular language may actually exert a causal influence on the development and formulation of conceptual metaphors in the minds of the speakers of that language (see, especially, Casasanto, 2013, 2016a, 2016b, 2017 for reviews). This impact of linguistic metaphors on conceptual metaphors is consistent with a version of linguistic relativity. It is represented in Figure 1 by a line pointing from linguistic metaphor to conceptual metaphor, thus forming a loop back onto conceptual metaphor. That is, *linguistic experience*, namely the experience using a language with particular linguistic metaphors can somehow affect metaphorical thinking of the speakers of that language.

Through experimental studies, Casasanto and his colleagues have reached a series of findings on the broad relationships between language, culture, body, and

cognition. He has proposed three types of relativity, namely, linguistic relativity, cultural relativity, and bodily relativity, which may affect how people think metaphorically one way or another (Casasanto, 2016a). For my purpose in this chapter, I focus on his specific claims about the relationships between linguistic metaphor and *mental metaphor* – the term he argues should replace *conceptual metaphor* – in particular, and between language and thought in general.

In an article on the role of language in the development of metaphorical thinking, Casasanto (2013, p. 4) points out that three proposals have been made in the literature:

- 1. Mental metaphors are innate. Cross-domain mappings are the result of co-opting neural machinery that evolved for perception and action to support more abstract thinking (Pinker, 1997). They are 'unlearned' (Walker et al., 2010, p. 21).
- 2. Mental metaphors are learned via direct experience interacting with the physical world (Lakoff and Johnson, 1999).
- 3. Mental metaphors are learned via experience with language: Using linguistic metaphors invites speakers to construct cross-domain mappings that were not present in their pre-linguistic thought (Gentner, 2001).

Casasanto (2013) points out that language plays no role in the development of mental metaphors according to the first two proposals, but it is necessary for their development on the third. He argues that, while each of the three proposals can explain the origins of some mental metaphors, none of them can draw a complete picture alone. Instead, he argues that a complete picture should emerge from the combination of elements from all three of them. His proposal is the following (Casasanto, 2013, p. 4):

it appears that (i.) *innate predispositions* may cause children (ii.) *to learn particular cross-domain correspondences as they interact with the physical world*, resulting in pre-linguistic mental metaphors that are (iii.) *subsequently shaped by experience using language*, or by other aspects of culture.

According to this proposal, children, as human beings and "metaphorical beings", possess certain "innate predispositions" with which they are able to learn and acquire certain "cross-domain correspondences" from their interaction with the physical world pre-linguistically. These pre-linguistic "mental metaphors" are then shaped by their subsequent linguistic experience or by other aspects of culture. That is, the subsequent linguistic experience plays a crucial role in determining which mental metaphors people actually use, although it is not the only factor.

In another book chapter reviewing the experimental studies he and his colleagues have done on the relationships between language and cognition, Casasanto

(2017, p. 20) suggests five different ways in which linguistic metaphors and mental metaphors can be related to each other as follows:

- 1. Linguistic metaphors can reflect mental metaphors (i.e. nonlinguistic metaphorical mappings).
- 2. Linguistic metaphors can determine which mental metaphors people use.
- 3. Linguistic metaphors can create new mental metaphors.
- 4. People can think in mental metaphors that do not correspond to any linguistic metaphors.
- 5. People can think in mental metaphors that directly contradict their linguistic metaphors.

Of these five ways, the second and third are particularly relevant to the thesis that language may affect thought. The second way is found in the studies of spatial metaphors for musical pitches. Languages may refer to pitches as either High/Low, as in English and Dutch, or Thin/Thick, as in Farsi and Hebrew. Studies done in Dutch and Farsi found that young children already have both versions of metaphors pre-linguistically. However, children learning to speak Dutch will strengthen the High/Low metaphor while at the same time weakening the Thin/Thick metaphor. The opposite is true with children learning to speak Farsi. This result is interpreted as a case of linguistic relativity, in which linguistic experience determines which mental metaphor to use subsequently.

The third way is illustrated by the example of a pair of mental metaphors in political discourse: namely, LIBERAL IS LEFT and CONSERVATIVE IS RIGHT. This pair of mental metaphors was created by the use of linguistic metaphors to refer to liberals and conservatives in the French parliament where the former sat on the left side and the latter on the right. This linguistic usage, which appears to be quite accidental for its beginning, has become widespread and conventionalized in various languages. Thus, the linguistic metaphors create the corresponding mental metaphors in the minds of people speaking those languages.

In this section, I have reviewed some recent literature on the relationship between language and thought focusing on metaphors. Conceptual metaphors have their experiential bases, emerging from the interaction between cultural and bodily experiences. They manifest themselves in language and, at the same time, linguistic experience using the language also affects the underlying conceptual patterns in one way or another. In the next section, I will present my own study using linguistic corpus data. I hope to show that salient linguistic patterns in a language, gained through elaboration and expansion by means of variety and frequency, should impact the formation of conceptual patterns in the minds of its speakers.

A corpus-based study of Chinese body-part terms for "face" and "heart"

Experimental studies have found that people using different metaphors in their respective languages conceptualize the target the way they talk about it (Casasanto, 2016a; Zhou and Cacioppo, 2015). In this section, I will discuss the possible and potential influence of linguistic metaphor upon conceptual/mental metaphor from the perspective of Chinese using linguistic evidence from the corpus. That is, through their repeated use, linguistic metaphors can possibly or potentially reinforce, modify, or even produce (especially through linguistic inheritance) conceptual metaphors (Yu and Jia, 2016).

For my purpose, I will focus on the Chinese terms for two body parts, the face and the heart, which I regard as cultural keywords in the Chinese language because, filled with extremely rich Chinese cultural meanings and values, they serve as clues to the Chinese cultural universe and history. In traditional Chinese culture, the "social face" is an extremely important concept at the core of interpersonal relations and social interactions, and the "heart" is regarded as the cognitive and affective center of a human person. I studied these Chinese bodypart terms before qualitatively (Yu, 2001, 2009a, 2009b), but now I want to look at them in a new light using some quantitative and qualitative data provided by the linguistic corpus, the CCL corpus, of the Center for Chinese Linguistics at Peking University. In doing so, I will also look at some English data provided by COCA. i.e., the Corpus of Contemporary American English at Brigham Young University, not for the purpose of comparison, but to establish another reference or view point. The current capacities of the two corpora are given in Table 1. Note that the number listed in the table is for "Contemporary Chinese" of CCL, which also contains 201,668,719 characters for "Classical Chinese", with a total number of 783.463,175 characters. The number of words for COCA is more than 520 million. Note that the numbers listed in Table 1 are those at the end of 2017 when the research presented in this chapter was conducted. COCA is updated annually, now with over 560 million words in 2018.

Table 1. The relevant capacities of the corpora as of 2017

Corpus	Capacity	Unit
CCL Contemporary Chinese	581,794,456	characters
COCA Contemporary American English	520,000,000	words

3.1 The Chinese "face"

As I argued before (Yu, 2001), our face is one of the most important parts of our body. Its importance is determined fundamentally by the kind of body we have and how it functions. It is the external body part that is most distinctive of a person. On the interactive side, the front, of our body, the face is really the focus of human interaction. Consciously or unconsciously, it conveys or betrays our intentions and states of mind, and shows our emotions and feelings. It is well known that Chinese culture attaches special importance to "face" because it is closely associated with interpersonal feelings and sensibilities, and with individual dignity and prestige. That is, our face is the most important identity of who we are, both physically and socially. The "social face" related to the social concepts of Relationship, Attitude, Dignity, Honor, Reputation and Prestige is the focus of my study here.

The English word *face* has two basic counterparts in modern Chinese: 脸 *liăn* 'face' and 面 *miàn* 'face', the other derivatives including 脸面 *liănmiàn*, 颜面 *yánmiàn*, all denoting the face. Besides, 面子 *miànzi*, derived from 面 *miàn* 'face', means "outer part of something" and "face" in its abstract senses, such as "dignity", "honor", "reputation" and "prestige", but not "face" as part of our body. The understanding of the abstract senses of "face", such as "prestige", involves a network of metonymic and metaphoric mappings, as illustrated by Figure 2 (adopted from Yu, 2013, p. 67).

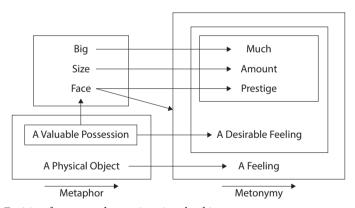


Figure 2. Entities, frames, and mappings involved in Prestige is face

In my earlier study of "social face" in Chinese, I also took a comparative perspective and looked at English as well (Yu, 2001; see also 2008, 2009b). I came up with a table that sums up the literal and figurative senses of the body-part terms for "face" in both languages (Table 2). As shown in the table, English and Chinese share all the meanings associated with the face. However, I cautioned about the table not

providing "a complete picture" because it only indicates "presence" vs. "absence" of a particular sense, but disregards whether it is a "strong" or "weak" presence in the language (Yu, 2001, p. 24). In other words, my earlier study is only qualitative, identifying "types" but disregarding "tokens" of the data (Kövecses, 2015). As I noted back then, there should be remarkable differences between English and Chinese in terms of the strength of certain figurative meanings of the seeming counterparts in both languages. Now that we are equipped with linguistic corpora of various kinds and capacities, we are able to be more specific in that regard. That is what I would like to achieve below.

Table 2. Senses associated with the body part of face in English and Chinese (Yu, 2001, p. 25)

	English	Chinese	2
Relevant senses associated with the body part of face	face	脸 liăn	面 miàn
1. front of head from forehead to chin	+	+	+
$2.\ a$ look on the face as expressing emotion, character, attitude, etc.	+	+	+
3. front, upper, outer, or most important surface of something	+	+	+
4. outward appearance or aspect; apparent state or condition	+		+
5. composure; courage; confidence; effrontery	+	+	+
6. dignity; prestige	+	+	+
7. have or turn the face or front towards or in a certain direction	+		+
8. meet confidently or defiantly; not shrink from; stand fronting	+		+

The first question I asked for this study is: What are the frequencies of the body-part terms for "face" in each corpus for both languages? The keyword searches led to the results in Table 3. Note that, as mentioned earlier, Chinese has two basic words for "face", so the total is the sum of two separate numbers. Here, the total frequency does not include, for instance, another "face" word $\not ij$ yán, which has other meanings not directly related to the face. As can be seen from this table, Chinese "face" words' total frequency is over 4.7 times of that of English.

Table 3. Frequencies of the body-part terms for "face" in COCA and CCL

Corpus	Term	Frequency	Total
COCA	face	183,490	183,490
CCL	脸 liăn + 面 miàn	85,323 + 792,750	878,676

Compound	English gloss	English translation	Total	% in 1st 100
面子 miànzi	face-suffix	face; reputation; prestige	3,773	93
脸面 liănmiàn	face-face	face; self-respect; sensibilities; feelings	794	85
脸皮 liănpí	face-skin	face; feelings; sensibilities; sense of shame	785	93
颜面 yánmiàn	face-face	face; decency; sensibilities	536	41
情面 qiánmiàn	feeling-face	feelings; sensibilities	763	88
体面 tǐmiàn	body-face	face; dignity; prestige	2,385	72

Table 4. Chinese compound words with "face" in abstract social senses

It is worth noting, however, that the Chinese word 面 *miàn* 'face' is highly polysemous. Apart from its verbal meaning "to face" in some compounds, such as 面临 *miànlín* (face-close) 'to face; to be faced with', 面对 *miànduì* (face-to) 'to face; to confront', 面向 *miànxiang* (face-towards) 'to face; to face towards', 直面 *zhímiàn* (straight-face) 'to face squarely', it can mean, in various compounds, "surface; façade, facet, aspect, side" of almost any kind, concrete or abstract, real or imaginary.

My next question is: To what extent the Chinese body-part terms for "face" express figurative meanings related to interpersonal feelings and sensibilities as well as individual dignity and prestige in their abstract social senses? To answer this question, I narrowed down my searches to some compound words that I know are commonly used in the relevant senses. The search results are shown in Table 4. "Total" refers to the total numbers of tokens retrieved, which range from 536 to 3,773. I then manually went through the first 100 tokens to eliminate the noises and to see how many of them are relevant to the abstract social senses related with interpersonal feelings and sensibilities and individual dignity and prestige. The final numbers so obtained are also the percentages of the words with the relevant senses I was looking for.

Table 5. Frequencies of Chinese "face" compounds and collocations in abstract social senses

Expression	English gloss	English translation	Frequency
有脸 yǒuliăn	have-face	have prestige; have face	435
没脸 méiliăn	not have-face	be too ashamed (to do sth.)	273
要脸 yàoliăn	want-face	have a sense of shame	579
丢脸 diūliăn	lose-face	lose face; be disgraced	719
有面子 yǒu miànzi	have-face	have face	205
没面子 méi miànzi	not have-face	not have face	159
好面子 hào miànzi	like-face	like face; be fond of face; be obsessed with face	49

Table 5. (continued)

Expression	English gloss	English translation	Frequency
爱面子 ài miànzi	love-face	have a strong sense of face; care too much about one's face	133
要面子 yào miànzi	want-face	be keen on face-saving; be anxious to preserve one's reputation; anxious to save face	175
给\$4面子 gěi miànzi	give face	show due respect for sb.'s feelings; do sb. a favor	529
留\$4面子 liú miànzi	leave face	spare sb's susceptibilities; let sb. keep some self-respect; not completely disgrace sb.	132
顾\$4面子 gù miànzi	attend to face	save face; keep up appearances; spare sb.'s feelings or sensibilities	109
碍\$4面子 ài miànzi	be hindered by sb's face	for fear of hurting sb's feelings; afraid to wound sb's sensibilities	77
丢面子 diū miànzi	lose face	lose face; feel humiliated	137
失面子 shī miànzi	lose face	lose face; feel humiliated	58

My next step was to search for the frequencies of some common V+N collocations, where N stands for either 脸 liăn 'face' or 面子 miànzi 'face' in its abstract social senses. The results are given in Table 5. In this table, some search terms have "\$4" between the verb and the "face" word. It means that up to four characters, which could represent the indirect object of the verb or the modifier of the "face" word, were allowed between V and N. I went through all the tokens and manually removed the noises and those that express meanings irrelevant to what I was looking for. For instance, the total search result for 有脸 yŏuliŏn 'have face; have prestige' is 535-100=435. As far as I know, English word face does not have many similar collocations that have similar meanings. The most common ones that I know are lose face, save face, and gain face, which I also searched for their frequencies in COCA. The results are provided in Table 6 as a reference point. As can be seen in this table, the frequencies of the three English collocations are 153, 340, and 6 respectively.

Table 6. Frequencies of English collocations with *face* in abstract social senses

Collocation	Frequency	Collocation	Frequency	Collocation	Frequency
lose face	69	save face	245	gain face	2
loses face	6	saves face	7		
lost face	22	saved face	12	gained face	1
losing face	56	saving face	76	gaining face	3
Total	153		340		6

The last thing I did with "face" in the CCL corpus was to look at the variety of the "face" collocations. In particular, I focused on 面子 *miànzi*, which, as mentioned above, is often used to refer to reputation and prestige as well as interpersonal feelings and sensibilities, namely the "social face". As listed in Table 4, this word has a total frequency of 3,773 in CCL, and 93% of them refers to the relevant senses of "social face" in the first 100 instances. I looked through the first 200 tokens only, but already found a large variety of relevant collocations, as listed in Table 7. Some of them are already listed in Table 5, but most of them are new occurrences.

Table 7. The variety of the 面子 miànzi 'face' collocations in the first 200 tokens of CCL

No.	Collocation	Literal English translation				
1. "f	. "face" as object (V+O)					
1	有面子	Have face				
2	有点面子	Have a bit of face				
3	没面子	Not have face				
4	没有面子	Don't have face				
5	给面子	Give face				
6	给予面子	Award face				
7	给足面子	Give sufficient face				
8	不给面子	Not give face				
9	看面子	See one's face				
10	顾面子	Attend to one's face; take one's face into consideration				
11	照顾面子	Take care of one's face				
12	顾及面子	Considering one's face				
13	顾全面子	Keep one's face intact or whole				
14	考虑面子	Consider face; take one's face into account				
15	留面子	Leave one's face; save face				
16	丢面子	Lose face				
17	丢尽面子	Lose one's entire face				
18	失面子	Lose face				
19	有失面子	Have lost one's face				
20	丧失面子	Lose one's face				
21	失去面子	Lose one's face off				
22	影响面子	Affect one's face				
23	伤面子	Hurt one's face				
24	损害面子	Damage one's face				

Table 7. (continued)

140	Table 7. (commuea)						
No.		Literal English translation					
25	栽面子	Tumble one's face					
26	跌面子	Fall one's face					
27	爱面子	Love face					
28	要面子	Want face					
29	争面子	Vie for face					
30	争得面子	Vie for and obtain face					
31	找回面子	Look for and recover one's face					
32	争回面子	Vie for and get back one's face					
33	挣回面子	Earn one's face back					
34	挽回面子	Rescue and save one's face					
35	好面子	Like face					
36	碍面子	Be hindered by face					
37	碍于面子	Be hindered by one's face					
38	撑面子	Prop up one's face					
39	硬撑面子	Work hard to prop one's face up					
40	保全面子	Protect and keep one's face whole					
41	保住面子	Protect and hold one's face					
42	保有面子	Protect and possess face					
43	为了面子	Support/help face					
44	讲究面子	Be particular with face					
45	关系到面子	Be related to face					
46	与面子有关	Be relevant to face					
47	凭面子	Lean on face; (do sth.) with the help of one's face					
48	卖面子	Sell face					
49	冲着面子	Facing toward one's face; considering one's face					
50	放下面子	Lay down one's face					
2. "f	ace" as subject (S+V)						
51	面子上挂不住	Face cannot hang and hold					
52	面子上下不来	Face cannot come down					
53	面子上过不去	Face cannot pass over					
54	面子上放不下	Face cannot be laid down					
55	面子上觉得光彩	Face does not feel bright and brilliant					
56	面子十足	Face is fully sufficient					
		/ / · · · · · D					

(continued)

Table 7. (continued)

No.	Collocation	Literal English translation
3. "f	ace" as nominal modifier	(N+N)
57	面子事	A face thing; a matter of face
58	面子问题	A face problem; a problem of face
59	面子上的话	Words on/about face

As can be seen from the table, there are 59 different kinds of collocations in just the first 200 tokens alone, even though some of them are quite similar to each other in meaning. In contrast, just to note in passing, I found only one instance of *lose face* in the first 200 tokens of *face* keyword search. Although I did not attempt a real comparison between English and Chinese, we can see from what I have roughly done with the corpora that the magnitude of differences between the two languages is tremendous in this regard. While the abstract social concepts of "face" exist in both languages, we see on the Chinese side extremely productive linguistic elaborations, extensions, and constructions that are incomparable on the English side. The Chinese side shows a huge pyramidal structure. On the very tip are two basic "face" words, which combine with other elements into various compound words and idiomatic expressions (see Yu, 2001) at the middle, which are then further elaborated, extended, and constructed into a gigantic base of collocations. These collocations spread out in the Chinese language, used repeatedly in daily communication.

3.2 The Chinese "heart"

My second case study concerns the Chinese "heart", $\[mathbb{N}\]$ $\[mathbb{N}$ $\[mathbb{N}$ $\[mathbb{N}$ $\[mathbb{N}$ which I argued is taken as the central faculty of cognition in traditional Chinese culture (Yu, 2009a). The cultural belief that the heart is the center of mental life, or so-called cardiocentrism, is reflected in a great number of Chinese linguistic expressions (Yu, 2009a; see also Sharifian et al., 2008). Experimental studies confirmed that the folk theory that the heart is a mental organ governing aspects of mental life, or so-called cardiopsychism, is still very much alive, and that conventionalized "heart" expressions people use in everyday life might be responsible for its perseverance and persistence (Zhou and Cacioppo, 2015). In this subsection, I will apply a similar approach as in the preceding one.

I first searched the terms for "heart", "brain", and "head" in English and Chinese and the total frequencies for these terms are given in Table 8. As can be seen in the table, the frequency for the "heart" is especially high in Chinese, over six times as many as that of *heart* in English, whereas the frequencies for the "brain"

and "head" terms are about 2:1 between Chinese and English. I then went through the first 100 tokens for the "heart" terms in both languages, and found a remarkable difference between the two languages, i.e., in English 61 tokens (61%) refer to the physical organ of heart whereas in Chinese only two of them (2%) do the same.

Table 8. Total frequencies for "heart", "brain" and "head" in COCA and CCL

	COCA			CCL	
Heart	Brain	Head	心xīn 'heart'	脑 năo 'brain	头 tóu 'head'
111,184	47,490	234,599	689,611	93,158	428,033

In Chinese, the source concept of "heart" is mapped onto all cognitive and affective aspects of a human person, such as mental, intellectual, rational, moral, emotional, dispositional, and so on. In Table 9, which is adopted from Yu (2014), the Chinese compound words are just some examples for the purpose of illustrating that the Chinese "heart" is present in all aspects of inner life. Interestingly, while all Chinese compounds involve the "heart" term as one of the two component elements, none of the English translations actually contains its English counterpart, *heart*. This difference at the linguistic surface itself points to some more fundamental cultural and cognitive differences. This is another case in which the linguistic patterns, with compound types and token frequencies, should not only manifest, but also reinforce, the underlying conceptual patterns. In fact, the list here contains only some examples, and it can go on and on (see Yu, 2009a).

Table 9. Some examples of Chinese compounds involving the "heart" term (from Yu, 2014)

Compound	English gloss	English translation	Frequency
诚心 chéngxīn	sincere-heart	sincerity	1,420
良心 liángxīn	good/fine-heart	conscience	3,766
知心 zhīxīn	knowing-heart	intimate; understanding (friend)	1,039
心想 xīnxiăng	heart-think	think to oneself	6,484
心服 xīnfú	be heart-convinced	be genuinely convinced	942
心甘xīngān	be heart-willing	be willing	1,032
好心hǎoxīn	good-heart	good intention	3,134
成心 chéngxīn	establish-heart	on purpose	655
用心yòngxīn	use-heart	with concentrated attention	4,531
决心 juéxīn	determined-heart	determination; be determined	21,971
违心 wéixīn	disobey/violate-heart	against one's will	408
恒心 héngxīn	constant-heart	perseverance; persistence	221

(continued)

Table 9. (continued)

Compound	English gloss	English translation	Frequency
小心xiǎoxīn	small-heart	be careful; be cautious	11,319
粗心 cūxīn	thick-heart	careless; thoughtless	624
焦心jiāoxīn	scorch-heart	feel terribly worried	67
开心kāixīn	open-heart	feel happy	4,964
心醉 xīnzuì	be heart-drunk	be charmed; be enchanted	405

The last thing I did in CCL is that I went through the first 200 tokens of the $\[mathcape{}\]$ 'heart' keyword search. As I said above, the search brought up 689,611 tokens (see Table 8). When I looked through the first 200 tokens, however, only two of them refer to the physical heart organ, whereas the remaining ones are compounds and idioms expressing some sort of figurative meanings in combination with other elements. I then searched each of them for their frequencies in the corpus. The results are provided in Table 10, which include some of the compounds in Table 9.

Table 10. Compounds and idioms in the first 200 "heart" tokens and their frequencies in CCL

Expression	English gloss	English translation	Frequency
关心 guānxīn	enclose-heart	be concerned with; care for	36,207
尽心 jìnxīn	exhaust-heart	with all one's heart	2,377
知心 zhīxīn	know-heart	intimate; understanding	1,000
悉心 xīxīn	all-heart	devote all one's attention	946
正心 zhèngxīn	straighten-heart	cultivate one's moral character	77
专心 zhuānxīn	concentrate-heart	concentrate one's attention	2,552
热心 rèxīn	hot-heart	enthusiastic; earnest; warm- hearted	5,283
省心 shěngxīn	save-heart	save worry	258
决心 juéxīn	determined-heart	determination; be determined	21,971
小心 xiǎoxīn	small-heart	take care; be careful; be cautious	11,319
信心 xinxīn	trust-heart	confidence; faith	27,283
谈心 tánxīn	talk-heart	have a heart-to-heart talk	1,707
内心 nèixīn	inner-heart	innermost being; inner self	12,974
心灵 xīnlíng	heart-soul/spirit	mind; heart; soul; spirit; psyche	11,890
心态 xīntài	heart-condition	mental state; mentality; psychology	7,423
心理 xīnlǐ	heart-principle	mind; mentality; psychology	35,868

Table 10. (continued)

Expression	English gloss	English translation	Frequency
身心 shēnxīn	body-heart	body and mind	5,747
重心 zhòngxīn	heavy-heart	focus; crux; core	3,409
轴心 zhóuxīn	axle-heart	axle center; axis	1,261
核心 héxīn	core-heart	core; heart of the matter	24,332
中心 zhōngxīn	central-heart	center; main; key	119,322
日心 rìxīn	sun-heart	sun-centered	100
上进心 shàngjìnxīn	upward advance-heart	desire for improvement	159
好胜心 hàoshèngxīn	like to win-heart	keen/eager to outdo/outshine others	67
羞耻心 xiūchĭxīn	shame-heart	sense of shame	88
自尊心 zìzūnxīn	self respect-heart	self-esteem	1,500
责任心 zérènxīn	responsibility-heart	sense of responsibility	1,688
心悦诚服 xīnyuè chéngfú	heart-happy sincerely- convinced	be completely convinced; feel a heartfelt admiration	308
心急如焚 xīnjí rúfén	heart-anxious like-being burned	burning with impatience	575
得心应手 déxīn yìngshŏu	get-heart respond- hand	(do sth.) with high proficiency/ facility	681

As we can see, there are 30 different compounds and idioms that contain the Chinese "heart" word as a component, and their frequencies in CCL range from 67 to 119,322. Specifically, 4 of them have frequencies up to 100 (67, 77, 88, 100), 6 of them up to 1,000 (159, 258, 308, 575, 681, 946), and the remaining 20 ranging from 1,261 all the way to 119,322. On the other hand, the English word *heart* appears in the English translations only twice (as highlighted by the bold font).

As shown in the relevant tables in this section, each linguistic item with its frequency in the corpus may not look significant in the sea of everyday language use. When the variety and frequency of them are added up, however, the magnitude of the numbers are tremendous. It is still the tip of the iceberg considering the fact that, for instance, the 30 different compounds and idioms in Table 10 are found in just the first 200 "heart" tokens in the corpus.

4. Conclusion

In my study presented in Section 3, I have outlined the linguistic patterns concerning the Chinese "social face" and "cognitive and affective heart" in both qualitative and quantitative terms, in contrast with a reference point from English. Such are the unique linguistic patterns experienced by native speakers of Chinese in everyday life. When the linguistic patterns repeat and expand themselves, with a snowball effect, in everyday linguistic usages, they should only reinforce the underlying patterns at the conceptual level. It can be argued that such linguistic patterns constitute a main force, among others, which help nail the conceptual patterns into the minds of Chinese speakers when they grow up learning and using these linguistic patterns. Since linguistic usages are part of cultural heritage that is passed down from generation to generation, each generation of speakers then inherits the conceptual patterns while learning and using the corresponding linguistic patterns. Thus, native speakers acquire the underlying conceptual patterns, at least partly, through their linguistic experience of learning and using the linguistic expressions. The repeated use of linguistic expressions that form salient linguistic patterns are at least partially responsible for the corresponding elements in the conceptual systems of the native speakers.

The linguistic usages involving the "face" and "heart" words are embodied in the sense that they express aspects of cultural cognition through parts of the body. In other words, they convey cultural conceptualizations through embodied cultural metaphors (Sharifian, 2017b). Linguistic embodiment manifests itself in varying linguistic patterns that entail differing linguistic experiences. Different strengths of linguistic patterns in linguistic experience should exert an impact on the cognitive status of the corresponding conceptual patterns as being either strong or weak in different languages and cultures. That should be a major reason why the abstract "social face" and "cognitive and affective heart" concepts are much stronger in the Chinese speaking cultures than are they in the English-speaking cultures. That is, linguistic patterns are not mere linguistic manifestations of conceptual patterns, and linguistic experience they constitute should loop back to affect the conceptual system one way or another.

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