

ORIGINAL ARTICLE

A semantic contrastive study of Chinese and English verb “跑/run” from the perspective of cognitive semantics

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Abstract: Based on corpus data, this paper finds that the semantics of “跑/run” have similarities, which lie in the consistency of the central meanings and common usages. The differences are: 1) the meanings of “run” are significantly more than those of “跑”, resulting in a great divergence in the numbers of meanings; 2) compared with “跑”, the implications of “run” display a higher level of specificity.

On the basis of cognitive theories, the paper has yielded the following findings. The semantic overlaps of “跑/run” root in their identical prototypical meanings. The semantic differences are generated by the following factors: 1) the image-schema distribution of “run” is wider with more abstract representations than that of “跑”, due to which many unique semantic items come into being; 2) semantic systems of “跑/run” adopt different metaphorical methods, contributing to more comprehensive cognitive domains of the semantic mapping and closer semantic interrelations of “run” than those of “跑”.

Keywords: contrastive study; cognitive semantics; polysemy; verb

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1. Introduction

From the 1970s till now, cognitive linguists have investigated the relationship between language and cognition from various perspectives and levels and revealed the cognitive basis of speech generation and understanding (Huang, 2012). Though scholars have been constantly infusing brand new vitality into cognitive linguistics, such as making contrast from syntactical (Lv, 1999; Huber, 2017; Deng, 2021), typological (Talmy, 1991; Zhang, 2010; Liu, 2019; Aktan, 2020; Bai, 2022), pragmatic and semantical perspectives (Nida, 1975; Gries, 2006; Glynn, 2012; Shuai, 2021) by adopting quantitative and qualitative approaches as well as synchronic, diachronic, and dialectical methods, there is still room left for the studies of polysemous words and semantic, cognitive contrast studies

of synonymous verbs in Chinese and English.

As Chinese-English commonly used verbs, “跑/run” have a wide range of application, when matched with different meaning items, new meanings emerge. Significant as the research might be, little study conducted ever centered on the words’ original and metaphorical meanings. In an effort to identify the real usages of “跑/run” and to find out the semantic similarities and differences while explaining the underlying mechanism from the perspective of cognitive linguistics, the paper makes several hypothesis: 1) the most frequently used meanings of “跑/run” are the same; 2) the amount of meanings of “跑/run” is relatively equal; 3) the specificity of the words demonstrates discrepancies to some extent. To serve the purposes of the analysis, the study material and method is presented first, then the results of semantic contrast are addressed. Afterwards, cognitive theories are incorporated to discuss cognitive factors that result in the semantic similarities and differences. The last part is the conclusion and suggestions for further studies.

2. Material and methods

To make a detailed and complete semantic description, the data used in this paper are all real usages drawn from the corpora BCC and COCA for these colloquial expressions constitute an indispensable part of modern vocabular and play an important role in meaning classification (Wang, 2016), Ant Conc (3.5.7) is applied as the analysis software.

In this study, 1,200 pieces of Chinese and English sentences are drawn respectively from BCC and COCA. The quantity of data is based on the statement of Xu (2007: 68) that at least 500 pieces of corpus material should be collected to analyze a linguistic phenomenon, the more, the better. Besides, it has been attested by Mahpeykar and Tyler (2015) that a total number of 800 tokens of verb-particle is valid for identifying the central sense and the extended senses. The semantic analyses of “跑/run” are conducted by following the procedures below.

Firstly, a total number of 1,200 sentences of “跑/run” from BCC and COCA are selected without restrictions on sources, and the first 1,200 pieces of data are downloaded in the txt format.

Secondly, unsuitable ones where “跑/run” are used as nouns as deleted based on *Xinhua Dictionary* (Zhongguo shehui kexue yuanyu yanjiusuo cidian bianjishi, 2011), *A Century Chinese-English Dictionary*, *Oxford Advanced Learner’s Dictionary (9th edition)* (Hornby, 2015), *Collins Cobuild Advanced Learner’s Dictionary (9th edition)*, dwindling the valid sentences to 1,134 for Chinese and 1,136 for English.

Thirdly, the data is processed in Ant Conc to reveal their collocations and the meanings of the collocations of “跑” are evaluated as follows: 1) to leap forward alternatively using two or four legs; 2) to leak; 3) to rush about to get things done; 4) to operate vehicles; 5) to escape; 6) to head for a place; 7) to achieve a result; 8) to deviate. The meanings drawn from the collocations of “run” are: 1) to go faster than walking; 2) to escape; 3) to operate; 4) to manage; 5) to be or near a level; 6) to meet someone unexpectedly; 7) to drive; 8) to campaign; 9) to use up; 10) to become; 11) to leave for a place; 12) to compete; 13) to make a machine function.

Finally, the sentences of “跑” are inspected one by one in complete contexts based on several Chinese dictionaries as *Xinhua Dictionary* (Zhongguo shehui kexue yuanyu yanjiusuo cidian bianji-

shi, 2011), *Comprehensive Dictionary of Regional Dialects of Modern Chinese* (Li, 2002), *Modern Chinese Dictionary (Version 7)* (Zhongguo shehui kexue yuanyu yanjiusuo cidian bianjishi, 2016) and the corpus data of “run” is closely analyzed in succession based on *Oxford Advanced Learner’s Dictionary (9th edition)* (Albert, 2015), *Collins Cobuild Advanced Learner’s Dictionary (9th edition)*.

3. Results

The top 8 frequently used meanings out of a total number of 21 senses of “跑” are shown in **Figure 1**.

The top 10 frequently used meanings out of a total number of 46 senses of “run” are shown in **Figure 2**.

No matter which language is studied, it is necessary to obtain a profound understanding by comparing it with other languages (Shen, 2001). As the meanings of the two verbs have been laid out above, a contrastive analysis is needed to further highlight the differences between “跑” and “run”. Comparing the two tables of the meanings of “跑/run”, we have the following findings.

3.1. The identical meanings

Firstly, the similarity of “跑/run” lies in that the meanings with the highest frequency in two languages are identical, several more meanings overlap to some extent.

Hence, hypothesis one is supported. Corpus data analysis shows that “fast pedestrian motion” in “跑/run” is the most frequently used term, exhibiting its central role (Durkin and Manning, 1989: 2).

Therefore, the two verbs both embody the self-motion feature as the core, which paves way for other overlapping meanings of “跑/run” including “to escape, to operate, to drive, to observe, to get sth. done, to leak”. Of those meanings, the shared agents are human, animal, machinery, vehicle, gas or liquid, computer system, eyes, and purposes in common are “to exercise or compete, to get sth.

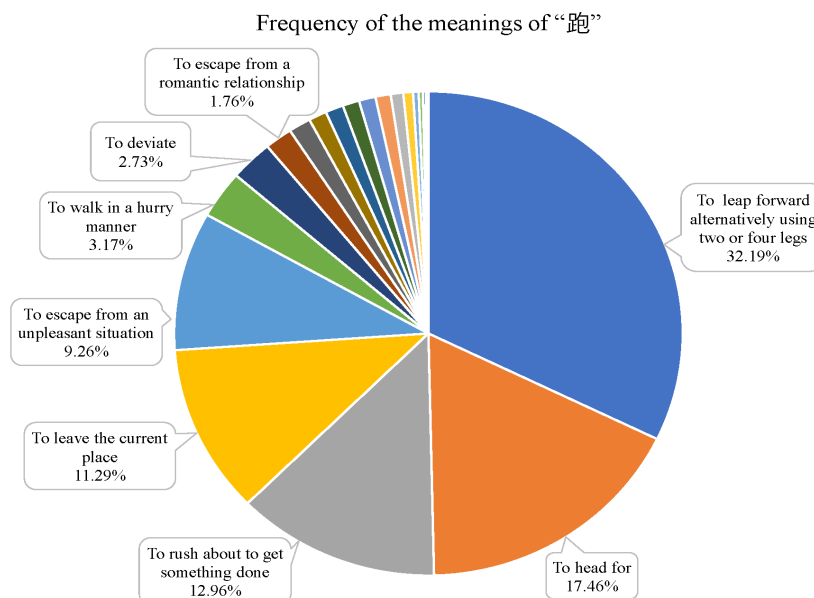


Figure 1. The frequency of the meanings of “跑”.

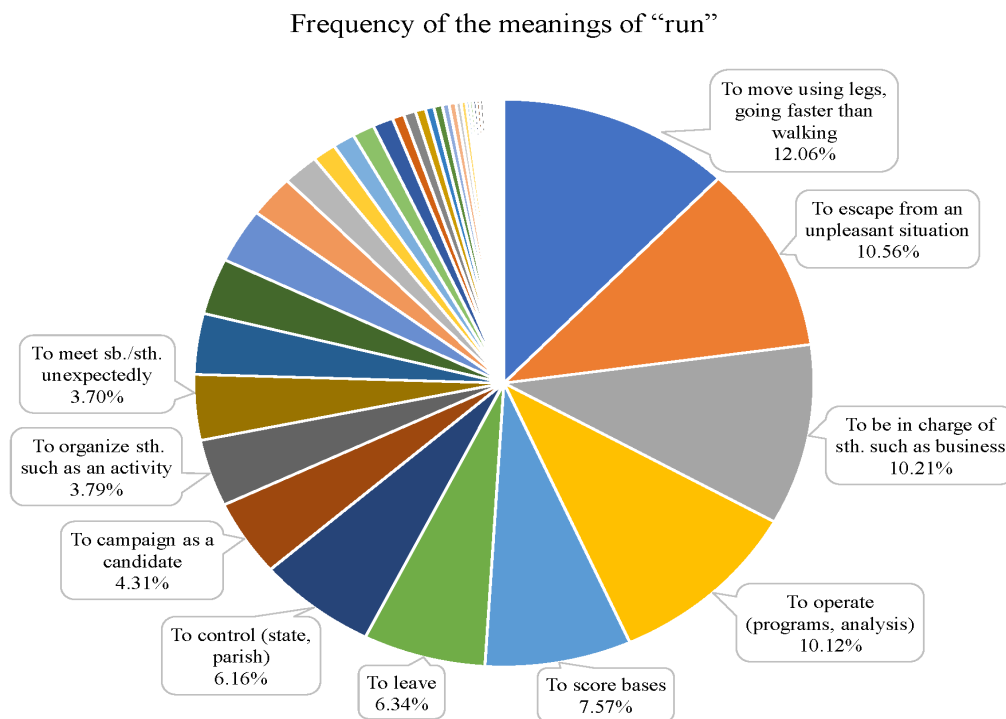


Figure 2. The frequency of the meanings of "run".

Table 1. The meaning with the highest frequency

	“跑”	“run”
Amount	365	137
Frequency	32.19%	12.06%

Table 2. The items of meanings of “跑 /run”

	“跑”	“run”
The number of items	21	46

done, to start a new relationship, to observe in a close way, to gain information, to function or support to function”. We can identify that the meanings all originate from the common experience of human beings, reflecting the embodiment essence of languages.

3.2. The disparity of amount of meanings

Secondly, one prominent difference is that the meanings of “跑” are far less than those in English, unlike the second hypothesis.

Many collocations of “run” display a high degree of abstraction, which are absent in Chinese, leading to the gap between the numbers of the meanings. Being a self-motion verb as “跑/run”, the shared semantic features are “fast, pedestrian, motional, directional, continuous and consistent function as a whole, self-productive”; however, in different contexts, the characteristics are not all included, but the abstraction of one or more features.

To understand a word, one can start with its collocation. The words after “run” are business, or-

ganization, activities, parish, world, society, race, errands, blockade, human organs, commercials, people, number, aid, riot, story, shows in gallery, antibiotics, lines, views, or words, demonstrating the feature of state-highlighted and process-centered, that’s why “run” develops state-highlighted meanings as “in charge of, manage, to break through” and process-centered meanings such as “to formulate, to mention to others, to experience”, which are all absent in Chinese. In contrast, the unique objects of Chinese are fewer, including agent of motion, people to be contacted, result, role, or profession and are basically emotion-stressed, motivation-driven and result-centered, as a result, the meanings contained by “跑” as “to cost, travel to get things done, make a living” have no equivalent expression related to “run” in English.

3.3. The different level of specificity of meanings

Thirdly, another difference is that the usages of “run” display a higher level of specificity than those of “跑”, conforming to the third hypothesis. The higher level of semantic specificity of “run” is achieved by detailed descriptions of its components including context, collocations such as agents, objects and sentence pattern; besides, causative and abstract meaning extension also effect to pave the way for meaning distinction.

Towards the same semantic core, the items of “run” are more specific, as shown in **Table 3**.

To begin with, the collocation of “run” is more restricted than that of “跑”, leading to a higher level of specificity of “run”. This can be viewed from the semantic core “to play the key role”. According to the classification of Gries (2006), among the most frequent usages of transitive senses of “run” are “to organize, to operate, to control” and “to be in charge of”. All these four meanings have one common feature in essence, that they all involve human to “play the key role”. Incorporating the meaning as “to operate program, computer system or analysis” as the usages in Chinese, “run” further illuminates its objects in detail so as to express in a logically and grammatically suitable manner. Likewise, from the semantic core of “to cover”, the agents of “to disappear” of “跑” are generally human or objects, but for “run”, the agents further includes play and event, which are all components absent in Chinese, therefore, we can tell that when the agent is clarified, the semantic orientation tends to be clearer.

Table 3. The different levels of specificity of “跑/run”

The meanings “跑”		“run”
Semantic core		
To play the key role	To operate	To organize (activity); To be in charge of (business); To operate (program, analysis); To control (country, parish);
To cover	To travel a long distance	To extend from one place to another; (A play, event) to continue for a period; To provide;
To function	To function	To function; To be made to function using a particular source of energy;

Afterwards, in terms of the same semantic core, “run” has more diversified meanings though applying analogy between spatial and temporal, concrete and abstract motion event leads to more complex semantic features of “run”.

Concerning the transition of spatial motion to temporal one of “run”, the tendency can be viewed from “to cover”. For “跑”, the verb is used to indicate the movement of an object, followed by distance to describe a process, which can be understood as “to travel a long distance”, as shown in the 1st example.

1. 以前一副轮胎顶多只能跑一万三千公里，现在不超载，气压足，又控制速度，可以跑二万五千里。

(In the past, a pair of tires could only *run 13,000 kilometers* at most, but now if the vehicle does not overload, the tire pressure is sufficient, and the speed is controlled, it can run 25,000 kilometers.)

While for “run”, when the emphasis is laid upon the agent, the semantic meaning of movement in the spatial scope is “to extend from one place to another” as example 2 clarifies, representing an image-schema transformation.

2. The chapel was the first building put up, and all the pipes *run from* it. Most plumbing problems will start here.

Under the circumstances above, both “跑” and “run” present their traits as a motion verb, reflecting the process of movement, but for “run”, the meanings are more explicit. Just as Zhang (2021) stated, English and Chinese adopt different strategies for encoding spatial relationships. Apparently, the spatial motion can turn to the temporal domain, as in “continue for a period”, the extension in space can also be understood as the continuation in time in example 3.

3. The weekly two-hour workshops *run 10 a.m. till noon* through Aug. 9, Thursdays at Robie House.

And it’s also noticeable that the usages of “run” go beyond the concrete domain to the abstract domain, and the trend also reveal itself in the application of the meaning “to cover”, from “to extend” to “to provide”. Based on encyclopedia knowledge, when an object extends, it covers the ground underneath. In a similar way, when the object to be covered is regions by “aid”, which seems to lead to nonsense, only when understood as “provide” can “run” be correctly interpreted as in example 4.

4. She couldn’t get out of China, but she still risked getting infected to *run aid* to isolated regions.

Moreover, through causative extension, “run” is enabled to derive new meanings, as the most straightforward and most productive method (Levin, 1993: 31), it further clarifies the semantic component and benefits the determination of meanings, for the similarities between related ones. For example, to express the meaning “to function”, the agents are generally machinery or transportation vehicles, while for “run”, considering that equipment functions by the support of gears or other parts, special energy or resource is involved to sustain a continuous movement, therefore, “run” also has the meaning “be made to function by using a particular source or energy”. Through semantic ex-

tension, the context of semantic generation is described in more detail, which, in turn, improves the accuracy of language descriptions.

4. General discussion

In the preceding part, the study on semantic contrast between the two words has been carried out. And this section attempts to elaborate on the reasons for similarities and differences from three aspects.

4.1. Prototype category and meaning formation

According to prototype category theory, among the different meanings of a polysemous word, one (in rare cases, more than one) should be dominant, whose status is determined in terms of such attributes as derivatives, frequency of usage and centrality.

Defining the prototypical meanings of “跑/run” could cast a clear insight into the study. The reason is that the confirmation of the prototypical meaning is closely related to the formation of a word’s meaning. This term is also often regarded as a typical member of word’s meanings. Tyler and Evans (2001) put forward corresponding criteria for judging the typicality of a meaning, such as the earliest formed one, the centrality of semantic network, and the asymmetric judgment of semantic praise or derogation or iconicity. Dirven and Verspoor (1998: 31) pointed out that there are three ways to determine the core or typical meanings of polysemous words:

- 1) Empirical method: when speaking of a word, the first meaning that comes to mind.
- 2) Statistical methods: the most frequently used term in polysemous words.
- 3) The term that serves as the basis for the extension of other ones.

The prototype meaning of the two, “fast pedestrian motion”, is found in this part following a set of rigorous conditions, for the intrinsic nature of the two verbs is a contributing factor to their semantic overlap, which can be well clarified by their prototypical meanings.

Combined with relevant criteria and corpus data, the generation of prototypical meanings can be divided into the following aspects:

To begin with, “fast pedestrian motion” is the most frequent meaning used in early language acquisition. Theakston et al. (2001) reached this conclusion after studying the data of Manchester Children’s Elemental Corpus. Aktan (2020) later mentioned 112 children aged 5 or 7 years old that the earliest learned phrasal verbs include “run-away”, in which “run” means to leave quickly, which is consistent with the former conclusion. In Chinese, Cheng (2009) did a follow-up survey on a 3-year-old child and tracked daily communication and made several tables. The conclusion presents that “跑” often appears in front of the complement displaying trend such as “来, 去” and is interpreted as fast motion. Compared with adults who can not only use the verb and tendency complement as a collocation, but its metaphorical meaning, children acquire a smaller amount of meanings, but it is sufficient to prove the semantic characteristics of verbs acquired in early childhood.

Secondly, according to an etymological dictionary based on historical text analysis, that is, a corpus-based approach. To be precise, the origins and interactions of semantics and phonology are

complex and ambiguous. Even in this way, the diachronic semantics of “run” included the former stated prototypical meaning. For the diachronic development of “跑”, it is often thought to derive from “走”, which means fast motion in ancient Chinese. According to The Scripta Sinica Database, “跑” initially appeared in Guan Hanqing Opera Collection in the Yuan dynasty, denoting the chase between the roles, consistent with the present meaning.

Thirdly, like many other English verbs, “run” is zero-derived when used as a noun, and its collocations are largely fixed. Besides, it does occasionally appear in proper nouns without many changes in its main meaning. For example, the movie title “Run Lola Run” and a certain event “the Sardine Run”, all have the feature of “fast walk”. Meanwhile, “跑” also presents similar characteristics in such words as “领跑” and “跑位”, still, they expose features of fast motion. According to the explanation of Lakoff (1987) of the relationship between semantic prototypicality and markedness in the elaboration of metaphor, the meaning with the least formal constraints can be considered as unmarked and therefore, the prototype one. Specifically, the meaning “fast pedestrian motion” is followed by the most varied prepositional phrases. This meaning has the highest number of semantic tag attributes. It also suggests that most of the semantic variation exhibited by the word comes from this formal and semantic feature, which has the strongest word formation, which in turn, strongly supports its unmarked essence.

4.2. Image-schema and meaning expansion

Initially, image-schema theory is proposed by Lakoff and Johnson (1980) while describing the conceptual metaphor, which is “the dynamic structure of perceptual interaction and continuous reappearance, which gives our experience coherence and structure”.

The difference in the numbers of meanings of “跑/run” can be explained by image-schema analysis. With “run” covering all the major types of image schemas and “跑” only covering a part of them, it is revealed that the verb “run” highlights its high level of abstraction and temporal nature while “跑” presents its spatial traits.

The eight types of image schemas divided by Lakoff (1987: 267) are container schema, source-path-goal schema, center-periphery schema, link schema, front-back schema, up-down schema, part-whole schema, linear order schema.

The distributions of image schemas of “跑/run” are shown in **Table 4**.

Table 4. The image schemas of “跑/run”

Image schemas	Sum of “跑”	Sum of “run”
Source-path-goal schema	17	32
Container schema	2	1
Link schema	1	4
Center-periphery schema	0	1
Front-back schema	1 ¹	4
Part-whole schema	2	0
Linear order schema	0	2
Up-down schema	0	2

¹ The meaning “to operate” in Chinese occurs in several domains, therefore, the total number exceeds the item of “跑”.

Several conclusions can be drawn from the table above:

First and foremost, one of the discrepancies of “跑/run” is that though both “跑” and “run” concentrate in large numbers in the source-path-goal domain but the specific meanings differ. Though verifying the common bodily experience of human, the meanings of the two words are not identical. And it is revealed that Chinese emphasizes spatiality, while the meanings of “run” are rather abstract.

The constituent elements of the schema are starting point, ending point, path, and direction. For “跑”, meanings that focus on spatial movement fall into this category, such as “to leave for, to get something done, to travel a long distance”. More accurately, the motion verb puts more emphasis on space in the Chinese language, denoting the source, goal, process and becomes more generalized, leading to the result of action. For “run”, the meanings that refer to abstraction motion can also be categorized here, such as “to operate, to become different in a particular way, to look through, to caress” for the elements are all included in these meanings but shift abstract and causative domains.

Secondly, one unique point of “跑” is that only the meaning “to operate” in Chinese covers 3 domains, no similar case is found in English as in “source-path-goal, front-back, part-whole” schemas due to the agents of the verb phrase can be a complete vehicle, such as a car, or a train used in the sentence “跑不上点” mentioned above, since the front of human body faces the direction of body’s movement, being delay carries the meaning of failing to arrive on time, which is, behind the schedule. The meaning can also be applied in the part-whole schema owing to the agent “tires”. As a part of a vehicle, tires can only function when supported by engines and other automobile parts; nevertheless, the agent can be used independently in the phrase “a pair of tires could only run 13,000 kilometers at most”, while the part-whole schema involves an integral whole, a part and connection type, the meaning also falls in this category.

Thirdly, the distribution of the image schemas is complementary in terms of center-periphery schema, part-whole schema, linear order schema and up-down schema and the meanings of the overlapping schemas are not identical. In the following is a detailed explanation.

The container schema, which foregrounds the visual, auditory, and other sensory impressions left by the agent (Langacker, 2009: 117–118), can be used metaphorically in many non-spatial domains, in most cases, the agents of “跑” are living entities. But in the example above, “跑” can mean “to be away from home”, with the essence emphasizing the behavior of “to leave the life partner”. The reason lies in that a married couple is often regarded as a whole, therefore, companionship is “located” as “internal”, and the behavior of leaving each other is to reach the external, as the promise of marriage is characterized by the container schema and the whole-part schema, since the behavior of leaving the former lover is expressed by the verb phrase “run off”.

In contrast, container schema occurs more frequently in English as the occasional encounter of unexpected things and people, normally carried by the set phrase “run into”. The former can be understood as being caught in a tricky situation, and the latter is more vivid as knocking into others. The meaning of disappearance in Chinese is personal characteristic, and it expands to the pass of time in English. According to the definition of the source-path-goal schema, the elements include a starting point, an end point, a path, and a direction, most of the meanings of spatial motion conform to this schema. In metaphors, the end point is often interpreted as the goal, which will be analyzed

in more detail later when we talk about metaphors, but here it is worth explaining why the meanings of “to manage, to execute/operate” are placed under this schema.

Under the link schema, here are four meanings, including two entities and connection relation, specifically, “to disappear” for Chinese. In the instance “the sale is not a deal, the righteousness is lacked”, the benevolence and consideration between cooperation partners serve as a bridge to seal a deal; when the two sides fail to reach an agreement, the connection is broken. In English, the four meanings under this schema are “to accept and adopt”, “to hang out”, “to confuse” and “to coexist”, carried by the verb phrase as “run with”. The general meaning is to juxtapose two things, or to compare them, or to emphasize the connection between them, while this classification does not appear in Chinese.

The center-periphery schema only exists in English, where “run” is used as “to spread”. The schema involves an entity, a center, and a periphery, which are all included in the meaning of “to spread”. Among the examples that imply this meaning, one agent is “disease”, and the spread of disease involves a center and affected areas, the latter is influenced and determined by the former one.

On the one hand, “to execute/operate” means to start a machine or software application that can then operate on its own or under the constant control of a human being. But on the other hand, “to manage” usually contains more abstract meanings, such as the management of the institutions, organizations. Though sometimes it’s hard to decide to how much extent human involvement is in an event, in essence, “run” all points to the motion from a particular starting point to an expected direction. It might be a continuous operation for software, steady advancement for business. In addition, meanings in Chinese and English concentrate in this schema. Most meanings in Chinese involve specific movement, but in English, many meanings are changed to abstract directions, such as management and program operation mentioned above, while representing many meanings such as continuity, extension, and coverage in the temporal span.

The front-back schema is derived from the embodied human experience, where the front of the human body faces the direction of movement and is also metaphorically used for the direction of time. In English, the emphasis is laid upon different states of the moving agent in a successive time period, such as in the instance “the sky is running dark”, referring to exterior changes in a continuous process.

Only meanings of “run” occur in the linear order schema and up-down schema. Linear schemas are generally used to represent temporal order. In English, it’s exemplified by two meanings “continue for a period” and “time to pass by”. No relevant corpus data can be found in Chinese for only the meaning of “run” incorporate the abstract domain. Likewise, the up-down schema only includes English language material, and is often followed by “over, up”. Representative meanings are “cause to increase” and “to be near or at a particular level”, all exactly suiting the metaphor “up is more” and having a certain spatial orientation, either going up or down. Of course, they are also applied in an abstract domain, such as “run up” when prices rise, which still has a logical connection between up and down.

4.3. Metaphor and meaning interrelation

Metaphor is a cross-domain mapping based on the principle of similarity, reflecting the correlation between two concepts or elements in the same cognitive domain. Sweetser (1990) pointed out

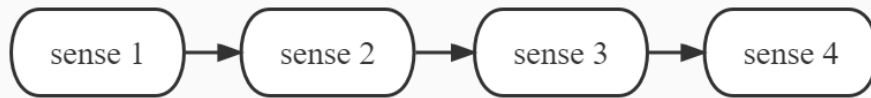


Figure 3. The method of meaning expansion—the meaning chain.

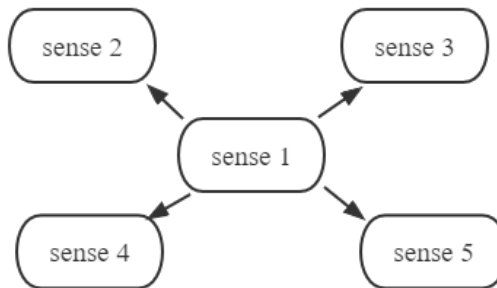


Figure 4. The method of meaning expansion—the ripple type.

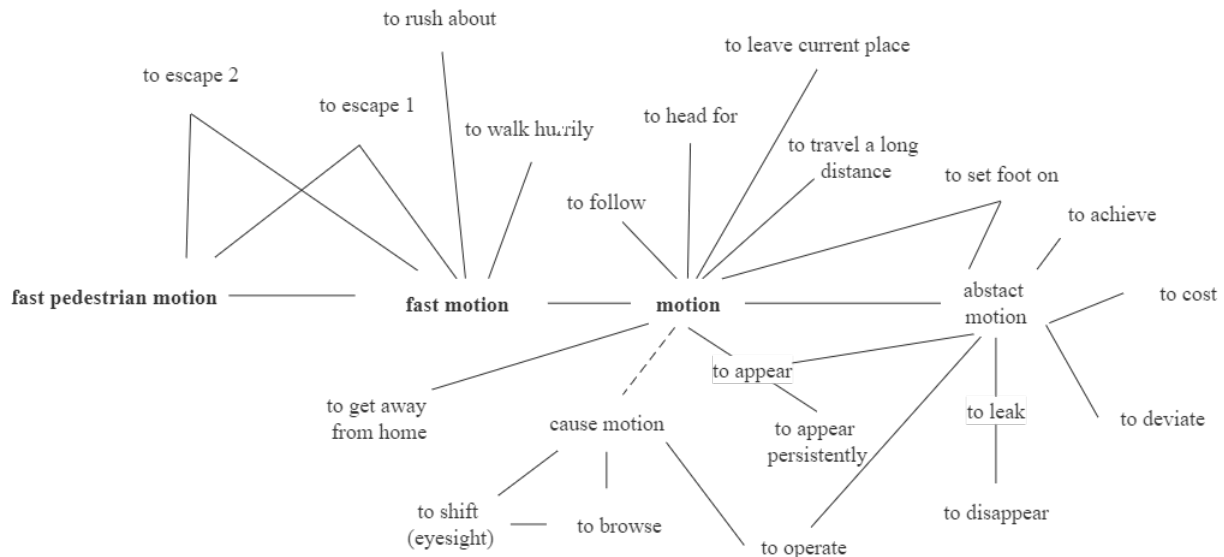


Figure 5. The radial network of “跑”.

that the use of metaphor is the result of the continuous expansion and extension of meaning.

The differences of level of specificity of “跑/run” can be well explained by metaphor applied in a close meaning extension. Since metaphor is the mapping or projection between conceptual domains (Sun, 2010), the application of metaphor and cognitive domain concerning “跑/run” can be illustrated in radial networks of meaning interrelation of the two.

There’re two types of meaning extension methods. The first one is the “meaning chain”, in which meanings only share some semantic features with their immediate neighbors because of their iconicity in a certain part. The concept was proposed by Taylor (1995) when he analyzed seven example sentences including “climb”.

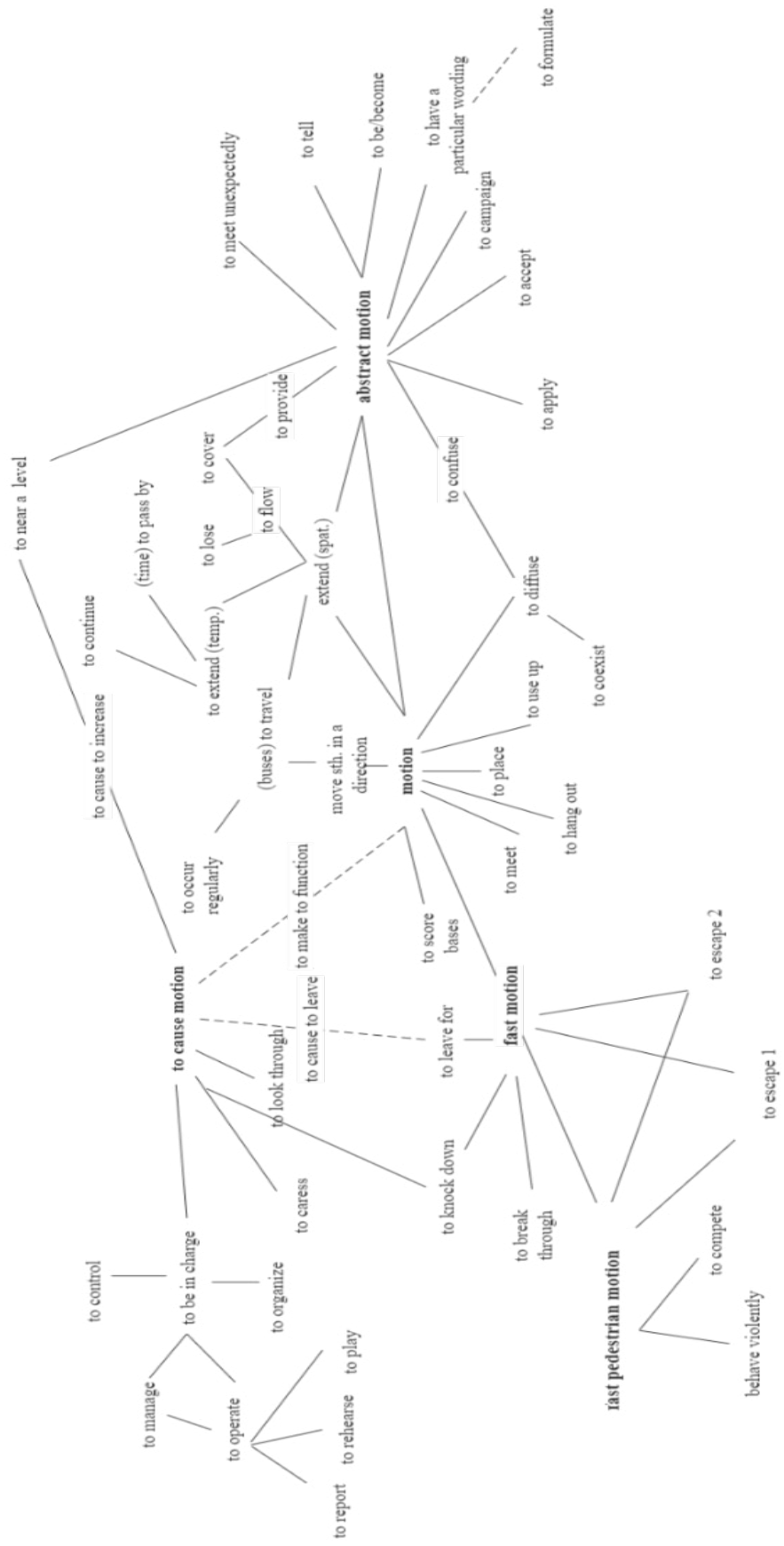


Figure 6. The radial network of “run”.

The second one is the “ripple type”, depicting the existence of a prototypical meaning in polysemous words, while other meanings derive from it in other directions, as shown in the **Figure 4**. Sweetser (1990: 9) put it forward and argued that if a word used to mean A, now it means B, then B is not produced out of blue, but there would be a stage when the word means both A and B, eventually, A was lost.

In fact, semantic extension is often a combination of the above two, as shown in the radial networks of “跑/run” below.

Dotted lines are drawn to show the causation links between motion and causative motion, which is what Levin (1993: 311) has termed as “induced action alternation”. The prototypical meaning of “跑/run” is termed “fast pedestrian motion” for consistency. Meanings are shortened to five letters at most for readability. “To escape from an unpleasant situation” and “to escape from a romantic relationship” are referred to as “escape 1” and “escape 2”, “spatially” and “temporally” are shortened as “spat.” and “temp.” in the radial network of “run”.

Figures 5 and **6** visually present the interrelations of different meanings, and several conclusions can be drawn:

To begin with, in radial networks, there is a prototypical sense from which other partially similar meanings are derived, the latter may become the source of semantic expansion, and then the other meanings are separated. As it can be clearly seen in the figures, the semantic extension of “跑/run” combines the above two meaning extension methods together.

The closely related semantics come from a few senses with the strong power of word formation. From “fast pedestrian motion” to “fast motion”, “motion”, “abstract motion” and “causative motion”, in this process of semantic divergence, the similarity between meanings is getting lower and lower, but there is still some internal connection, that is, family resemblance. The subsequent reason lies in the continuous improvement and development of people’s cognitive ability, new meanings continue to extend from the prototypical meaning, and the extended ones can further become the source meaning, based on which expands the iconographic “family” system.

Take “to escape” and “to leave a place for something”, as an example. They both take root in “fast motion”, and are characterized by “quickness”. Even in this way, they are applicable in different situations with reference to the distinguishing characteristics described above. The former often appears in adverse and critical situations, while the latter appears to be in a hurrying state without any external threat. However, the agent of “escape” is highly coincident with the prototype meaning, so the two are connected in the network diagram.

Secondly, the semantic meanings of “跑” are mainly mapped from the domain of physical attributes to psychological factors, and the attributes of familiar things are mapped to abstract things by analogy. Concerning “跑”, meanings are relatively scattered while the derived meanings are evenly distributed. In terms of virtual displacement, relatively more meanings overlap with English ones. While for “run”, the scope of agents, the paths are more abstract, extending from spatial to the temporal range. Its category expansion undergoes changes from [+life], [+controllable], [+displacement] of prototypical metaphorical extension agents to [-life], [-control], [+displacement] role of the main body; finally, it extends to the virtual displacement subjects with the features [-active], [-controllable] and [-displacement]. The process reflects that English lays emphasis on verb’s timeliness (Wang,

2007).

Lastly, the meanings of “run” are of a higher cognitive experience. They are developed on the basis of mental cognition of humans and are accumulated based on social experience with prominent cognitive traits serving as the connections between entities and psychological or social states.

The conclusion is also consistent with Lakoff’s (1987: 248), who distinguished between two types of mental scanning: sequential scans and overall scans. Sequential scanning is a continuous recording of actions or events that occurred in different periods, highlighting a complex temporal relationship just like the meaning expansion trend exhibited by “run”. While “跑” focuses on the simultaneous scan of all the components in the scene, consequently, the emphasis is on the result and reflects a static state.

5. Conclusion

This paper, dictionaries-based and corpus-driven, attempts to make a contrast of verb “跑/run” on the basis of analysis of real usages from corpora data and bring out the underlying mechanism of meaning extension and interrelations between Chinese and English from the perspective of cognitive theories.

According to the semantic contrast analysis, the present thesis yields the following major findings: first and foremost, no matter in dictionary entries or from actual usage, the meanings placed on top of the two verbs are the same. Besides, the gap between the number of senses is quite noticeable, and meanings of “run” are far more than those of “跑”. Thirdly, English presents a higher level of specificity than Chinese, the reason can attribute to the detailed descriptions of its components through profile shift and causative meaning extension, paving the way for meaning distinction.

The investigation to reveal the cognitive causality behind semantic similarities and differences of the words draws conclusion as follows:

Firstly, the most basic meaning of “跑/run”, fast pedestrian motion, turns out to be the prototypical meaning, from which diverse senses come into being.

Moreover, regarding the image schema, the distribution of the two words varies. The occurrences of meanings in the source-path-goal image schema holds the highest rate, but the meanings categorized here are rather different, in the meantime, the distribution of other meanings is complementary.

Furthermore, according to the contrast of the radial analysis, the overwhelming meanings of “run” distribute massively and are connected logically. Covering several cognitive domains into an abstract dimension, “run” displays a higher level of cognitive processing while the semantic meanings of “跑” cover a basic cognitive domain and are mainly mapped from the domain of physical attributes to psychological factors by analogy.

Though considerable effort has been made to enrich the present study, deficiencies and limitations are still inevitable.

To begin with, the paper focuses on semantic contrast studies, excluding the influence of syntax or other grammatical factors, but the syntactic components might interact with semantic factors,

which may play a prominent role in words' interpretation.

Besides, more inclusive, and comprehensive language data and more accurate analysis tools will undoubtedly lead to more enlightening conclusions.

The further studies can be carried out from the following aspects: firstly, diversified perspectives are to contribute to the research's comprehensiveness such as syntactical, morphological, and pragmatic approaches. Additionally, the expansion of data samples and tools for semantic analysis can improve the accuracy of the research.

Conflict of interest

The authors declared no potential conflict of interest.

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