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## Metaphorical Conceptions of Time: A Corpus-Based Semantic Analysis of ‘TIME IS MONEY’ in English and Chinese

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### ABSTRACT

Time, as an abstract yet fundamental concept, has been extensively studied across disciplines. Within cognitive linguistics, Conceptual Metaphor Theory (CMT) suggests that people conceptualise time through source domains and mental mappings. However, cross-linguistic variations in these conceptualisations remain underexplored. This study employs a corpus-based semantic analysis to investigate the ‘TIME IS MONEY’ metaphor in British English and Mandarin Chinese, drawing data from the Freiburg-LOB Corpus (FLOB) and the Lancaster Corpus of Mandarin Chinese (LCMC). Through Metaphorical Pattern Analysis (MPA) and semantic tagging with Wmatrix, 219 English metaphors (15.38% of concordances) and 98 Chinese metaphors (19.37% of concordances) were identified. Statistical analyses revealed significant cross-linguistic differences, particularly in the semantic fields of Social Actions and Processes and Psychological Actions and Processes. The findings indicate that while the ‘TIME IS MONEY’ metaphor is more semantically diverse in Chinese, it is more systematically expressed in English. Culturally, English metaphors emphasise individual control over time, whereas Chinese metaphors underscore collective needs and responsibilities. These results highlight the cultural and linguistic nuances shaping metaphorical expressions of time, offering new insights into the interplay between language, cognition, and culture.

**Keywords:** Time; Money; Cross-Linguistic Studies; Conceptual Metaphor Theory; Corpus-Based Analysis; Semantic Tagging; Semantic Analysis; Statistical Analysis

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## 1. Introduction

The study of metaphor dates back to Ancient Greece, where philosophers such as Plato and Aristotle proposed that metaphor is a form of comparison based on analogy and argued that it primarily serves an ornamental function in language<sup>[1, 2]</sup>. This perspective, known as the ‘Comparative Theory’ of metaphor<sup>[3]</sup>, laid the groundwork for understanding metaphor as a tool for artistic and rhetorical expression.

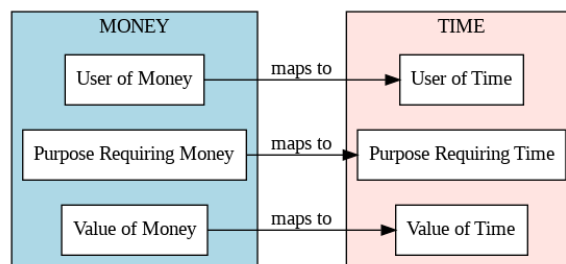
A significant advancement in metaphor theory was made by I. A. Richards, who argued that metaphor is not merely a decorative or rhetorical device but rather ‘a grace or added power of language’<sup>[4]</sup>. He introduced the terms ‘tenor’ and ‘vehicle’ to represent the main subject and its comparative counterpart, respectively, highlighting that metaphors arise from the interaction between the two<sup>[5]</sup>. Richards further developed metaphor theory by pointing out that the relationship between the tenor and vehicle goes beyond simple ‘resemblance’—the idea that the two elements share similar features—and includes ‘disparity,’ where differences between the elements are just as significant<sup>[6]</sup>. This led to a deeper exploration of how metaphors are constructed, shifting the focus from their mere usage to how these complex relations generate new meanings.

More recently, with the advent of cognitive science, neuroscience, and psychology, the cognitive study of metaphor has gained substantial attention. Researchers have increasingly focused on exploring the relationship between language and the human mind. One of the most influential theories is the ‘Conceptual Metaphor Theory’ (CMT) proposed by Lakoff and Johnson<sup>[7]</sup>. They defined metaphor as ‘understanding and experiencing one kind of thing in terms of another’ and elaborated on how metaphors function. In their view, metaphors are mental mappings from a more concrete ‘source domain’ to a more abstract ‘target domain’<sup>[8]</sup>, structured as *target is source*. For example, the metaphor LOVE IS A JOURNEY involves mapping the concept of ‘journey’ onto ‘love,’ enabling us to understand the abstract idea of ‘love’ through our experience and understanding of a ‘journey.’

Lakoff and Johnson further distinguished between ‘conventional metaphor’ and ‘novel metaphor’<sup>[7]</sup>. The former frequently recurs in language to represent particular meanings, events, or objects, while the latter extends conventional metaphors in unique contexts<sup>[3]</sup>. They argued that because

conventional metaphors are pervasive in our daily lives, they shape our thoughts, speech, and actions. In other words, ‘our ordinary conceptual system is fundamentally metaphorical in nature’<sup>[7]</sup>. This perspective is widely supported by linguistic, psychological, and sociological studies<sup>[9–13]</sup> and is effective across different languages<sup>[3, 14, 15]</sup>.

Among conventional metaphors, ‘time’ is one of the most basic and frequently discussed subjects due to its centrality in human society<sup>[16]</sup>. Common temporal metaphors include ‘TIME IS MONEY,’ ‘TIME IS A MOVING OBJECT,’ and ‘TIME IS A CONTAINER’<sup>[7]</sup>. Various studies have examined the relationship between time and space, with scholars generally agreeing that people’s perception of time is constructed through tangible spatial concepts<sup>[17]</sup>. Regarding the movement of time, previous research has also explored the metaphorical concepts of ‘moving time’ and ‘moving ego’<sup>[18]</sup>, conducting psychological experiments to demonstrate that different languages and cultures perceive the movement of time differently<sup>[19, 20]</sup>. However, the metaphor ‘TIME IS MONEY’ has received comparatively less attention. According to Lakoff and Johnson, ‘time’ is understood in terms of money, giving sense to the use of words like ‘budget,’ ‘spend,’ ‘invest,’ ‘profit,’ and ‘loss’<sup>[7]</sup>. The mapping between the source and the target domain is described in **Figure 1**.



**Figure 1.** The conceptual mapping of ‘TIME IS MONEY’.

Due to the widespread nature of the metaphor ‘TIME IS MONEY’<sup>[1]</sup>, its subtleties across different languages are often overlooked. However, cross-linguistic studies have shown that this metaphor can vary significantly in terms of collocations and semantic relationships, being closely tied to both linguistic and cultural contexts<sup>[16, 23]</sup>. This highlights the need for further research on the ‘TIME IS MONEY’ metaphor.

Traditional approaches to studying metaphors often rely on introspection or isolated citations, making it challenging

to quantify findings or systematically characterise specific metaphorical mappings<sup>[24]</sup>. In contrast, corpus-based analysis offers robust quantitative support for such research. To provide a more comprehensive understanding of the ‘TIME IS MONEY’ metaphor across languages, the present study conducts a corpus-based semantic analysis of British English and Mandarin Chinese, focusing on everyday language use. It utilises the Freiburg-LOB Corpus (FLOB) and its Mandarin counterpart, the Lancaster Corpus of Mandarin Chinese (LCMC), to identify metaphorical expressions. Automatic annotation software is then employed to label the semantic tags of the identified metaphors, followed by statistical and semantic analyses.

This study seeks to answer three key research questions:

1. How is the metaphor ‘TIME IS MONEY’ distributed across the two corpora (FLOB and LCMC), and what common expressions are used in each language?
2. Are there any differences in the semantic relationships of ‘TIME IS MONEY’ between the two languages, and if so, which semantic tags represent these differences?
3. What factors contribute to the semantic similarities and differences (if any) of ‘TIME IS MONEY’ in the two languages?

## 2. Materials and Methods

### 2.1. Datasets

The FLOB corpus, an updated version of the Lancaster-Oslo/Bergen Corpus (LOB), was built in the late 1990s to capture linguistic changes in present-day English. To maintain consistency with the LOB, texts in FLOB were manually selected rather than randomly sampled. The corpus comprises 500 texts, each approximately 2,000 words in length, distributed across 15 text categories<sup>[25]</sup>. This selective mechanism ensures that the corpus encompasses a wide range of texts written and published in British English, representing common language use. Consequently, FLOB serves as a valuable resource for examining metaphor usage in everyday contexts. The original version of FLOB was released in 1999, followed by the POS-tagged version in 2007. The corpus is accessible via ICAME Corpora<sup>[26]</sup>.

The LCMC corpus was designed to align with FLOB’s sampling framework, making it a corresponding Chinese

counterpart to the FLOB corpus. It contains written texts in Mandarin Chinese, published in Mainland China, and transcribed in both Chinese characters and Pinyin<sup>[27]</sup>. This alignment provides a robust basis for contrastive studies of Chinese and English, enabling comparisons between the two languages as a whole or by text type. The LCMC corpus was released in 2004 and is available for download from the Oxford Text Archive<sup>[28]</sup>.

By comparing these two corpora—similar in size and structure—this study effectively examines the ‘TIME IS MONEY’ metaphor in British English and Mandarin Chinese, while minimising potential interference from differences in data collection methodologies.

### 2.2. Analysis

This study employs a multifaceted analytical approach to investigate the ‘TIME IS MONEY’ metaphor, integrating corpus-based, semantic, and statistical methods to ensure a comprehensive exploration of cross-linguistic patterns and variations.

#### 2.2.1. Identify Metaphorical Patterns

To identify metaphors in the corpora, this study used the Metaphorical Pattern Analysis (MPA) method proposed by Stefanowitsch<sup>[24]</sup> and conducted the analysis using WordSmith<sup>[29]</sup>. The MPA approach involves searching for lexical items associated with the target domain and analysing their collocational patterns to uncover underlying metaphorical structures.

Each concordance was then manually reviewed within its context to determine whether the sentence conveyed the metaphorical meaning of ‘TIME IS MONEY’. Particular attention was paid to verbs such as ‘spend’, ‘waste’, ‘give’, and ‘save’, which frequently signal metaphorical use. Representative examples from the two corpora include:

Examples from FLOB:

- (1) Albery *wastes no time* in letting us know that his view is one of uncompromising seriousness.
- (2) He *spends more time* on the physio’s couch than on the field.
- (3) If I’d listened to her right from the start, I could have *saved myself a lot of time* and trouble.

Examples from LCMC (translated):

- (4) 我懶得在她身上浪费时间, 我是一个事情极多的人。(I can't be bothered to *waste my time* on her. I have too many things to do.)
- (5) 建筑大厦的人们花在打基础上的时间往往比花在建筑本身的时间多。(People who build buildings often spend more time laying the foundation than on the building itself.)
- (6) 趁年轻的时候, 要抓紧时间, 惜时如金。(While you are young, you should seize the time and cherish it as gold.)

According to Lakoff and Johnson<sup>[7]</sup>, 'TIME IS MONEY' entails that 'TIME IS A LIMITED RESOURCE', which entails that 'TIME IS A VALUABLE COMMODITY'. Thus, 'TIME IS MONEY' represents the most general form of metaphor within this conceptual domain.

Sentences identified as belonging to the 'TIME IS MONEY' metaphor were marked in the original dataset using Excel, and relevant sentences were filtered for further examination. **Figure 2** illustrates filtered results from the FLOB corpus, with the keyword 'time' highlighted and placed centrally within each concordance.

	A	B	C	D
1		centre		metaphor
20	is are figments of his imagination, and that he spends more	time	on the physio's couch than on the field. Encouragingly	TIME IS MONEY
29	wing unrest among their concerned friends at the amount of	time	they spend apart, the Prince and Princess of Wales h	TIME IS MONEY
31	led by the education secretary. The criticisms that too much	time	is spent on psychology and on sociology are patently	TIME IS MONEY
32	ur, it locks up the system for about an hour, and that has a	time	value of \$50,000 to £70,000. People attempting suicide	TIME IS MONEY
112	am in the enviable position today of being able to spend his	time	doing just what he wants. What he wants at the moment	TIME IS MONEY
157	of Telecommunications calculates that BT's longer dialling	time	for and to London will waste 16.7 million hours a year.	TIME IS MONEY
162	ision that the more expert a surgeon was clinically, the less	time	he was prepared to spend on administration, which he	TIME IS MONEY
194	ncement: the son must slay the father. Bloom spends much	time	tracing the influence of predecessors on younger rival	TIME IS MONEY
247	is a purposeful visit and the two of them would n't spend the	time	talking about the weather! I believe that Paul was anx	TIME IS MONEY
304	ding, and even the print-out from a computer. Spend some	time	browsing in the oversize books section of your local li	TIME IS MONEY
325	a creature exists) might spend months in Cameroon all the	time	rejoicing to have found an abundantly fertile African co	TIME IS MONEY
341	to me until I read this book just how valuable the name and	time	on the annunciator are as an alibi for anything from im	TIME IS MONEY
364	. These functions will most certainly appeal to users saving	time	particularly for contractors. A newly designed cab is r	TIME IS MONEY
421	to find a pup with the likely potential and then spend a lot of	time	training her. I was talking to David having tracked him	TIME IS MONEY
517	and Manley Hopkins, so that one soon learns to include it, to save	time	and avoid confusion. Gerard, given in honour of the saint, is	TIME IS MONEY
533	relationship with him, in large part because they had spent so little	time	together during Eric's childhood. Until he was eight he bare	TIME IS MONEY
536	ices. At each place his duties required him to spend nearly half his	time	travelling round his district. He was expected to keep a clo	TIME IS MONEY
537	times made life miserable. When he was not travelling, much of his	time	was spent on paperwork. As a bachelor, he braved twenty ye	TIME IS MONEY
592	hours. Despite East Spencer's curious plea for her to spend more	time	at home being a mother, Diana has always been the centrai	TIME IS MONEY
716	-domestic satellite channel is concerned. Groups will have to buy	time	. There will be opportunities for faith-communities on local t	TIME IS MONEY
730	gency to gather together in the same clubs and to spend their free	time	engaged in a narrow range of leisure pursuits. Generally the	TIME IS MONEY
731	unt, no longer listing it as a pastime. Mi Justice Harman spends his	time	fishing and watching birds. This is the same judge who conf	TIME IS MONEY
761	le, weekdays with one parent and weekends with the other or tem	time	with one parent and school holidays with the other, or when	TIME IS MONEY

**Figure 2.** Filtered results for the 'TIME IS MONEY' metaphor within the FLOB corpus.

Finally, verbs collocating with 'time' and their frequencies were recorded to analyse the various ways metaphorical meanings are expressed. Ambiguous cases—where the metaphorical status of an expression was unclear—were discussed between two researchers to reach a consensus, ensuring reliability and minimising bias.

### 2.2.2. Semantic Tagging

To conduct a detailed semantic analysis of the identified metaphorical expressions, this study utilised Lancaster University's Wmatrix software<sup>[30]</sup> for automatic semantic tagging and data summarization.

Wmatrix provides a web-based interface for a suite

of natural language processing tools, including the UCREL Semantic Analysis System (USAS) and the Constituent Likelihood Automatic Word-tagging System (CLAWS). USAS facilitates automatic semantic analysis using a tagset comprising 21 major semantic fields, each further divided into finer-grained categories. Meanwhile, CLAWS is a part-of-speech tagging system that applies over 160 tags, identifying not only the part-of-speech of a word but also its grammatical context. By combining the capabilities of USAS and CLAWS, Wmatrix can automatically annotate text with both semantic and part-of-speech tags, which can then be sorted by frequency and category.

Since Wmatrix (version 5) only supports English text, the Mandarin Chinese data required translation before tagging. To address potential translation biases and maintain consistency, we used Google Translate<sup>[31]</sup> for preliminary translation and manually reviewed the results to ensure semantic and syntactic accuracy. To preserve the metaphorical context, literal translations were prioritised, with minimal adjustments made to convey cultural nuances. By using this method, most sentences can be translated accurately, but for expressions indicating emotional preferences or are more contextually dependent, translations are sometimes slightly adjusted, mainly concerning the metaphor itself, to keep a more authentic expression. For example, the phrase “打发时间” (dǎ fā shíjiān) will sometimes be translated as ‘consume time’ or ‘spend time’ by Google Translate, but it is more appropriate to use ‘kill time’, as it conveys the boredom that people feel.

While these measures aimed to minimise bias, it is acknowledged that certain cultural nuances inherent to Mandarin Chinese may not be fully captured in English translations. Future studies could explore the development of semantic tagging tools specifically for Mandarin to enhance methodological precision.

### 2.2.3. Statistical Analysis

Statistical analysis of the semantic data was performed using SPSS Statistics<sup>[32]</sup>. First, we normalised the tag frequency as in equation (1) to mitigate the impact of the varying number of metaphors identified in each corpus:

$$Normalized\ frequency = \frac{tag\ frequency}{number\ of\ metaphors} \quad (1)$$

Then, we tested whether the dataset followed a normal distribution by drawing Q-Q plots and conducting the Kolmogorov-Smirnov test. Based on the results, we em-

ployed the non-parametric Mann-Whitney U test to determine whether there were significant differences between English and Chinese semantic tags. The test variables were the different semantic tags, and the grouping variables were English (1) and Chinese (2).

Following the overall difference analysis, semantic tags were grouped by broader semantic fields (e.g., A1.1.1 and A1.1.2 were grouped under field A) and tested individually using the Mann-Whitney U test. Semantic fields containing only a single tag were excluded from further analysis as they did not indicate significant differences. This approach allowed us to pinpoint which semantic fields were significantly different in a statistical sense and served as a guidance for subsequent semantic analysis.

### 2.2.4. Semantic Analysis

Based on the statistical results, we focused on semantic fields that exhibited significant differences. We conducted a detailed examination of the semantic tags to identify major disparities in category and frequency, then analysed the words associated with these tags and reviewed the concordances in both corpora. By examining the full context, we compared and interpreted how the ‘TIME IS MONEY’ metaphor is constructed in British English and Mandarin Chinese, exploring the semantic variations between related words.

To better understand the factors contributing to these semantic differences, we considered social, cultural, and ideological aspects that may shape metaphorical expressions in each language.

## 3. Results

### 3.1. Metaphorical Patterns

We identified 1,424 concordances of the word ‘time’ in the FLOB corpus and 506 in the LCMC corpus. Out of these, 219 concordances in FLOB and 98 concordances in LCMC were classified as containing the metaphor ‘TIME IS MONEY,’ representing 15.38% and 19.37% of the total concordances, respectively (see Table 1).

Table 1. Distribution of identified metaphors in the corpora.

	FLOB Corpus	LCMC Corpus
concordances	1424	506
metaphors	219	98
proportion	15.38%	19.37%

For the verb collocation of ‘time’, we ranked the verbs by frequency and selected the top 10 most frequent verbs from each corpus for our analysis (verbs that appeared only once or twice were considered less relevant). The results are shown in Figures 3 and 4.

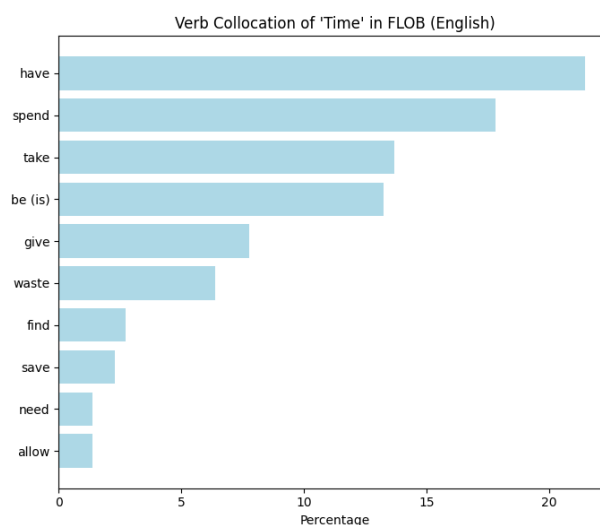


Figure 3. Verb collocation of ‘time’ in FLOB.

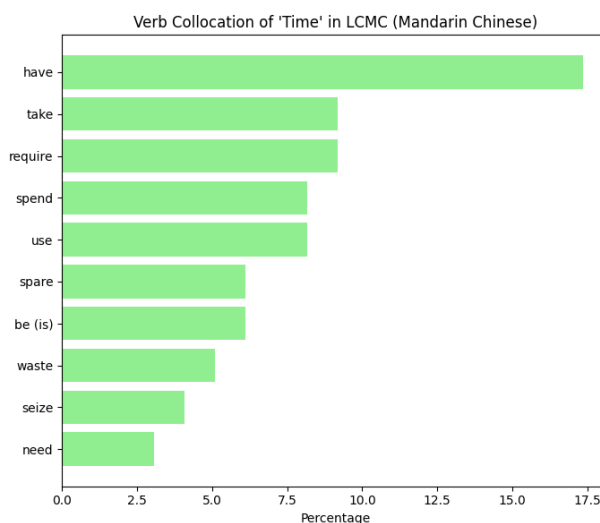


Figure 4. Verb collocation of ‘time’ in LCMC.

### 3.2. Statistical Analysis

After automatic semantic tagging using Wmatrix, descriptive statistics and normality tests were conducted for the normalised frequency of semantic tags in British English and Mandarin Chinese. A total of 315 tags were identified for English (M = 0.132, SD = 0.752) and 257 for Chinese (M = 0.166, SD = 0.800). Visual inspection of Q-Q plots

(Figures 5 and 6) indicated the presence of extremums in both datasets. The Kolmogorov-Smirnov (K-S) test results

(Table 2) confirmed that neither dataset followed a normal distribution ( $p < 0.001$ ).

Table 2. Descriptive and K-S test results for English and Chinese tags.

Variables	N	Mean	SD	K-S Statistic	Asymp. Sig.
English tags	315	0.132	0.752	0.433	<0.001***
Chinese tags	257	0.166	0.800	0.423	<0.001***

Note: \*\*\*  $P < 0.001$ ; \*\*  $P < 0.01$ ; \*  $P < 0.05$ .

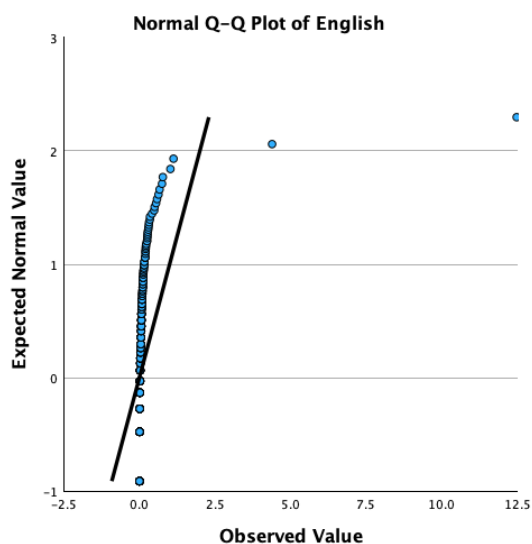


Figure 5. Q-Q Plot of English tags.

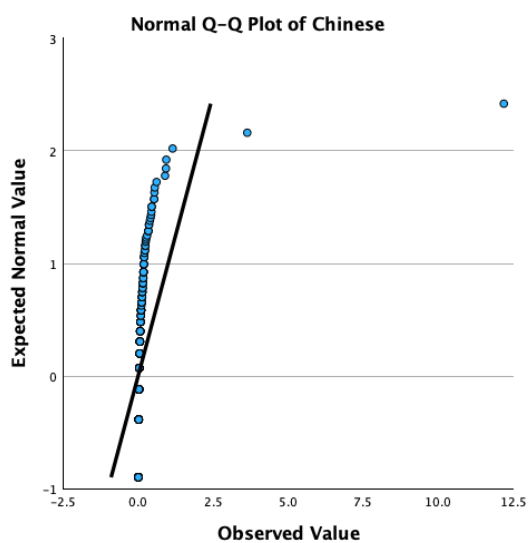


Figure 6. Q-Q Plot of Chinese tags.

Based on the normality test results, semantic tags were grouped into broader semantic fields and ranked by frequency (Tables 3 and 4). The top-ranked fields in both languages were highly similar, with only minor differences in their

ordering. A notable distinction was that the final semantic field for English was ‘The Body and the Individual’, while for Chinese, it was ‘Substances, Materials, and Equipment’. This indicates that English expressions are more centred on individual experiences, whereas Chinese expressions focus on practical, everyday contexts.

Table 3. Semantic fields in English.

Semantic fields	Frequency
Names and Grammatical Terms	19.58
General and Abstract Actions	6.00
Time	2.60
Numbers and Measurement	2.24
Movement and Location	1.72
Social Actions and Processes	1.63
Psychological Actions and Processes	1.58
Language and Communication	1.05
Money and Commerce	0.67
The Body and the Individual	0.63

Table 4. Semantic fields in Chinese.

Semantic fields	Frequency
Names and Grammatical Terms	17.81
General and Abstract Actions	7.17
Numbers and Measurement	3.01
Time	2.53
Social Actions and Processes	2.34
Psychological Actions and Processes	2.06
Language and Communication	1.60
Movement and Location	1.36
Money and Commerce	1.17
Substances, Materials, and Equipment	0.77

To evaluate cross-linguistic differences, Mann-Whitney U tests were conducted for the overall tag sets and individual semantic fields. The overall test revealed a significant difference between English and Chinese tag sets ( $Z = -4.281$ ,  $p < 0.001$ ), with a small effect size ( $r = 0.179$ ). When individual semantic fields were examined (Table 5), significant differences were observed for ‘Social Actions and Processes’ ( $p = 0.014$ ,  $r = 0.32$ ) and ‘Psycho-

logical Actions and Processes’ ( $p = 0.029$ ,  $r = 0.28$ ). These fields exhibited medium and small effect sizes, respectively. While ‘Language and Communication’ and ‘Money and Commerce’ showed medium effect sizes, their  $p$ -values were

not significant, potentially due to sample size limitations or variability within groups. For this study, only the two fields with significant results are considered, as they provide robust evidence of cross-linguistic variation.

**Table 5.** Mann-Whitney U test results for each semantic field.

Semantic Fields	Z	Asymp. Sig.	Effect Size (r)
Names and Grammatical Terms	-0.397	0.691	0.09
General and Abstract Actions	-1.772	0.076	0.16
Time	-0.992	0.321	0.15
Numbers and Measurement	-1.210	0.226	0.15
Movement and Location	-0.841	0.400	0.21
Social Actions and Processes	-2.448	0.014*	0.32
Psychological Actions and Processes	-2.180	0.029*	0.28
Language and Communication	-1.799	0.072	0.41
Money and Commerce	-1.849	0.065	0.36

Note: \*\*\*  $P < 0.001$ , \*\*  $P < 0.01$ , \*  $P < 0.05$ .

### 3.3. Semantic Analysis

Upon further examination of the semantic tags in semantic fields S (Social Actions and Processes) and X (Psychological Actions and Processes), it was observed that, in field S, Chinese vocabulary tended to indicate interpersonal relationships and social activities (such as ‘families,’ ‘social,’ and ‘coalition’), while English vocabulary focused on power relationships and specific actions (such as ‘manage,’ ‘guide,’ and ‘allow’). In field X, psychological activities were further divided into ‘thoughts and beliefs’ (e.g., ‘think,’ ‘consider,’ ‘idea’), ‘learning and understanding’ (e.g., ‘know,’ ‘remember,’ ‘examine,’ ‘investigate’), and ‘expecting or hoping for something to happen’ (e.g., ‘want,’ ‘expect,’ ‘desire’). In Chinese, vocabulary expressing the first two categories was more commonly seen, while in English, vocabulary expressing wanting and expecting was more prevalent. We will discuss the semantic differences in detail in the discussion part.

## 4. Discussion

### 4.1. Distribution and Metaphorical Patterns

The overall frequency of ‘time’ in the English corpus (FLOB) is notably higher than in the Chinese corpus (LCMC), reflecting the broader use of the concept in English. However, the metaphor ‘TIME IS MONEY’ is more prevalent in Chinese, where 19.37% of concordances relate to the

metaphor, compared to 15.38% in English. This suggests that while ‘time’ as a concept is more frequently discussed in English, the specific metaphorical framing of ‘TIME IS MONEY’ is more commonly applied in Chinese contexts.

Verb collocation analysis reveals that in English, expressions of the ‘TIME IS MONEY’ metaphor are relatively fixed, with the top five verbs (‘have,’ ‘spend,’ ‘take,’ ‘be,’ and ‘give’) accounting for about 74% of occurrences. This regularity indicates that the metaphor is deeply embedded in everyday language use, supporting the notion that conventional metaphors become habitual expressions of thought<sup>[7]</sup>. In these English expressions, the verbs suggest a dominance of time, with people responsible for how they allocate, spend, or waste it. There is a strong focus on agency, where individuals are seen as actively managing time, paralleling the control one exerts over financial resources.

In contrast, the Chinese corpus presents a more diverse range of verbs associated with time, with the top five verbs (‘have,’ ‘take,’ ‘require,’ ‘spend,’ and ‘use’) accounting for only 52% of total collocations. This diversity implies that Chinese speakers employ a wider variety of expressions when discussing time. For instance:

- (1) 他在百忙中抽时间写书  
(tā zài bǎimángzhōng chōu shíjiān xiěshū)  
He **spares** time to write a book amidst his busy schedule.
- (2) 我可以匀一点时间为你们讲解  
(wǒ kěyǐ yún yīdiǎn shíjiān wèi nǐmèn jiǎngjiě)

I can spare some time to explain to you.

In these two sentences, the words ‘抽’ (chōu) and ‘匀’ (yún) both convey the meaning of ‘sparing time’, with only a subtle quantitative difference. The former (‘抽’ chōu) emphasises extracting a small portion of time from a tight schedule, while the latter (‘匀’ yún) highlights balancing the distribution of time. For non-native speakers, the expressions may seem to be synonymous, but for native speakers, these nuances would imply different attitudes conveyed by the speaker and influence the hearer’s interpretation of the sentence’s implication. This illustrates how the metaphor ‘TIME IS MONEY’ in Chinese is context-dependent and less fixed, allowing for more flexible interpretations based on the speaker’s intent and situation.

Data from the LCMC corpus also show that verbs conveying the meaning of ‘needing time’ and ‘seeking time’ (such as ‘require’, ‘seize’, and ‘need’) take up a notable percentage of the total collocations. These verbs emphasise the idea that ‘something needs time to be done’ and that ‘time is precious’. In this context, the task that takes time to finish becomes the dominant role while people are being dominated. We can only ‘borrow’ time from the outside world, rather than relying on ourselves and deciding how to manage it.

Overall, the metaphor ‘TIME IS MONEY’ has a more fixed expression in English, often implying that ‘time is controllable’. In contrast, the expressions in Chinese are more diverse and complex, underscoring that people use time while being subject to its control, highlighting the scarcity and preciousness of time.

## 4.2. Semantic Analysis

Due to the greater number of English concordances compared to Chinese, the quantity of semantic tags in English (N = 315) is significantly higher than in Chinese (N = 257). However, upon normalisation, the average value of semantic tags in Chinese (M = 0.166) is slightly higher than that in English (M = 0.132). This suggests that despite having fewer total concordances, the Chinese corpus showed higher semantic density, indicating that Chinese tends to express a more focused set of ideas within each metaphorical expression.

The comparison of semantic fields between English and Chinese reveals that both languages have similar categories,

such as human behaviour (physical, mental, individual, interpersonal), numbers, measurement, and commerce. However, the frequency ranking of these categories differs significantly between the two languages, resulting in an overall notable difference in semantic tags. A key finding is the significant difference in the semantic fields of ‘Social Actions and Processes’ and ‘Psychological Actions and Processes,’ with Chinese placing more emphasis on collective and interpersonal dynamics. In the ‘Social Actions and Processes’ field, Chinese metaphors of time often relate to group efforts and societal needs. For example, sentences such as:

- (3) 要用长时间动员社会，家庭，学校相互配合  
(yào yòng chángshíjiān dòngyuán shèhuì, jiātíng, xuéxiào xiānghù pèihé)  
It will take a long time to mobilise society, families, and schools to cooperate.
- (4) 他们加班加点，不计时间  
(tāmén jiābānjiādiǎn, bùjì shíjiān)  
They work overtime without counting the hours.

Here, ‘time’ is conceptualised as a collective resource necessary for social cooperation, downplaying the individual’s control over time and stressing its use for the benefit of the group. This aligns with the collectivist orientation in Chinese culture, where group harmony and cooperation are valued over individual time management.

In contrast, English emphasises personal agency in time management, where time is viewed as a commodity under individual control. For instance:

- (5) It is vital to find out about restrictions well in advance to **allow yourself time** to get the necessary permit.
- (6) I **gave him a little time** to take in that first slide.

In these two sentences, both the dominator and the user of time are individuals. Sentence (5) emphasises the idea that individual actions determine the remaining amount of time, implying personal responsibility for its allocation, while sentence (6) highlights the exchangeability of time, suggesting that individuals can ‘give’ time to others and ‘receive’ time in return, emphasising the transactional nature of time, similar to money.

When considering the ‘Psychological Actions and Processes’ field, the concept of ‘time’ is still not depicted as something individuals actively allocate but as something ob-



tained from external sources. Instead of expressing emotions related to the need for time, the Chinese language prioritises the importance of time for cognitive processes such as thinking and learning, resulting in more objective and neutral expressions. Expressions such as:

- (7) 她需要时间来冷静地考虑  
(tā xūyào shíjiān lái lěngjìng de kǎolü)  
She needs time to think calmly.
- (8) 趁年轻抓紧时间学习知识  
(chèn niánqīng zhuājǐn shíjiān xuéxí zhīshi)  
Take advantage of your youth to acquire knowledge.

In sentence (7), taking time for thorough consideration is emphasised, with the adverb ‘calmly’ underscoring the value of rationality over emotion. In traditional Chinese culture, the saying ‘三思而后行’ (think twice before you act) is considered a virtue, emphasising the importance of contemplation, and it continues to influence people’s mindset today. Another virtue, ‘勤奋’ (diligence), is also closely associated with time. It is believed that the more time one spends studying or working, the more diligent he or she is. Thus, as indicated in sentence (8), acquiring new knowledge would be the top priority for a young adolescent.

Different from Chinese, English metaphors regarding psychological activities often convey personal desires and expectations related to time, such as:

- (9) I **wanted my time** on earth now that I had heard the song that sings from head to toe.
- (10) He’s able to spend his time doing just **what he wants**.

Sentences (9) and (10) both indicate a direct yearning for scheduling time according to one’s own wish, reflecting an individual’s active allocation of time and reinforcing the idea of personal control and responsibility over time management. In the English language, such expressions are notably more subjective and emotive, employing terms like ‘my time’ and ‘his time’ to underscore personal control over time.

In summary, the semantic analysis indicates that in English, the metaphor ‘TIME IS MONEY’ underscores individual agency, emphasising the effective use of time and personal responsibility for time allocation. This framework allows individuals to express their personal views and plans regarding time more freely. Conversely, in Chinese, time

is more often conceptualised as a collective resource rather than an individual possession. When time is needed to meet collective or societal needs, individuals are expected to contribute their time selflessly, without expectation of personal benefit. This view frames time as something that is requested from external sources and driven by specific purposes, resulting in a more objective and impartial perception of time, with little emphasis on individual preferences.

### 4.3. Affecting Factors

At the most fundamental level, the metaphor ‘TIME IS MONEY’ is understood similarly in British English and Mandarin Chinese. Both languages conceptualise time as a form of economic commodity. According to Lakoff and Johnson<sup>[7]</sup>, this metaphorical understanding is influenced by industrialisation and Western capitalism, where work is often measured in time, and compensation is typically quantified by the hour, week, or year. However, the cultural and ideological contexts in which these metaphors are employed vary significantly between the two languages.

The Marxist theory further elaborates on the association between time and money by linking time to the value of commodities through the concept of surplus value, which quantifies the additional value generated by workers based on their extra labour time<sup>[33]</sup>. Influenced by Marxist ideology, Chinese societal values prioritise enhancing collective productivity over individual gain, contrasting with the emphasis on individual pursuit in Western cultures. In China, individual labour is integrated within the broader framework of societal labour, and individuals are expected to increase work efficiency to contribute to reducing socially necessary labour time. The differences in ideology further influenced the cultural values and beliefs of a speech community<sup>[3]</sup>. It is believed that a metaphor is shaped not only by its informational content but also by its anticipated effect and linguistic context<sup>[34]</sup>.

The impact of cultural values, particularly individualism in English and collectivism in Chinese<sup>[35]</sup>, plays a pivotal role in shaping the metaphorical framing of time. In individualistic cultures, such as that of the UK, there is a strong emphasis on personal autonomy, independence, and self-expression. These values encourage the view that individuals are responsible for their own actions and time. Consequently, metaphors of time in English often focus on

personal control, ownership, and the management of time as a resource that belongs to the individual. Phrases like ‘time is money’ and ‘time is precious’ convey a sense of time as a finite resource that the individual must manage effectively, often in the context of personal success or economic gain. This conceptualisation of time aligns with the values of individual responsibility and efficiency. The expression of time in British English tends to emphasise personal control and the efficient management of one’s time, reflecting a culture that prizes individual agency and productivity.

In contrast, Chinese metaphors of time reflect the collectivist values prevalent in the culture, where individual time is often subordinated to the needs of the group. The frequent use of expressions that depict time as something borrowed or required for collective tasks highlights the cultural emphasis on contributing to societal progress, with less focus on individual autonomy. Phrases such as “time is lent to you” or expressions that depict time as a shared resource underscore the collectivist orientation, suggesting that time is not solely for individual benefit but must be managed with the group in mind. This aligns with the influence of Marxist ideology in Chinese society, where productivity and efficiency are framed in terms of collective benefit rather than individual gain.

This divergence in the conceptualisation of time based on cultural values not only shapes the way metaphors are constructed but also reflects broader societal norms and ideologies. While English metaphors typically frame time as a personal resource to be optimised for individual gain, Chinese metaphors often frame time as a resource that is shared and used for collective purposes. These differences highlight how metaphors are deeply embedded in cultural contexts, which influence the way people perceive and utilise time, both on an individual and collective level.

#### **4.4. Novelty and Contribution of the Study**

This study makes a novel contribution to the field by combining advanced statistical analysis and semantic tagging to investigate the metaphor ‘TIME IS MONEY’ in British English and Mandarin Chinese. While the metaphor itself is widely studied, the application of a mixed-methods approach—incorporating both corpus-based statistical analysis and semantic annotation—represents a key innovation. By merging these methodologies, the research uncovers subtle

and complex patterns in metaphor usage that traditional approaches might overlook. This methodological framework opens up new possibilities for studying metaphors in a way that combines the strengths of both quantitative and qualitative research. By providing a comprehensive view of metaphor use, the study pushes the boundaries of traditional metaphor research, demonstrating the importance of integrating diverse analytical tools to capture the complexity of metaphors and their cultural implications.

Additionally, this study contributes to Conceptual Metaphor Theory (CMT) by illustrating the interplay between universal cognitive mappings and cultural specificity. While the source domain of ‘money’ remains consistent across the two languages, its application to the target domain of ‘time’ varies in ways that reflect the socio-cultural and ideological frameworks of each speech community. This highlights the adaptive nature of metaphorical thought and suggests that conceptual metaphors, while universal in their basic structure, are not culturally neutral. Furthermore, the findings align with recent research emphasising the interaction of linguistic, cultural, and individual factors in metaphor interpretation<sup>[36]</sup>. Evidence increasingly suggests that metaphorical understanding is shaped by a complex interplay of individual cognitive tendencies, situational contexts, and socio-cultural influences. This study extends this perspective by demonstrating that the cultural embedding of metaphors can influence not only their form but also the affective and pragmatic dimensions of their use.

## **5. Conclusions**

This study reveals both similarities and differences in the metaphorical conceptualisation of ‘TIME IS MONEY’ in British English and Mandarin Chinese. While the metaphor is more prevalent in Chinese, it is expressed more systematically in English, where metaphors follow a more fixed, habitual usage. Both languages share a common conceptualisation of time as a valuable resource that can be possessed, spent, or traded, but the specific expressions differ. In English, the metaphor tends to emphasise individual control and responsibility, whereas in Chinese, it reflects a more collective and nuanced view of time. These differences underscore the importance of cultural and linguistic context in shaping metaphorical expressions of time.

Despite the insights gained, some limitations were identified, particularly in the translation process between Mandarin and English. To minimise translation bias, manual review and pilot testing were carried out, though further refinements could be made by applying semantic tools specifically designed for Mandarin. Additionally, while statistical analysis offered valuable insights into semantic differences, qualitative methods—such as ethnographic interviews—could further enrich the understanding of the cultural contexts that shape metaphorical usage.

Looking ahead, this study opens several avenues for future research. Expanding the scope to include additional languages or temporal metaphors, such as ‘TIME IS A JOURNEY’ or ‘TIME IS A CONTAINER’, would provide more nuanced insights into cross-linguistic and cross-cultural variations in metaphorical thought. Incorporating spoken data or real-time interactions could capture more dynamic and context-sensitive uses of metaphors. Finally, interdisciplinary approaches that integrate sociology, psychology, or anthropology could deepen our understanding of how metaphors reflect and shape cognitive and social realities.

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Conceptualisation and methodology, J.C. and C.G.; first draft, J.C.; review and editing, C.G. Both authors have read and agreed to the published version of the manuscript.

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## Data Availability Statement

Corpora used in the research can be accessed through the links below.

The Freiburg–LOB Corpus of British English

(‘FLOB’): <https://clarino.uib.no/korpuskel/corpora#>.

Lancaster Corpus of Mandarin Chinese (LCMC): <http://purl.ox.ac.uk/ota/2474>.

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## Conflicts of Interest

The authors declare no conflict of interest.

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