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Revisiting the nature and function of transliteration through a semiotic lens, exemplified by the English translations of *Shan Hai Jing*

Abstract: As a common translation practice, transliteration has been a constant topic in translation studies. In contrast to related fruitful practice, there is a lack of interest in it at the theoretical level. Most studies take transliteration as a ruled-based sound transferring process, neglecting its complexity and multi-functions. This paper affords a Peircean semiotic analysis of the inner workings of transliteration as a sign activity. It proposes treating transliteration as a multidimensional semiosis, whose efficacy in cross-cultural communication lies in the interdependency of three semiotic properties, namely, iconicity, indexicality, and symbolicity. With a case study of cultural word transliterations in the Chinese classic *Shan Hai Jing*, this study further exemplifies the linguistic, cognitive, and cultural functions of transliteration derived from the abovementioned properties. I propose a three-dimensional working mechanism of transliteration dominated by the axes of sign transformation, sign interpretation, and sign interaction. The aim is to bring forward an innovative perspective in transliteration studies, thus providing reference to future practice.

Keywords: iconicity; indexicality; Peircean semiotics; sign activity; symbolicity

1 Introduction

As a basic translation method, transliteration has been extensively used throughout history. Utilizing similarities of linguistic sound instead of meaning, transliteration is effective in rendering names, *realia*, or other items which have no precise target language equivalent (Shuttleworth and Cowie 2004: 175). However, transliteration has attracted relatively little attention in translation studies, especially on the theoretical side. What is the essence of transliteration? What are the functions of using this method? How can it be employed to better serve the purpose? This paper

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seeks to answer some of these questions by placing the issue of transliteration under a broader perspective, i.e. semiotics.

Major translation studies deal with transliteration mainly from a linguistic perspective. Catford indicates three steps in transliteration, where source language letters are replaced by source language phonological units, which then correspond to target language phonological units and lastly to target language letters (Catford 1965: 66), setting the tone for future transliteration studies. Recent studies seek to simplify the process with the help of machines. Computational linguists have developed various methods of machine transliteration systems using phoneme-based, graphene-based, and combined methods to transliterate proper names automatically and efficiently (Mammadzada 2021: 3). However, few studies address the complexity of transliteration. Scholars naturally assumed that "transliteration as a process is distinct from translation because of its conventionalized, predictable nature," as defined in *the Dictionary of translation studies* (Shuttleworth and Cowie 2004: 190).

However, as this paper will argue, transliteration is an important and complex object of study for its semiotic properties. By investigating transliteration from the perspective of Peircean semiotics (especially with his classification of sign as icon, index, and symbol), this paper redefines transliteration as a three-dimensional sign activity which embodies sign transformation, sign interpretation, and sign interaction. It then probes into the methods and functions of transliteration at the practical level with examples taken from *Shan Hai Jing* and its English translations. The aim is to provide a new perspective in the study of transliteration.

2 Semiotic essence of transliteration

In a narrow sense, transliteration is the conventionalized and reversible orthography-based conversion of different alphabets. In a broad sense, transliteration includes transcription, i.e. the recording of the sound using another writing system, which is often non-reversible. This study interprets "transliteration" in a broad sense, defined as the interlingual transfer of linguistic signs based on phonetic similarity.

What are the features of transliteration as the Representamen? The Peircean classification of signs is found insightful. Peirce writes, "In respect to their relations to their dynamic objects, I divide signs into icons, indices and symbols" (CP 8.335, 2745), which is also "the most fundamental division of signs" (CP 2.275, 377). Icons are signs that are based on the resemblance of the sign to the thing signified. Indices are related to the sign by causality, and symbols signify the sign through relations of convention. Likewise, we can deduce three major features of transliteration, namely transliteration as icon, index, and symbol.

2.1 Transliteration as icon

First and foremost, transliteration is an icon, the firstness of sign that is linked to the source text based on perceived phonetic similarity. Icon is a sign "which stands for something merely because it resembles it" (CP 3.362). By preserving the sound shape of the source text in the target language, the transliterated sign becomes "inextricably linked to its object, an analogue of its own composition, formal, structural, and/or material nature" (Queiroz and Daniella 2015: 207). As an icon, transliteration is "a Representamen whose representative quality is a firstness of it as a first" (CP 2.276). In Peircean semiotics, firstness implies originality and fundamentality, overlapping with the sphere of iconicity in translation. It is believed by many that iconicity predominates and ordinarily describes the character of translation (Naude 2010: 388; Petrilli and Augusto 2012: 11), providing that translation always attempts to achieve equivalence (or likeness) to the source text. The firstness of transliteration is even more eminent. To some extent, we may regard transliteration as a primitive type of translation. "At the beginning of civilizations, people from different tribes cannot understand each other's languages, so they memorize and imitate the phonetic feature of the other language and guess what each other is talking about" (Li and Li 2000: 4). The process of observing, imitating pronunciation, and deducing meaning exemplifies the primitive form of translation and transliteration as well, showing the firstness of transliteration.

In addition, the iconicity of transliteration is not similarity in nature, but similarity based on recognition. "Similarity does not cause iconicity, nor is iconicity the physical relationship of similarity. It is a kind of inferential process that is based on recognizing a similarity" (Deacon 1998: 75). Due to differences in phonetic systems, transliteration always involves subjective adaptations and appropriations, bringing about ambiguities. This is especially true when the source phonetic unit has multiple target phonetic counterparts. For instance, "sch" in English could be rendered as 士 (shì), 希 (xī), 斯 (sī), or 什 (shí) in Chinese for lack of exact equivalence of the phoneme. Therefore, transliteration embraces flexibility: so long as the target text bears recognizable and perceivable phonetic similarities, it is iconic to the source text and should be viewed as transliteration. Sometimes iconicity is employed to a great extent and creates interesting effects. For example, the word "husband" was once transliterated as 黑漆板凳 (hēi qī bǎn dèng) (literally 'black-painted bench'), and "gentleman" as 尖头鳗 (jiān tóu mán) 'sharp-headed eel.' Here translators establish iconic similarity with a purpose.[1] Therefore, iconicity opens possibilities of transliteration.

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1 黑漆板凳 and 尖头鳗 are used in jocular ways. 黑漆板凳 is the nickname used by ladies in reference to their husbands, while 尖头鳗 mocks men with a dandy-like appearance.

To conclude, transliteration as an icon well accounts for its universality and flexibility. The firstness of icon suggests transliteration as a foundation in translation practice. Meanwhile, the flexibility of iconicity makes innovative transliterations possible. In a broader sense, iconicity directs to indexicality. "For a great distinguishing property of the icon is that by the direct observation of it other truths concerning its object can be discovered than those which suffice to determine its construction" (CP 2.279). In other words, observing iconicity gives rise to the discovery of other features of the object. It indistinctly points to the second dimension, namely, transliteration as an index.

2.2 Transliteration as an index

Transliteration is an index, the secondness of sign, whose meaning is directed toward the source text. By definition, "an index is a sign which refers to the Object that it denotes by virtue of being really affected by that Object" (CP 2.248). Index signifies the object by relations of contiguity, causality, or other physical connections which are pre-existent to interpretation (Cobley 2001: 205). Examples of index include smoke (index of fire), weathercock (index of wind), and symptom (index of illness). In a similar sense, transliteration is the index to its object, i.e. the source text. Particularly, transliteration signifies its source text through causality, where it is "in dynamical connection with the object" (CP 2.305).

Concerning the index's categorical status, index is in line with secondness, "the category according to which something is considered relative to, or over against something else" (Cobley 2001: 257). Bearing secondness, transliteration is in bounds closely with the source text. Transliteration and its source text constitute the binarity that forms an inseparable pair in its existence, becoming sorts of "brute actions of one subject or substance on another, regardless of law or of any third subject" (CP 5.469).

Moreover, transliteration works as an index in its relation with its object (source text) and its interpretant (target reader). Unlike semantic translation, in which traces of the object have mostly vanished in target language expressions, transliteration retains the evident trail by carrying the sound pattern of the source text, thus being "directly connected in some way to the signified," where the link could be "observed or inferred" (Chandler 2007: 37). In this way, transliteration amplifies the existence of the source text, "fixes what is represented, or what is being talked, written, or thought about" (Thomas 1977: 53). "An index asserts nothing but only *shows* its object" (italics in the original) (Thomas 1977: 54), and it is the same with transliteration. Pure transliteration presents the source text without asserting its meaning.

As to its relation with its interpretant, transliteration directs readers' attention toward the source text, calling for further cognitive processing. "Every subject partakes

of the nature of an index, in that its function is the characteristic function of an index, that of forcing the attention upon its object" (CP 2.357). The most evident feature of index that Peirce repeatedly emphasizes is its compulsive influence on the interpreter that acts upon the hearer's nervous system and forces the attention upon its object (Thomas 1977: 56), which is also an eminent function of transliteration. For the target reader, pure transliteration is like an inscription that has not been deciphered: it points to a distant object whose meaning remains vague. Therefore, transliteration needs "more or less detailed directions for what the hearer is to do in order to place himself in direct experiential or other connection with the thing meant" (CP 2.288).

Sometimes, the semantic direction is accomplished in transliteration itself. It works in two ways. The first is by adding semantic elements into the transliteration, either as annotations or suffixes. This method is called "semantic transliteration" (Hu and Xu 2003) and is widely adopted in Chinese traditions. For instance, "beer" is transliterated as 啤酒 (pí jiǔ) with "beer" corresponding phonetically to "啤" with the category name of "酒" 'alcohol') added. "Hippies" is transliterated as 嬉皮士 (xī pí shì), using "士" 'person, man' to express the meaning as well as the pronunciation. Semantic transliteration helps to incorporate foreign concepts into the target culture and fills in the semantic gaps left by pure transliterations. It is an obvious way of directing the interpreter's attention in order to understand the meaning.

Transliteration sometimes works in an implicit way of semantic index, called "sound symbolism." Despite the general assumption of that sound meaning is arbitrary, linguists have found the prevailing linkage between sound and meaning with convincing cases (Hinton et al. 2006: 1). For instance, it was found that high tones, vowels with high second formants ([i] for instance), and high-frequency consonants are associated with high-frequency sounds, small size, sharpness, and rapid movement; and low-frequency consonants (notably [u]) are associated with low-frequency sounds, large size, softness, and heavy, slow movements (Hinton et al. 2006: 10). "Sound may in some cases be symbolic of their sense even if they are not so in all words. […] There is no denying that there are words which we feel instinctively to be adequate to express the ideas they stand for" (Jespersen 1954: 397–398). From this perspective, the use of transliteration directly transplants the connection between sound and meaning of one language into another, which may, to some degree, instinctively inspire target readers in understanding or experiencing the sense. It is especially the case when the source and target language share certain kinds of sound symbolism. For instance, "tittup" was transliterated as 踢踏舞 (tī tà wǔ). Both "tittup" and "踢踏" imitate the spritely cantering sound of hooves striking the ground, inspiring the cognitive association between the word and its meaning. Another example is the transliteration of the philosophical term 道 (dào) as *Dao*. The vowel [ào] in 道 can indicate large size and profoundness, and is kept in its transliteration, which potentially inspires readers to associate with its philosophical connotations.

By adding meaning implicitly or explicitly, transliteration bridges the cognitive gap between source text and target text, thus directing the interpreter toward the object. Index is "[a] sign, which refers to its object […] because it is in dynamical (including spatial) connection both with the individual object, on the one hand, and with the senses or memory of the person for whom it serves as a sign, on the other hand" (CP 2.305). Transliteration functions as a semantic index, where the reader's understanding is withdrawn and directed toward the source text. Overall, index-icality reveals the semantic aspect of transliteration as a conceptual clue with which the readers identify and use to interpret the meaning.

2.3 Transliteration as a symbol

Transliteration is a symbol, the thirdness of signs, which involves a genuine tri-adicity. According to Peirce, "a symbol is a sign which refers to the Object that it denotes by virtue of a law, usually an association of general ideas, which operates to cause the symbol to be interpreted as referring to that Object" (CP 2.249). A symbol is constituted merely by the fact that it is used and understood as such and without regard to the motives which govern its selection (CP 2.307). Unlike icon and index, symbol is "created to express meaning and come into usage at the very beginning. It must have its creator and receiver (the two can overlap)" (Peng and Li 2016: 38). So it is with transliteration. Every transliteration is eventually evaluated and used by its target reader. Its interaction with the interpreter draws forth its symbolic features.

In Peircean semiotics, a symbol has two eminent features: conventionality and autonomy (Peng and Li 2016), which also works in transliteration. First, the symbol denotes its object in an arbitrary, conventional way. Etymologically, "symbol" means 'to throw together,' which was used by the Greeks to signify the making of a contract or convention (CP 2.297). And Peirce emphasizes that "any ordinary word, as 'give,' 'bird,' 'marriage,' is an example of a symbol" (CP 2.298). In this way, it's most appropriate to consider transliteration as a symbol that forms under the convention made in the target language. "Convention, the major traditional criterion of these signs […] typically comes about by a voluntary and intentional agreement between the members of a community" (Nöth 2010: 83). In order to be accepted by a certain language community, transliteration must conform to conventions in the target culture to function properly. For instance, semantic transliteration is much more acceptable than pure transliteration in the Chinese context because it corresponds to the ideographical nature of the Chinese language. It arouses certain associations which may boost the reader's acceptance. Meanwhile, transliterations may affect or even rewrite certain conventions with accumulated usage. For instance, many Chinese characters originally used to simulate the pronunciation of the source text have

evolved into morphemes encompassing both phonetic transcription and semantic meaning (Su 2003). For instance, 秀 (xiù) as the transliteration of "show" has become an independent morpheme like in 秀场 (xiù chǎng) 'show stage', 脱口秀 (tuō kǒu xiù) 'talk show.' Similarly, 吧 (ba) as the transliteration of "bar" also generates new terms like 吧台(ba tái) 'bar counter,' 网吧(wǎng ba) 'net bar.' As a symbol, the use of transliteration is restricted by language reality, which is framed by certain social communities.

Conventionality points to the fact that transliteration denotes its object by means of "an imputed character" (Bellucci 2021: 174), and thanks to the convention made and used, it can consequently denote whatever the characters possess. And that leads to the second characteristic of transliteration being autonomous, where the symbol develops through its own path. "[S]ymbols are created by humans, just like children are created by their parents. However, once created, symbols begin to lead a life of their own just like children created by parents do" (Nöth 2014: 175). Similarly, transliterated words have a life of their own that they evolve and mutate with the change of language. For instance, "ketchup" is originally the transliteration of kê-chiap (鲑汁, guī zhī) in Chinese (Oxford English Dictionary 2022). It is firstly used to denote a type of piquant sauce made from fermented soybeans or fish. Later, when the word came into English in the 17th century, it generated new meanings, and ketchup made from tomatoes generally replaced its original meaning. It is seen that, like other symbols, transliteration involves degrees of cultural interaction. The process of transliterations being established, accepted, and evolved reflects the conventionality and autonomy of signs in pragmatic usage, giving rise to fruitful usage of transliteration.

Iconicity, indexicality, and symbolicity are three major properties of transliteration interplaying both in synchronic and diachronic senses. In a synchronic sense, icon, index, and symbol represent different levels of degeneracy of the sign, instead of being three separate and autonomous classes of signs (Petrilli and Augusto 2012: 2). As Peirce clarifies with his typology, no single one of the three types of relations connecting the interpreted and interpretant signs subsists without the other two, which are always present even if to a minimal degree (Petrilli 2008: 242). Likewise, transliteration is never mere iconic, indexical, or symbolic but a mixture of the three, whereas one or two features predominate in different cases. For instance, some accepted transliterations are more symbolic than iconic as their symbolic usage outweighs their formal iconicity, such as the abovementioned "ketchup." The above three properties are always interdependent in transliteration.

In a diachronic sense, transliteration grows in the way signs develop from icons (i.e. signs of firstness) via index (i.e. signs of secondness) to symbols (signs of thirdness), from a more primitive kind to "more fully developed" signs. "Symbols grow. They come into being by development out of other signs, particularly from icons, or

from mixed signs partaking of the nature of icons and symbols" (CP 2.302). Transliteration first appears as a phonetic imitation whose existence hangs on the original text. Later it acquires its meaning and functions in the semantic dimension to designate its object. Lastly it becomes a symbol that has crossed over into full reception in the target language community. Above all, transliteration is formed under the constant effect of iconicity, indexicality, and symbolicity, from which its multifaceted functions sprout and grows.

Its shown that transliteration is a complex semiosis taking into account iconicity, indexicality, and symbolicity. The next section will shift from theoretical speculation to practical analysis of the semiotic functions of transliteration, especially with cases from the Chinese classic *Shan Hai Jing* (The Classic of Mountains and Seas) and its English transliterations.

3 Semiotic functions of transliteration, exemplified by English transliterations in *Shan Hai Jing*

I now exemplify the function of transliteration with cases taken from the English versions of the Chinese classic *Shan Hai Jing*. With origins from as early as the 4th century BC, *Shan Hai Jing* is a fabulous geographical and cultural account of pre-Qin China, and is valued as "the encyclopedia of ancient China." (Yuan 2017: 4) The major reason for choosing this book lies in the abundancy of transliteration in its English versions. According to my extensive calculations, the book contains 2,477 cultural words falling into categories of geography/landscape, animals/plants, minerals, utensils, mythology, illness, dance, and religion. Two full English translations of *Shan Hai Jing* adopt transliteration in above 68% of all cultural words. Wang and Zhao's version (2010) uses transliteration in rendering 68.67% of the cultural words, and the transliteration in Cheng Hsiao-Chieh's (1985) version amounts to 87.97%. Moreover, these transliterations exhibit various semiotic functions in different types of terms. Next, I present examples of three types of functions, namely, linguistic, cognitive, and cultural functions, based on the iconic, indexical, and symbolic nature of transliteration described earlier.

3.1 Iconicity and its linguistic function

Transliteration is a form of sign transformation based on phonetic iconicity that retains linguistic mechanical faithfulness to the source text. This linguistic function

is especially eminent when coming to transliterate archaic texts, and cultural words in *Shan Hai Jing* are a case in point.

Linguistically, cultural words in *Shan Hai Jing* are difficult both in the morphological and semantic aspects. Morphologically, Chinese characters are difficult to recognize or pronounce. *Shan Hai Jing* survived two millennia, during which it has been repeatedly edited and compiled into various versions. Therefore, cultural words in *Shan Hai Jing* unavoidably suffer from mistaken, missing, or redundant characters as a result of unwary editorial work. For instance, 芘蠃 (pí léi) is mistaken for 芘蠃 (zǐ léi), and 藻珪 (zǎo guī) is mistaken for 桑封 (sāng fēng). In addition, many characters are no longer used or pronounced in *Shan Hai Jing*'s time. For example, 柜 in 柜山 (jǔ shān) is sounded as [jǔ] in *Shan Hai Jing* but is rendered as [guì] nowadays, and 液 in "液女之水(yì nǚ zhī shuǐ) is sounded as [yì] instead of its modern [yè]. There are also cases where the character's sound become unrecognizable because of polyphony, for instance 戠 in 戠国 could be pronounced as [zhì] or [tì], and 贲 in 贲闻 之山 has two possible sounds: [bēn] or [bì]. Semantically, cultural words are often synonymous and polysemous in *Shan Hai Jing*. Synonymy is created by phonetic variants and morphological variants. For instance, 屏蓬(píng péng) and 并封 (bìng fēng), 留牛 (liú niú) and 犁牛 (lí niú), 鹿 (lù) and 錄 (lù), ?鸟 (shǔ niǎo) and 树鸟 (shù niǎo) refer to the same beast respectively because they have similar pronunciations. Likewise, 比翼之鸟 (bǐ yì zhī niǎo) and 比翼鸟 (bǐ yì niǎo), 赤鷩 (chì bì) and 鷩 (bì), 三珠树 (sān zhū shù) and 珠树 (zhū shù) indicate the same thing as a result of character loss. Polysemy is also very common in *Shan Hai Jing*, where different concepts share the same name. For instance, 夸父 (kuā fù) is a god name in *Hai Wai Bei Jing* and becomes a beast name in *Bei Ci Er Jing*. 肥遗 (féi yí) is a serpent name as well as a bird name. 戏 (xì) functions as a place name and a god name in different chapters. There are many polysemous words like 蜚 (fēi), 延维 (yán wéi), 鼯 (áo), and 寓 (yù) among others. Synonymy and polysemy both impose obstacles in identifying entities of *Shan Hai Jing*, this and in turn complicates their translations.

In response, transliteration functions at the linguistic level in morphological and semantic aspects to bridge the gap between the sign and the referent. Morphologically, transliteration tries to keep trace of the original to present actual word pronunciations. For instance, one translator Cheng Hsiao-Chieh et al. consult explanatory notes by different annotators in reproducing the ancient pronunciations of cultural words. He transliterates 繁缋之山 (fán kuì zhī shān) as "Fan K'uei Mountain," ?山 (qián shān) as "Ch'ien Mountain" and 湍水 (zhuān shuǐ) as "Chuan ('rapidly flowing') River," where "缋," "?," and "湍" are transliterated as [kuì], [qián], and [zhuān] according to their obsolete pronunciations in *Shan Hai Jing* with reference to Guo Pu's annotation. In cases of polyphonic words, Cheng et al. prefers to give an account of all possible pronunciations. 鬲山 is rendered as "Ko (or Li) Mountain," and 戠国 is translated as "Chih (or Ti) Land," impressing readers with the polyphonic features of Chinese

characters. Semantically, translators deliberately adjust transliterations to differentiate between polysemous words. To be specific, translators tend to use different fonts as distinguishing markers. Place name, deity name, and other proper names tend to be capitalized, while general terms are lowercased and italic. For instance, when 夸父 (kuā fù) refers to a beast, Cheng Hsiao-Chieh and Wang Hong render it as *"k'ua fu* (boast father)" and "*kuafu*" respectively. When 夸父 is a god name, the two translators use "K'ua Fu (boaster)" and "Kuafu." One translator, Wang Hong, even goes further to categorize transliterations with morphological changes. Names of deities and places are capitalized in roman type and italics respectively, while general terms are lowercased in italics. For instance, 司幽 (sī yōu) (a deity), 聶都 (niè dōu) 'a country name,' and 蛩蛩 (qióng qióng) (a beast) are transliterated as "Siyou," "*Niedu*," and "*qiongiong*" respectively, with varied form and font indicating their respective categories.

Overall, in their effort to restore the sound pattern of the original text and distinguish between polyphonic words, translators construct a relatively normative system of cultural words, fulfilling their denotative functions in the target language. In the linguistic dimension, transliteration functions as a tool to denote and regulate concepts with the principles of iconicity. Iconicity enables readers to experience, identify, and breathe the literal features of the source text coming from afar and further helps readers to identify eccentric categories by the adjusted word forms. It actually "constructs a bridge between two languages, between two worlds, their geographies, temporalities and metaphysics" (Brinkley 2003: 180).

3.2 Indexicality and its cognitive function

In the semantic dimension, transliteration acts as an index to lead readers into the cognitive framework of the source text. Previously, we identified two ways in which transliteration bridges the cognitive gap between the source and the target texts, i.e. by adding semantic translations and by resorting to sound symbolism. Both are present in transliterations in *Shan Hai Jing*.

To begin with, transliteration in *Shan Hai Jing* combines semantic elements to promote the reader's understanding in a systematic and procedural way. In terms of systematic understanding, translators deliberately rename cultural words in a consistent and organized manner, i.e. "transliteration + category." For instance, 嬴母 之山 (luǒ mǔ zhī shān) is rendered as "Mount *Luomu*" and "Luo Mu Mountain" by Wang Hong and Cheng Hsiao-Chieh respectively; 匠韩之水 (jiàng hán zhī shuǐ) is taken as "*Jianghan* River" and "Chiang Han River." This naming rule is valid for most proper names, rebuilding a taxonomic record of *Shan Hai Jing* in the target language. In terms of procedural representation, different translations are used in the term's

first and subsequent occurrences according to their cognitive functions. Specifically, for terms of denotative and nomenclative functions, translations are gradually geared toward transliteration. For instance, when translating place names and deity names for the first time, Cheng et al. always combines transliteration with semantic explanation, like "Men (gate) River," "Ch'in (soak) River," "Huan T'ou (horse head)," "Hsi Wang Mu (west king mother; Goddess of the West)." But at their second occurrence, Cheng et al. retains only the transliteration, rendered as "Men River," "Ch'in River," "Huan T'ou," and "Hsi Wang Mu" respectively. Another translator, Wang Hong, uses the same strategy as in the god name 应龙 (yìng lóng). He first translates it as "*Yinglong*, a legendary dragon with wings," and later reduces it to "*Yinglong*." For terms for conceptual functions, the translators eventually prefer translation, especially for known species such as plants and animals. For instance, in their first occurrence, 枭 (xiāo), 鸳鸯 (yuān yāng), 蓍 (shī), 榖 (gǔ), 箭 (jiàn) are rendered as "*hsiao* (owl)," "*yüan yang* (mandarin duck)," "*shih* (milfoil)," "*ku* (paper mulberry)," "*chien* (arrow) bamboo," by Cheng et al. At these terms' subsequent occurrence, only the semantic parts are kept, rendered as "owl," "mandarin duck," "milfoil," "paper mulberry," "bamboo." Cheng's intention of procedural interpretation is manifested in the six translations of 梓 (zǐ), a botanical term. Cheng translates it into "*tzu* trees (*Catalpa ovata*, used for printing blocks)," "*Tzu* (*Catalpa ovata*) trees," "*Tzu* (Catalpa)," "*tzu* (catalpa)," "catalpa," "catalpa trees," respectively. The translations evolve from explanation aided transliteration to semantic transliteration, and finally to translation with gradual simplification, to fit into the cognitive framework of the target culture. It is seen that combined with semantic elements, transliteration is embedded with the possibility of interpreting concepts and building cognitive network accordingly. It either leads the reader to the text or vice versa.

Meanwhile, transliteration conveys the cognitive features of the source text in an implicit way, as is seen in the translation of some animals and birds. Some animals in *Shan Hai Jing* obtain their names from their cry, like 鴸 (zhū), 孟极 (mèng jí), and 鮯鮯之鱼 (gé gé zhī yú). In this case, transliteration directly transplants the linkage between the sound and the meaning of the source text into the target text. Table 1 provides some examples.

As is seen above, Cheng et al. and Wang use transliteration in all cases, and they also translate the explanation to help rebuild the cognitive path of the sound-meaning linkage. Utilizing auditory sensory modality and with the help of onomatopoeia, transliteration echoes with the conceptual features of the creatures, which enables the readers an on-the-scene experience.

Above all, in the cognitive dimension, transliteration works as an index. An index has a dual connection to the signified object, on the one hand, and to the interpretant, on the other hand. Transliteration works in a similar way. On the one

Table 1: Names with sound-meaning linkage and their translations.

Source text	Cheng Hsiao-Chieh's translation	Wang Hong's translation
有鸟焉…其名曰鴸, 其名自号也 (yǒu niǎo yān…qí míng yuē zhū, qí míng zì hào yě)	There is a bird… It is called **the chu**, after its cry	There is another bird called **zhu**…It is said that it is named after its call.
有兽焉…名曰孟极…其鸣自呼 (yǒu shòu yān…míng yuē mèng jí … qí míng zì hū)	There is an animal…called **the meng chi**… it calls its own name	There is an animal called **mengji**…It is named after its call.
有鱼焉…名曰鮯鮯之鱼, 其名自叫 (yǒu yú yān…míng yuē gé gé zhī yú, qí míng zì jiào.)	There is a fish…called **the ko ko fish**. Its call is its own name.	There is a fish called **gege**…It is named after its call.

hand, transliteration gives order to the object. According to Yiheng Zhao (Zhao 2011: 83), "a critical function of index is to give order to the object it signifies. Connected by causality and adjacency, index organizes the sequence of its object." Therefore, by systematically renaming the cultural words in *Shan Hai Jing*, transliteration re-organizes the object (source text) and give it order accordingly. On the other hand, transliteration arouses the attention of the reader. "An index exerts a compulsive influence on its interpreter, forcing him to attend to the indicated object" (Thomas 1977: 53). By incorporating semantic elements explicitly or implicitly, transliteration directs the target reader's attention toward the source conceptual system. Semantic indexicality refutes the belief that transliteration has nothing to do with meaning. On the contrary, it leads, directs, and aids target readers' better knowledge in one way or another.

3.3 Symbolicity and its cultural function

As is stated above, transliteration also works as a symbol. One significant feature of a symbol is its ability to grow. "A symbol, once in being, spreads among the peoples. In use and in experience, its meaning grows," and "it is only out of symbols that a new symbol can grow" (CP 2.302). The growth of a symbol is achieved though accumulated usage, with which the Peircean symbol has the potential to grow into a cultural symbol, one that constitutes the essence of the human being in Cassirerian semiotics. This is also true in the transliteration of *Shan Hai Jing*. In particular, translators intentionally use transliteration to symbolize cultural images and preserve cultural memories.

Transliteration is symbolized in the text through the mechanism of multilingualism in a cultural semiotic sense. According to Lotman, the founder of Tartu–Moscow cultural semiotics, multilingualism is a prominent feature of culture. Multilingualism indicates that the development and evolution of culture necessitates translation between code systems, during which "the combination of translatability-untranslatability is what determines the creative function" (Lotman 1990:15). Therefore, the presence of heterogenous signs is able to generate new meanings, which in turn promotes dialogue between semiotic systems. In this sense, transliteration is the outcome of cultural dialogue and stands as a cultural other to preserve multilingualism.

In Cheng et al.'s translation of *fenghuang*-related terms, we can see a noteworthy endeavor toward preserving multilingualism, where transliteration is always in parallel with other forms of translation. Some examples are shown in Table 2.

The translations of *fenghuang*-related terms always manifest multilingualism. Cheng et al. keeps the dialogic form of transliteration and semantic translation or annotated translation. This is due to the importance and distinctiveness of this cultural image. Given primacy in Chinese mythology, *fenghuang* and *luanniao* are divine birds which are omens of world peace and political harmony. Their closest equivalent in English is "phoenix," which bears some similarities in avian prototype, auspicious function, and symbolic significance in their respective cultures. However, *fenghuang* and phoenix have essential differences in many aspects. While phoenix implies

Table 2: *fenghuang*-related terms and Cheng Hsiao-Chieh's translation.

Source text	Cheng Hsiao-Chieh's translation
有**鸾鸟**自歌, **凤鸟**自舞. (yǒu luán niǎo zì gē, fèng niǎo zì wǔ)	There are ***luan*** **phoenixes** singing by themselves and ***feng*** **phoenixes** dancing by themselves.
鸾鸟自歌, **凤鸟**自儛, 灵寿实华, 草木所聚. (luán niǎo zì gē, fèng niǎo zì wǔ, líng shòu shí huá, cǎo mù suǒ jù)	The ***luan*** **phoenix** sings to itself, the ***feng*** **phoenix** dances by itself. The *ling shou*, 14 fruits, flowers, plants and trees all grow here.
有鸟焉, 其状如翟而五采文, 名曰**鸾鸟**, 见则天下安宁. (yǒu niǎo yān, qí zhuàng rú zhái ér wǔ cǎi wén, míng yuē luán niǎo, jiàn zé tiān xià ān níng)	There is a bird similar to the pheasant, with long tail and many-colored markings, called the ***luan* (a kind of phoenix) bird**. Its appearance is an omen of world peace.
有鸟焉, 其状如鸡, 五采而文, 名曰**凤皇**. (yǒu niǎo yān, qí zhuàng rú jī, wǔ cǎi ér wén, míng yuē fèng huáng)	There is a bird resembling the chicken here, with colorful patterns, named the ***feng huang* (phoenix).**
佐水出焉, 而东南流注于海, 有**凤皇**、**鹓雏**. (zuǒ shuǐ chū yān, ér dōng nán liú zhù yú hǎi, yǒu fèng huáng, yuān chú)	The Tso (assist) River flows southeast from here, into the sea. The ***feng huang*** and the ***yüan ch'u* (two kinds of phoenix)** live here.

cyclical cosmology and represents the resurrection of the god, *fenghuang* signifies political inauguration of order and represents the Confucian sage and the Taoist saint (Diény 1989). Despite the disparities, *fenghuang* has been "almost universally mistranslated in the West as the 'phoenix'" (Strassberg 2002: 193), which "gives entirely the wrong connotation, both in mythological and cultural terms" (Birrell 1999: 213). To avoid cultural misunderstanding, Cheng et al. repeatedly juxtaposes "fenghuang" with "phoenix" to indicate their similarity in difference, achieving multilingualism in some way and further facilitating cross-cultural dialogue.

At the same time, transliteration preserves cultural memory in the target language, as in Cheng et al.'s transliteration of jade terms. In cultural semiotics, culture itself could be defined as "a space of shared memory, within which certain common texts are preserved and actualized" (Lotman and Tamm 2019: 133). Cultural memory can be further split into "informative memory" and "creative memory," where the former is characterized by "recording as precisely as possible the results of knowledge" (Lotman and Tamm 2019: 10), and the latter "preserving the past as an inhabitant of the present" (Lotman and Tamm: 135). We can also see the two types of memory in the transliteration of jade. Jade has played an integral role in the Chinese cultural tradition since the beginning of recorded history and is much valued in *Shan Hai Jing*. It is found that the word 玉 (yù) (meaning 'jade') appears 248 times in the text, and dozens of jade categories are recorded. It has decorative, cultural, and religious functions and covers a variety of jade-like stones. Table 3 provides some examples of jade terms in *Shan Hai Jing* and Cheng et al.'s translation.

Almost all jade terms are rendered into annotated transliteration, with which Cheng et al. intends to keep the linguistic and cultural traces of the original. Further, the translation tends to stress different aspects of cultural memory. On the one hand, the translation of jade-like stones tends to preserve informative memory, such as rare words and textual variants. Transliteration preserves the pronunciation of some obsolete characters, such as *hsien* for 瑊 (jiān) and *fu* for 砆 (fū), the ancient reference to jade-like stone. In this way, the transliteration "record(s) the maximum amount of information" (Lotman 1990: 10) and serves as an archive. On the other hand, the translation of jade and jade ware tends to preserve creative memory, the meaning element that still influences cultural values. For instance, the translation of jade is often supplemented with descriptions like "white," "green," and "deep green." This is because color and texture are the major standards of jade evaluation. For jade ware, description of their shape is more common in translation (like "jade circlet" and "jade tablet"), for the shape of jade ware determines its ceremonial function. For instance, *pi* is a flat disk with a hole in the center, which symbolizes Heaven and is used in burials. *Kuei* is flat and blade-shaped,

Table 3: Jade terms and Cheng Hsiao-Chieh's translation.

Category	Source text	Cheng Hsiao-Chieh's translation
Jade	白玉(bái yù)	*pai yü* (white jade)[1]
	青碧(qīng bì)	*ch'ing pi* (a green jade)[2]
	苍玉(cāng yù)	*ts'ang yü* (deep green jade)[3]
	婴垣之玉(yīng yuán zhī yù)	*ying yüan* jade[4]
	瑂珸之玉(tú fú zhī yù)	*tu fou* jade[5]
Jade-like stone	水玉(shuǐ yù)	*shui yü* (water jade: quartz; rock crystal)[6]
	珹石(fēng shí)	*peng* stones[7]
	珹石(jiān shí)	*hsien* stone[8]
	砆石(fū shí)	*fu* stones (agates)[9]
	白珉(bái mín)	white *min*[10]
Jade ware	圭(guī)	*kuei* jade[11]
	环(huán)	jade circlet
	璧(bì)	*pi* jade
	玉璜(yù huáng)	a jade *huang*[12]
	璋玉(zhāng yù)	*chang* (small jade)

[1]Hao: *Yi Wen Lei Chü (YWLC)* #83 quotes *Kuang Chih (KC)*: "The finest white jade reflects the face, and comes from Chiao Chou (now south China and north Vietnam)."
[2]Kuo: *Pi* is also a kind of jade.
[3]Hao: Yu Tsao says: "The *tai fu* (high officers of the government) wear *shui ts'ang yü* (water green jade) at the waist."
[4]Kuo: There may have been an error here in text copying. No details on *yüan*.
Hao: *Ying yüan* (baby stonewall) could be *ying yin shih* (*ying yin* stone). *Yü P'ien* quotes Chang Yi's *p'i Ts'ang*: "*Ying yin* stone resembles jade". Also, *Shuo Wen* says: "*Yin* is a stone like jade." (The graphs for *yin* and *yüan* are similar, so, an error in copying the tex1 is possible.)
[5]Kuo: It is not clear what the '*tu fou* jade' refers to.
Hao: Perhaps this is the same as *yü fan*, a type of fine jade.
[6]Kuo: *Shui yü* is now called *shui ching* (water crystal: quartz).
[7]Pi: This should be *peng* stones.
Hao: *SW*: "*Peng* is a stone inferior to jade."
[8]Kuo: *Hsien* stones resemble jade.
[9]Kuo: This *fu* stone is *wu fu* stone, similar to jade.
[10]Kuo: *Min* is a stone resembling jade.
[11](*Kuei* is a jade tablet.)
[12]Kuo: Half a circular jade with a center hole (*pi*) is called a *huang*.

symbolizing wood. Therefore, by adding descriptions of the jade's color and shape, the transliteration of jade and jade ware in *Shan Hai Jing* preserves creative memory that is still in effect.

Above all, in the cultural dimension, transliteration functions as a symbol that communicates with the other culture in a synchronic sense and conveys cultural memory in a diachronic sense. Transliteration is formed under convention in the target language, and it further promotes cultural interaction between the target and source cultures.

In brief, transliteration constructs renaming norms and fulfills denotative functions as an icon, restructures the knowledge framework and realizes cognitive functions as an index, and promotes cultural interaction while preserving memories as a symbol. The paper stresses that transliteration, unlike as perceived before, is a complex sign activity taken into account iconicity, indexicality and symbolicity. This may refresh our knowledge of transliteration from a semiotic perspective.

4 The semiotic mechanism of transliteration

As is seen, transliteration should not be reduced to binary oppositions but works in a trinary way, where the source sign undergoes linguistic transformation, cognitive interpretation, and cultural interaction, as depicted in Figure 1.

As in Figure 1, transliteration as a sign activity is led by three axes, sign transformation, sign interpretation, and sign interaction, where each axis focuses on a different aspect of transliteration. Sign transformation emphasizes the conversion between sign systems, i.e. the linguistic transference in writing and pronouncing systems. Sign interpretation refers to the renewal of meaning and knowledge in the target language, which works both in explicit and implicit ways to direct cognitive efforts. Sign interaction points to the relation transliteration faces in the target language, where it is regulated, modified, accepted, and communed with on the cultural level.

Further, transliteration reveals itself on two layers: semiotic essence and semiotic function. At its root, transliteration abides by the semiotic features of
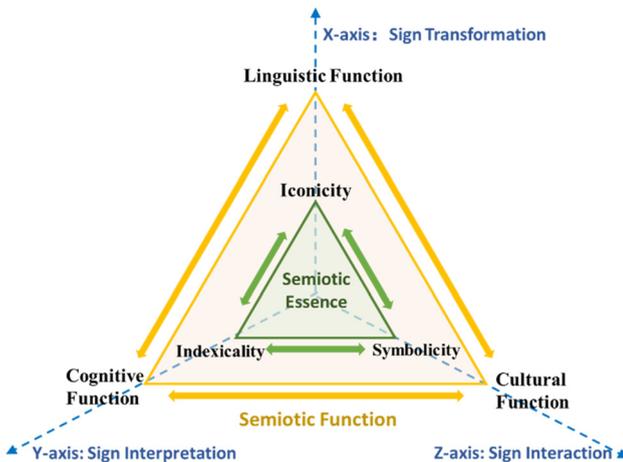

Figure 1: Working mechanism of transliteration as a sign activity.

iconicity, indexicality, and symbolicity, corresponding to firstness, secondness, and thirdness in its formation. Generated from iconicity, indexicality, and symbolicity, transliteration fulfills functions in linguistic, cognitive, and cultural dimensions. Specifically, it introduces a referent to denote concepts in SL, thus bridging the linguistic semiotic systems. It binds with semantic elements to direct the reader's attention in cognitive construction. Transliteration also functions in cultural interaction and memory preservation. It should be noted that the elements on each layer are correlated and interdependent. Iconicity, indexicality, and symbolicity are always present together in transliteration but to varying degrees. Suggestively, transliteration partially responds to the barriers that translation meant to overcome: linguistic barriers between language systems, cognitive barriers between knowledge structures, and cultural barriers between cultural traditions.

5 Concluding remarks

Transliteration has always been viewed as a linguistic substitute for an SL unit, a secondary choice when translation is impossible. However, as this study reveals, transliteration is a complex sign activity meriting close attention on the theoretical side. Grounded on Peircean semiotics, this study investigated the semiotic essence of transliteration from the trinary concepts of iconicity, indexicality, and symbolicity. It further analyzed multiple functions of transliteration from linguistic, cognitive, and cultural perspectives with examples taken from the Chinese classic *Shan Hai Jing*. A possible mechanism of transliteration was then visualized, giving an account of its triadicity. It was shown that a semiotic perspective may help to open the discussion (especially theoretical) to give more insights into transliteration issues that would apply to various types of translation practice and problems encountered by professionals. Moreover, the multifarious form of transliteration calls for comprehensive research both in translation and semiotic studies.

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