

# On the Indexical Nature of Language

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## *Abstract*

In linguistics as well as semiotics, words have long been deemed as symbols instead of icons or indexes. Although in some particular cases words can be iconic, such as the Chinese characters 日, 月, 火, etc., or indexical, such as pronouns (e.g., *he, she, it*) and demonstratives (e.g., *this, that, these, those*), most words are believed to be symbols, whose signifier and signified sustain an arbitrary relation in nature. Icon and symbol are distinct concepts and have been clearly defined to a large extent, but index seems to be rather vague in signification. Based on relevant research and Peirce's trichotomy of signs, we propose a pan-indexicality model used for interpreting linguistic signs. In this model, a linguistic sign is taken as an index that guides the addressee to search for objects or senses at three levels, i.e., the formal sense level, the conventional sense level, and the overall sense level. Interference of the Interpretant in meaning understanding varies at two general levels. At the formal and conventional levels, it is the Interpretant<sup>i</sup> (knowledge shared by both the addresser and the addressee) that determines meaning understanding, but at the overall sense level, the personalized Interpretant<sup>ii</sup> (knowledge owned solely by the addressee) plays a key role. Throughout the whole pan-indexicality process, formal sense and the Interpretant<sup>ii</sup> are two key factors that are related to the particular and distinct features of English and Chinese.

**Keywords:** *index, icon, symbol, pan-indexicality*

## 1. Introduction

Peirce's trichotomy of icon, index, and symbol has been an effective tool for identifying and analyzing signs of a certain modality (e.g. language or gesture) or varying modalities. The three types of sign seem to have idiosyncratic traits that can distinguish some particular signs from others. For instance, words are in general believed to be symbols instead of icons or indexes (Durst-Andersen, 2008, p. 2), and this is especially true in Saussure's semiotic system. Although some words are said to be indexical, such as demonstratives (*this, that, these, those*, etc.), or iconic, such as some Chinese characters like 日 (meaning 'the sun', imitating the shape of the sun) and 月 (meaning 'the moon', imitating the shape of the moon), the criteria for specifying a certain type of sign seem to be clear and definite. In the case of non-verbal signs, such as gestures, photographs, traffic signs, etc., Peirce's trichotomy also applies very well, grouping signs into different categories. In so doing, scholars could focus on some particular aspects of sign, i.e., conventional relation, which would lead to the conception of symbol; similarity-oriented imitation, which is concerned with iconicity; or sequential or causal relation, which is about indexicality. But now more and more scholars (e.g. Doane, 2007; Burge, 1982) have realized that the three signs of icon, symbol, and index are not as clearly defined as they appear, especially for index, which seems more problematic in its definition and does not seem to be at the same analytic level as icon and symbol. By elaborating the true nature of index and indexicality, we would propose, to some extent in line with Zhao Yiheng (2017), that indexicality is not only in the first place of human's linguistic expression and understanding, but rather fundamental for the open and idiosyncratic understanding of Chinese language that features reader-centeredness instead of speaker-centeredness (Shen, 2015, p. 38).

## 2. The Debates on the Status of Indexicality

The distinction between icon, index, and symbol can easily cause people to think that the three forms of sign are simply three types of sign, but the fact is that "they are not necessarily mutually exclusive" (Chandler, 2017, p. 44). In other words, a sign can be an icon, an index, and a symbol all at the same time, or a combination of any two of the three forms; the three forms of sign are not only three types, but rather three kinds

of relations that feature conventionality/arbitrariness, resemblance, or certain logical inferential properties. These relational properties can be represented on a certain sign to varying extents. A photograph, for instance, can be deemed as a typical icon for the sake of the resemblance relation between the sign and its object (Dubois, 1983, pp. 20ff), while its ‘stylized’ content may indicate that certain conventionality is playing a role, thus rendering it a ‘symbolic icon’ (see Chandler, 2017, p. 55). However, it has also been noticed that photographs should be considered indexical signs (Peirce, 1931), and the peculiarity of a photograph resides in its indexical nature (Sonesson, 2015, p. 418). A more correct way of understanding Peirce’s claim of taking a photograph as an index should be that “the photograph is an index in one respect, which apparently permits it to remain an icon when considered from other points of view” (ibid., p. 434).

The debates concerning the status of photographs as well as other forms of signs will definitely continue and can hardly come to an easy agreement in the near future. There are many reasons for these disagreements (such as the researchers’ theoretical backgrounds, their research purposes, the artifacts under discussion, etc.), but two major points should not be overlooked or underestimated: First, the three forms of sign represent quite different signification relations, each of which may be quite conspicuous and predominant on some types of signs, but only vaguely perceivable or totally non-existent on other types of signs. For instance, when language is taken as symbols, especially from a Saussurean tradition, researchers usually don’t bother to consider its iconic or indexical properties, although even casual scrutiny could uncover that these properties do exist to some extent. Second, researchers may fail to precisely specify what each form of sign actually means. While the symbol, thanks to the pioneering and pivotal contribution of Saussure in the proposition of signifier and signified as well as the improved version of this concept by Peirce, is relatively easy to understand and specify in terms of conventionality or arbitrariness, and the icon contains a “relatively straightforward resemblance” (Doane, 2007, p. 1), the index unfortunately “occupies an uncomfortable position in the complex taxonomy of sign... [a]t times, the disconcerting closeness of the index to its object raises doubts as to whether it is indeed a sign, suggesting instead that the index is perched precariously on the very edge of semiosis” (ibid., p. 2). Burge (1982) also claims that “the standards for indexicality are now so weak that any word can be trivially indexical”. So it is sensible that even ‘water’ has been regarded

as being indexical (Smit, 2010), though such a proposition has been taken as a joke by Zhao Yiheng (2017).

Then, what is the nature of index? Different from researchers' relatively thorough and fruitful exploration of symbol and icon, the index, though with surprising complexity when it is further examined, has been the least discussed topic in the semiotic circle up to now (Zhao, 2017, p. 105). The reason why it is so is partly due to the fact that the definition of the concept of index by many scholars has been too general to focus on any distinct and exclusive properties. Peirce, undoubtedly the first to be quoted, states that "[a]n Index is a sign which refers to the Object that it denotes by virtue of being really affected by that Object" (Peirce, 1955, p. 102). This is a quite loose definition that can lead to nowhere, because for any form of sign there would be a certain effect of influence coming from the object. In the case of symbol involving the relationship of signifier and signified, the signifier would denote nothing if it is not affected in some sense by the signified. It is equally true for the icon, in which the ultimate cause for the identification of the sign of icon is that it is related or affected by its object. It must be noticed that mutual influence of any sign and its object must sustain, otherwise the sense link between them would be cut off.

Then we turn to a more elaborate definition of index by Peirce:

An *index* is a sign which would, at once, lose the character which makes it a sign if its object were removed, but would not lose that character if there were no interpretant. Such, for instance, is a piece of mold with a bullet-hole in it as sign of a shot; for without the shot there would have been no hole; but there is a hole there, whether anybody has the sense to attribute it to a shot or not. (Peirce, 1955, p. 104)

According to Peirce's statement above, there is a close connection between the sign and its object, but the index's character is not affected by the interpretant. Thus, think about words as symbols, where words, taken as a form of sign, always mean something as a result of conventionality, because we all know they are related to certain referents or objects, but which may not be affected at all by whether there is an interpretant or not. The same is true for icon: a simple house-like image on the internet means something (a link to somewhere) by referring to a website's homepage, and this signification would not be lost in the internet context with or without the

interpretant. When Peirce claims that “The index asserts nothing; it only says ‘There’” (Peirce, 1885), he is unexpectedly proposing a rather general statement that may cause symbol and icon to be trapped in the same scope; any sign *per se* means nothing, it only points at some place where its meaning is located. So, in the same line, it is nothing strange for Fauconnier (1994, p. xxii) to say that “Language does not carry meaning, it guides it”, suggesting the role of language as being indexical.

Besides Peirce, many other researchers have defined index or indexicality in two general ways. Pearson (2015, p. 139), for example, says that an index is “a sign...whose object is related to its representamen by an actual, single, existential, cause and effect relation”. Though several modifiers, i.e., *actual*, *single*, *existential*, *cause-effect*, are used to specify the relation between sign and object, they are unfortunately still unable to pin down the exact sense of index, and fail to hold detached from the symbol or the icon. In other words, all these relations can be found to exist on the symbol or the icon as long as they are defined in a loose or atypical way. Is the relationship between sign and object in symbol or icon non-actual, non-single, non-existential, or does it not involve cause and effect? Is this awkward situation actually caused by the choice of ambiguous terms? It seems not. There is no problem for conventionality to be used as a crucial criterion for specifying the status of symbol, and resemblance for identifying the icon. For another example, while Zhao Yiheng (2017, p. 110) approves of Peirce’s summary of index that there is a *natural* relation between the sign and its object in an index, which constitutes an *organic* pair, he further proposes that the legitimacy of an index must contain two major factors: *contiguity* and *vectorality* (or *directionality*) (ibid., p. 108). But to examine the four italicized key terms that delimit the concept of index, we would come up with the same confusion: *Natural* is similar to *actual* as has been mentioned above, and thus equally unable to separate index from another two forms of sign. *Organic*, which is of course used metaphorically, is close to *natural* in sense, evoking the same kind of vagueness. How can *he*, a pronoun, now taken as an index, indicate an *actual* or *organic* relation between sign and object? If it does indicate an *actual* or *organic* relation, why do ordinary terms not function in the same way? Then for *contiguity*, what does it actually mean? A footprint, as a typical index or a sign, is spatially and closely related to who or what made it. If contiguity is of this kind, then, again, what about the pronoun *he*, which may point to a person nearby, but may also point to anybody anywhere, even to an imagined person. At last, whenever we talk

about a sign, whether it is of the indexical, symbolic, or iconic type, it will always involve *vectorality* or *directionality*, a route that goes from Firstness to Secondness to Thirdness, an obvious way of development and perception of a sign.

### 3. Causes for Uncertain Indexicality

If we admit there are some problems with the defining features of index or indexicality, we have to know why it is so. According to the analyses we have made above, it can be easily found that no matter how we define index or indexicality it is always difficult to narrow down the scope of the concept to such an extent that other types of signs can be easily and definitely excluded. When similar things occur in academic research, it is usually caused by the loose definition of the concept concerned. In the case of index, Al-Sharafi's (2004, p. 116) statement is quite insightful:

If the reference item points at another item then that is some sort of signification. This signification can be symbolic or iconic or indexical. With regard to 'reference' it is always indexical because there is an act of pointing each time there is reference.

So, the fundamental feature of index is pointing at a certain referent, but this is also a feature that can apply to symbol and icon. A sign of any kind means nothing in itself, and, more exactly, it cannot be taken as a sign at all when it is detached from what it refers to. Both Saussure's dichotomy and Peirce's trichotomy of sign are established on relations, a kind of reference from an initial form to something real or unreal, mental or physical, that is, a certain entity or existence. Reference is the most fundamental feature of any sign, and it is quite close to index in the basic sense. Take the pronoun *he* for an example. According to Al-Sharafi (2004, p. 116), *he*, even when it is used in a discourse or text, does not mean anything except 'its own conceptual signification', i.e., a third-person-singular pronoun. Its function in the particular discourse or text where it is used depends on what it signifies or on a cognitive movement to the 'antecedent' (in text). In saying so, Al-Sharafi is only partly right, because even between *he* and the 'third-person-singular' there is a relation of reference, though this is one detached from specific context. Besides *he* as a typical indexical, such 'natural kind terms' (Smit, 2010) as

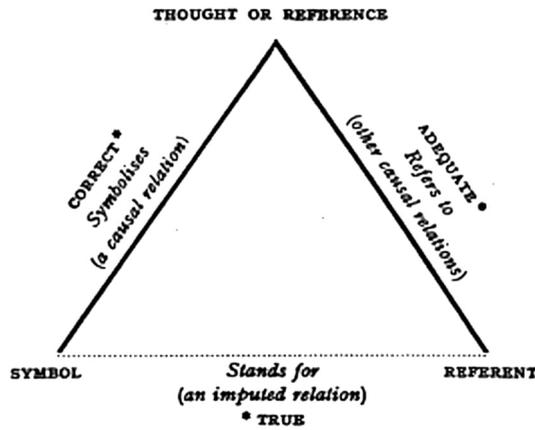
*water* may also rightfully be regarded as being indexical, for it is definitely referential. *Water*, spelled as *w-a-t-e-r* phonetically or transcribed as *water* orthographically, means nothing but an empty phonetic or morphological form, nothing different from a meaningless utterance that slips out of a person's tongue or appears as a mark left out by the nature. When we collectively take it as referring to a kind of substance, that is, H<sub>2</sub>O, we are considering its indexical property; and when *water* is regarded as referring to any particular entity as confined by the context, it is still about indexicality, but one further extended as an effect of the interpretant's interpretation.

It should never be forgotten that indexicality is simply a property of reference, a pervasive property that is represented in varying degrees on all signs. It should not be taken as a label for a certain type of sign, for example, pronouns or footprint-like stuff. Thus indexicality and index are two distinct concepts, the former relating to property, while the latter is concerned with a certain type of sign. When Zhao Yiheng (2017) is challenging Peirce's trichotomy of Firstness, Secondness, and Thirdness, he is actually bringing indexicality instead of index to the primary status of Firstness, for the simple fact that index only serves as a particular type to distinguish from other two types of signs, and the three types of signs do not overlap to a great extent. So although indexicality and index are so closely related to each other, indexicality is not exclusively owned by index, but pervasive as a property of reference that can be found on all signs.

It is also important to make clear the difference between indexicality and reference.

Reference is a concept that has been very widely and even loosely used in meaning-related studies. In semantics, reference is generally used as the relationships between nouns (including pronouns) and what they refer to, called *referents*. In the famous triangle of reference (also called *semantic triangle*. See Figure 1) proposed by Ogden & Richards (1923), there is a three-way referential relationship between *symbol*, *thought* (or *reference*), and *referent*. A *symbol* refers to a related *thought* in a certain causal relation directly, and a *thought* refers to a certain *referent* (or object) also directly, but there is an indirect relation (marked by a dotted line) between *symbol* and *referent*. So here reference as a property is identical to 'pointing at' in a certain way, a relation connecting two entities with uni-directionality.

Figure 1. Triangle of Reference (Ogden & Richards, 1923)



But for Frege (1960), he tries to distinguish reference from meaning in a word by proposing the distinction between sense and reference. Sense, in Frege’s words, is concerned with concept, an abstract idea in one’s mind, while reference is related to a concrete entity. A much-quoted instance would be the phrase *Morning Star or Evening Star*, which, when taken as a particular star or planet, i.e. Venus, in the solar system, is a question of reference; when the two phrases are interpreted as meaning something quite different, that is, *Morning Star* meaning hope, youth, full of energy, etc. and *Evening Star* meaning hopelessness, old age, lack of energy, etc., this is actually about sense. So here reference is a more direct signification between two entities without involving any mental conception.

In semiotics or semiosis, however, reference is used as a rather general term that is similar to that in semantics, referring to any sign relation involving two signifying components. As Peirce is a peculiar semiotician who is fond of creating new terminologies for achieving accuracy of concepts and expressions, it is no wonder that the old term of reference has not been clearly defined by him. In contrast, no matter how close in meaning the two terms of reference and indexicality are, Peirce defines indexicality definitely by taking it as “properties...of the relation between representamen and object” (Sonesson, 2015, p. 475), and these properties are the manifestation of index, other than icon and symbol. So, indexicality is a specific term used to describe the Peircean concept of index, similar to the use of iconicity for icon and symbolization (though this term has been much less used than iconicity and indexicality) for symbol.

A notable thing is that, although Peirce is the first person who proposes the concept of index, and uses the term (including the derivational form *indexical*) very frequently, it seems he does not prefer to use the term *indexicality*. For example, in the book collection entitled *Philosophical Writings of Peirce* (edited by Justus Buchler in 1955), which contains 28 research papers written by Peirce, no one single term of *indexicality* has been used, but *index* has appeared 56 times and *indexical* 31 times. By contrast, when other scholars are talking about the Peircean term of index, they use the term *indexicality* rather frequently. For example, in Trifonas (2015), a book collection entitled *International Handbooks of Semiotics, indexicality* (including *indexicalities*) has been used 69 times. And in Chandler (2017), a monograph, there are 25 occurrences for *indexicality*. This fact partly reflects the unstable status of *indexicality* in the study of semiotics. There might be such a concept called *indexicality* in Peirce's mind, though not explicitly expressed, at least in Buchler's (1955) collection; other scholars believe *indexicality* does exist as an indispensable part of Peirce's semiosis. No matter how *indexicality* has been treated, the fact that it is the least studied part of the sign trichotomy is undeniable.

Now we may come to the major differences between reference and *indexicality*. *Indexicality*, due to its intrinsic connection with the sign of index in Peirce's semiotics, must be defined in the following ways: a) It is a property attached to index, not one interpreted generally in the way similar to reference; b) It basically holds between two entities as a way of signification; c) It is directional, maintaining a one-way reference; d) A sign *per se* is meaningless when it is detached from its object and interpretant; e) There might be several or even countless *indexical* processes for a certain index as its interpretants continue to get involved. Based on the above basic notion of *indexicality*, a new model named Pan-*indexicality* would be proposed in what follows so as to give a brand-new interpretation of linguistic signs.

#### **4. Toward a Pan-indexicality Model of Linguistic Signs**

The proposition of the notion of Pan-*indexicality* is mainly based on two theoretical backgrounds.

Firstly, it is Peirce's notion of index, *indexicality*, and other semioticians' elaborations of Peirce's basic thoughts. When Peirce (1885) asserts that index expresses nothing, but only says 'There', he is actually treating the sign of index in

two ways: separating the index from other referential components and focusing on the relation between the sign and its object. The two ways are contradictory but combined here, reflecting a complicated relation, because when an index does assert nothing, it would not be able to say 'There'; and since it says 'There', this fact actually indicates that the index says something. The essence of Peirce's saying so is that at first sight when an index is perceived it is nothing but a meaningless mark, nothing different from a natural entity (a leaf on the ground, for example) without any influence from human activity or consciousness. And when human consciousness is involved, the index would be perceived as having a function of reference, but this reference does not directly point at a certain object, but a location. As to what can be found in this location, this would be a question beyond what the indexical process cares about. Drawing on this basic idea, we can reasonably infer or hypothesize that a word, or a linguistic sign, may also function as what an index does: a word, when taken as a mark without involving any human consciousness, simply means nothing. When the word starts to be interpreted, it would be first of all taken as a linguistic sign meaning something. Before the word is finally understood as referring to a certain particular thing, its meaning is 'vacant', highlighted by a contrast with non-linguistic signs. That is, it is perceived as a 'word', not a 'non-word', and it must mean something as any linguistic sign would do. This line of understanding is perfectly in accordance with Fauconnier's (1994, p. xxii) claim that language itself does not carry any meaning, and it just helps the addressee to find out meaning. This is no doubt an indexical view of language expression and understanding.

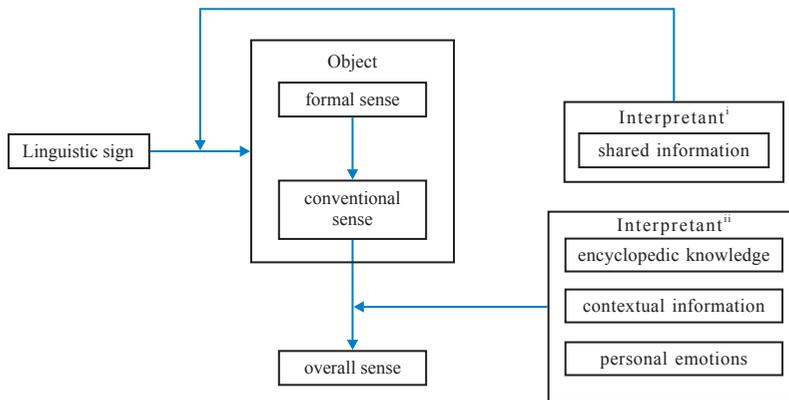
Secondly, it is Zhao Yiheng (2017) who has elevated the role of indexicality to the most fundamental position of signification, the position of Firstness, instead of Secondness as Peirce and most, if not all, semioticians believe. According to his demonstration, indexical ability is inborn, primitive, and fundamental, a result of natural evolution, the first step for human's consciousness to get in contact with the world, and human beings nearly do not need to learn to know how to apply indexicality (p. 108). But, if it is so, how do we interpret such indexes as pronouns or arrows indicating direction? It seems that people must learn to know that pronouns are words and such words have the function of pointing at particular people or things. Or people should be told in some way that the sign of the arrow is related to direction. To solve this problem, we think we must distinguish the two distinct concepts of index and indexicality. Pronouns, arrows, and other similar signs such as footprints, a death

mask, etc., are nothing but indexes rather than indexicality. Indexes very often have to be learnt by means of bodily contact with certain environments, or formal or informal education. Once indexical relations have been established, indexical effect would start to function. It is at this stage that indexicality has been embedded in the indexical relation, and then indexicality functions automatically. So, *water* is definitely not an index in Peirce's framework of semiotics, but it definitely contains indexicality, automatically bringing addressees to some place (the "There" as used in "The index asserts nothing; it only says 'There'" by Peirce, 1885) to fetch out what it actually refers to. It is in the latter sense that *water* as well as all words are 'indexes'. In order not to mix with Peirce's term of index, we call the latter index Pan-index, and the essential property of the Pan-index Pan-indexicality.

#### 4.1 Pan-indexicality of linguistic signs

When all words are taken as Pan-indexes that contain Pan-indexicality, we need to know the indexical process that effects meaning. Figure 2 is a description of the Pan-indexical process of a linguistic sign.

Figure 2. The Pan-indexical process of a linguistic sign



The above Pan-indexical process contains Peirce's three basic sign components, i.e., sign, object, and interpretant, which constitute the general framework of this process and allow us to interpret the linguistic sign within the classic semiotic framework. What makes it special or different is the way object is structured and how the interpretant interferes in the semiotic process. A linguistic sign *per se* means nothing when it stays away from its object and interpretant. As Pan-index, it hints at a certain

object, guiding the addressee to find out what the object actually refers to. It is only when the Interpretant<sup>i</sup> is involved that the sense of the object becomes clear and definite. Interpretant<sup>i</sup> refers to the shared information mutually understood by both the addresser and the addressee, which assures the correct reading of what the object refers to. Since this is a model for linguistic signs, the form of the sign may reveal some sense, which is part of the sense of the object. For example, the acoustic form of bang would automatically evoke a sound produced by something or somebody, or the morphological form of 森 (forest) in Chinese transmits the information of having some or many “woods” or “trees”, as the component 木 (also used as an independent Chinese character) looks like a tree and it actually means wood or tree. Formal sense is understood nearly automatically but still subject to the Interpretant<sup>i</sup>. Then what follows is the conventional sense of the linguistic sign. Take *bang* for example once again. The formal sense of *bang* suggests nothing but a sound that is not related to any particular person or thing that produces it. The conventional sense, however, is concerned with the concept of bang, which is a result of a community’s general agreement of what it normally refers to, and this of course is something both the addresser and addressee agree upon. The entry of *bang* in an English dictionary tells the major sense of its conventional sense. According to Merriam-Webster Online Dictionary<sup>1</sup>, *bang* as a noun means: 1. *a resounding blow*; 2. *A sudden loud noise—often used interjectionally*. If language interaction is simply a transmission of what both the addresser and the addressee have already known, or something the community has agreed upon, that would be rather boring and bears no insightful substance. So we propose in the Pan-indexical process a concept of overall sense, which is solely related to Interpretant<sup>ii</sup> or the addressee. To acknowledge the role of Interpretant<sup>ii</sup> is to acknowledge the disparity between the addresser and the addressee in actual communication. The addressee’s personal encyclopedic knowledge, personal emotions, and perception of the contextual information when the actual communication is in progress, all affect the final reading of the linguistic sign.

To work out the final overall sense of the linguistic sign involves a lot of factors, and these factors interact with each other, with some of them being more predominant or active, while others less so in particular cases. For example, in terms of formal sense, its prominence in sense expression varies significantly for different kinds of linguistic signs. In the most general sense, Chinese characters are much more conspicuous in expressing formal sense than English. In the single language of

English, it seems that only words imitating sounds, i.e., onomatopoeia, have obvious formal senses, while the majority of words (here only simple words are concerned) contains no formal sense. In order to have a clearer understanding of the pan-indexical process, we in what follows take a general look at the Chinese and English linguistic signs from a contrastive perspective.

#### **4.2 Chinese and English in contrast**

If we want to study some striking and significant differences between two languages, the contrastive analysis of Chinese and English would be the best case. Chinese is a unique language in both morphology and syntax that is quite different from most, if not all, other languages in the world (von Humboldt, 2011). Many scholars have pointed out the major differences between Chinese and English in various aspects. For now it is impossible (for the sake of the complexity of the task) and also unnecessary to focus on the details of the contrastive differences between the two languages, for our present task is to present an analytic model of indexicality and try to show its validity in the theoretical facet. Only when this model has been proved to be sound and effective in the general sense, can we go on to apply it to more specific details.

In the first place, there is not any difference for both English words and Chinese characters to be used as linguistic signs which are detached from any referents or interpretants. At this stage, both words and characters are nothing different from natural objects that have not been assigned any meaning. The significance of setting up such a stage is that anything, before it comes into any sense organs of the human being and is processed by the human's mental mechanism, is of the same nature: a material entity seemingly having not been affected by any human activity, in spite of the fact that the words and characters are entirely man-made artifacts. It is only when human's sense organs start to interfere in the linguistic sign that meaning differences begin to emerge. This is about the formal sense of the linguistic sign.

When a linguistic sign is taken as an indexical, it would guide the addressee to search for something meaningful according to some potential referential relations. As an indexical "says only there" without telling the exact nature of what can be found "there", the interpretation of meaning would rest on the addressee's knowledge of that particular language. *Apple* in terms of its formal sense can evoke nothing, because this free morpheme cannot be separated into any two or more meaningful letters or letter

clusters, and its overall morphological form reveals nothing meaningful relevant to the meaning of this word. However, its Chinese counterpart 苹果 (apple) means a lot in terms of its formal sense. Although the two Chinese characters have some ancient forms (e.g. 蘋菓<sup>2</sup>) which are different in some aspects from the modern ones, they still reveal certain senses relating to the fruit of apple: the part 艹 looks like and stands for “grass” or “plant”, 木 looks like and stands for “wood” or “tree”, and 田 looks like the round shape of an object. Especially when 田 appears on the top of 木 forming the character 果, the resultative character vividly depicts a tree on which there is fruit. For the most part, English simple words are a juxtaposition of meaningless letters, and their overall formal features usually can remind people of nothing significant or relevant to the sense of the words. Chinese, however, is quite different in this respect. As pictographs, Chinese characters rely too much on their morphological forms to transmit meaning. Although thousands of years have passed and many rounds of morphological changes have taken place on most of the Chinese characters, quite a large number of simplified Chinese characters are still semantically transparent. This makes it possible to get to know the meaning of words from form to meaning directly, without involving the necessary component of sound for the alphabetic languages (Pan, 1997, p. 236). In the study of Chinese characters to see which factor is first activated among the character’s form, sound, and meaning, it is always the form that is believed to come first, with meaning coming second, and sound last, quite different from the activation sequence of English words (Chen & Peng, 2001). The function of the formal features of words to transmit primary senses is not totally absent in English and other alphabetical languages. Onomatopoeia is a case in point, but this kind of words takes up only a quite small portion of English vocabulary, a sharp contrast to Chinese whose formal features play a crucial role in meaning understanding. While we talk about the indexical relation from the linguistic sign to the formal sense, we should not forget the indispensable part of the Interpretant<sup>i</sup>, without which the formal sense as well as the conventional sense would fail to emerge. The indexical process starting with the linguistic sign points at somewhere where a certain meaning can be found, but the nature of the meaning must be subject to the Interpretant<sup>i</sup>, and the addresser and addressee’s communicative efforts with their shared knowledge about the linguistic and non-linguistic contexts.

Formal sense is only the first part of object the linguistic sign intends to express. Closely related to or based on the formal sense is the conventional sense agreed upon

by a speech community. Take apple for example, once again. The conventional sense of it refers to the standard definition of *apple* as can be found in the dictionary, and it may also refer to certain parts of the standard definition both the addresser and addressee are fully aware of, because not every meaning defined in the dictionary can take part in the real communication.

Linguistic sign as an index presupposes a meaning potential, but whether this meaning potential can come true or not is determined by the Interpretant<sup>i</sup>, the joint efforts of both addresser and addressee. According to the model of Figure 2, a linguistic sign does not simply end with working out the formal sense and conventional sense, the standard and relatively stable interpretation of meaning, but it must be combined with the Interpretant<sup>ii</sup>'s participation. By Interpretant<sup>i</sup>, it is meant that the addressee has the final control of the communicative context to work out the overall sense of the linguistic sign. The addressee's encyclopedic knowledge, his awareness of the contextual information, and his personal emotions all exert influence on what the linguistic sign finally means. The major reason why we emphasize the role of Interpretant<sup>ii</sup> is that in communication both addresser and addressee may not be in an equal position for interpreting a certain linguistic sign. In terms of the sign's formal sense and conventional sense, they can easily reach an agreement about what a linguistic sign normally means; but when contexts, both linguistic and non-linguistic, are involved, both parties' roles differ. And these disparate roles have much to do with the linguistic feature of the linguistic sign.

Words in communication are always concerned with or constrained by grammatical rules, but in some languages, such as English, grammatical rules are so rigid and finely-defined that every word is assigned a specific grammatical status or category, while in other languages, and typically in Chinese, many grammatical rules and categories are not clearly defined or are quite vague. These diverse grammatical features require the linguistic signs to be interpreted in different ways. As ideographic writing, Chinese is highly contextualized, that is, it can only be understood in context. And Chinese is a language that is most difficult to translate into other languages, in terms of representational force and structural pattern equivalences (Humboldt, 2011). This is why Chinese is regarded as a language for which the addressee takes the responsibility, while English as a language for which the addresser is responsible (Shen, 2015, p. 37). Most of the time, when a Chinese word is uttered, the understanding of its meaning must be based on a thorough evaluation of the word

used in context by the addressee. For example:

- (1) 人        来        了。  
       person    come    AUX
- (2) a. The person is coming /has come.  
       b. The people are coming /have come.  
       c. The man /woman /girl /boy...is coming /has come.  
       d. The men women /girls /boys...are coming /have come.  
       e. ? A person /man /woman /girl /boy...is coming /has come.  
       f. ? Some persons /men /women /girls /boys...are coming /have come.

The Chinese character 人 roughly means *person* or *people*, but when it is used in the sentence 人来了, this word's meaning becomes indefinite with the absence of specific contextual information. For the addresser, he is fully aware of who is/are coming, but his expression is so vague that no specific gender, singular/plural, age, even definiteness information are expressed. All that can be determined is a general fact that *we have people coming here*. But the addressee, on the other hand, is supposed to know more of the message expressed by the sentence. So the addressee depends on world knowledge, knowledge of the specific situation, and his personal emotions (this would motivate him to know more or less of the details based on the overt expression) to get to the final meaning. Also in (1), 了, as an auxiliary word used after a verb to denote the meaning of “finished”, similar to the function of the perfect tense in English, can be interpreted in two ways: present perfect tense or present continuous tense. As to which is the intended meaning by the addresser, and whether this meaning can be transferred to the addressee, is up to the addressee to determine. So 人, if taken as an index, means nothing first, but points at a certain potential meaning of what a word should carry with it; then its formal sense (人 looks like a person standing with two legs apart, and this is actually why this character was created), and conventional sense. By now, the meaning of 人 as well as 人来了 is simply based on the relation between the linguistic sign and the object interpreted by the Interpretant<sup>1</sup>. But this is only the primary or basic meaning of 人 and 人来了; more specific reading of the meaning is subject to the addressee. So in the above case, the addressee has a great voice in meaning understanding. One of the major reasons why this is so is that the vague grammatical categories leave out much room for further interpretation by

the addressee. In English, by contrast, every single word is right in a well-defined grammatical position, which makes it difficult or even impossible for any flexible interpretation. In English, the addresser has made almost everything clear, leaving no room for other interpretation. The advantage of doing so is that messages coded by words can be more precisely transmitted to the addressee.

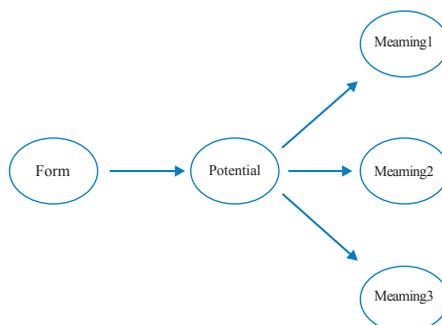
Compared with English, Chinese is more like index and has more obvious indexical properties. The rigidity of English grammatical rules and word categories fixes every word in a particular grammatical position, and its meaning is much constrained by grammar, leaving less room for flexible interpretations by the addressee. The form-meaning pattern of English words is more like a one to one correspondence, as shown in Figure 3 below.

Figure 3. The form-meaning pattern of English



Figure 3 is a simplified form-meaning relation without explicating other components, such as the distinction between object and interpretant. The reason why we present this simple pattern is that, since there is a direct form-meaning correspondence, the role of addressee can thus be played down or neglected for the fact that the addressee cannot, or can hardly, change the formal and conventional meaning of words. Anyway, this form-meaning pattern is simply a general and idealized pattern to which the following pattern for Chinese has been made in contrast, so exceptions that are found among specific instances to contradict this pattern are to be expected.

Figure 4. The form-meaning pattern of Chinese



Different from Figure 3 for English, Figure 4 does not have a single form-meaning correspondence. In Chinese, as it is often difficult to specify the grammatical status of a certain word, and the word itself is often vaguely expressed in terms of its gender, number, class, etc., both internal and external factors of a word would require the meaning interpretation to be in a temporarily unresolved situation; the meaning is a potential which implies something but is not clearly or explicitly determined. It is up to the addressee to work out the final overall sense of the word in context. So, when Form points at Potential that implies more possible meanings, it is quite reasonable to take Potential as what Peirce calls “there”, and the referential relation between Form (linguistic sign) and Potential as a kind of indexical relation.

### 4.3 Unbalanced trichotomy

Theoretical trichotomy has been much favored by Peirce and becomes one of the striking features of his theory of semiotics. Although every one of the three components in a trichotomy is clearly defined and distinct from each other, these components may not be in the same status. The distinction of First, Second, and Third implies in part the unbalanced status of the three components, i.e., icon, index, and symbol, and Zhao Yiheng’s (2017) proposition of putting indexicality in the First place is also a sign of showing imbalance. But in what follows we will elaborate another kind of imbalance related to two sets of trichotomy, that is, icon-index-symbol and sign-object-interpretant. By doing so, we intend to further demonstrate the validity of the pan-indexical model in Figure 2, and how this model applies to Chinese.

As icon-index-symbol and sign-object-interpretant are interwoven, the interpretation of one trichotomy would unavoidably involve another; thus it is better to talk about them together.

In the trichotomy of icon, index, and symbol, the sign *per se* of each is the same in that it is relatively independent, that is, it can be isolated to a large extent from its object and interpretant. By saying so, it is not meant that the sign can stand alone without involving its object and interpretant, because a sign would not be a sign without relating to what it refers to. The reason why we take the sign as relatively independent is a comparative consideration of the more non-independent role of object and interpretant. In terms of the present topic of discussion, the major difference between icon, index, and symbol lies in the connection between sign and object.

For the icon, there is a direct relation between sign and object, for they two hold certain resemblance, which is the ultimate cause for the understanding of meaning. Similarly, for the symbol, the relation between sign and object (or, in Saussurean words, signifier and signified) is also direct, because it is these two that are based on conventionality, which has less to do with the interpretant. So, in terms of object-based meaning expression, both icon and symbol are content-based, while index, which is characterized by showing “there” only, is vector-based, showing no concrete content. However, the content of an index should not be taken away from the object; they are combined and depend on each other. Think about the index of an arrow. As an index, the arrow does not simply indicate a certain direction, but it is closely tied to what the destination is. Even when the destination is totally unknown to the viewer who happens to come across such a sign, it still suggests there is a destination. So the object of the index suggests only half the way to the potential destination, while the objects of icon and symbol are the end of the sign’s meaning, if we take meaning understanding as a sign process. So the difference between index and icon/symbol can be shown as follows:

Figure 5. Major components in index, icon, and symbol



Index should be described as a three-stage process, going from the sign to the object, and at last to a destination, while both icon and symbol contain only two stages, from the sign to the object. It is not that icon and symbol do not contain a destination, but that their destinations are integrated into the object.

For the trichotomy of sign, object, and interpretant, the three components are also not balanced in status. For Saussure, there are only two basic components for a sign, i.e. signifier and signified, which are the most significant components of a sign. By adopting a dichotomy of sign, the role of interpretant as defined by Peirce is treated as hidden, but not useless, because without the interpretant there would be no way for signifier and signified to be connected. This fact shows that the interpretant plays a role quite different from that of signifier/signified or sign/object. This specialty of interpretant is related to the specialty of index in a way in which contextual factors are involved, and this is possibly the key factor that supports Peirce’s trichotomous

systems, and the absence of them gives rise to Saussure's dichotomous system. However, contextual factors can be both stable and dynamic. Peirce's trichotomous system is based on stable or conventionalized contextual factors, and is suitable for interpreting signs, including language, in standardized ways. But in dealing with signs which are constrained by specific contextual factors, Peirce's system does not readily apply. In terms of language, English does not rely as much as Chinese does on contextual factors. Chinese supports a flexible reading of the sign's meaning based on contexts. This is why the Interpretantii in Figure 2 is isolated, and by doing so the role of addressee together with contextual factors can be highlighted. Besides, the unbalanced trichotomy is mostly a result of the specialty of index or, more exactly, indexicality, rather than the other two kinds of signs. This specialty does not restrict index to a limited scope of definition. On the contrary, it can apply to both icon and symbol. The nature of this specialty is indexicality, a property typically represented in index, but also reflected in icon and symbol. This is why we propose the pan-indexicality model.

## **5. Final Words on Indexicality**

The pan-indexical model applies to both Chinese and English, and in fact it may apply to all non-verbal signs. Any sign has an indexical potential that awaits association with a certain object by an interpretant. This is especially true for linguistic signs, because any linguistic sign can be easily recognized as being different from non-human things or marks, or belonging to a certain language. This is the basis for taking linguistic signs as indexicals. The form or pattern of a linguistic sign determines to a large extent how it is interpreted. In terms of free morpheme, English words are the best instantiations of signifier and signified in that the sense of words is determined by conventions that associate a sound image with its referential concept, without involving the factor of morphology. However, in Chinese, words' morphology is very often sense-laden, an extra factor as compared to English that affects the sense of words. This is one of the major reasons why calligraphy has been so popular in Chinese culture, because the way of writing or drawing may reflect or enhance the sense of the written words, or the writer's temperaments can be injected into the words and are expected to be felt by the reader. The meaning of a Chinese word is composed of several layers, from morphological cues to various associations. Before

we get to know the meaning of a certain layer, we are motivated and guided by certain cues, which have the property of indexicality.

The purpose of proposing the pan-indexical model lies in two aspects: first, to highlight the prominent role of the indexicality of the linguistic signs, which are expected to be in line with how the meaning of words is understood (although more empirical proof is needed for this claim); and second, by applying this model to different languages, to know better and clearer how meanings of words are understood in quite different ways. This is in fact what this paper really cares about. Quite a lot of evidence has shown that English is a language rigidly constrained by grammatical rules, while Chinese is one whose meaning can hardly be precisely specified without relating it to contexts of various kinds. So the role of the Interpretantii suggests something significantly different for English and Chinese: for English words and expressions, thanks to the strict grammatical constraints, there is less room for flexible interpretation for the addressee. Meaning seems to be transmitted from addresser to addressee without considerable reduction, nor significant addition. This is why English is taken as an addresser-responsible (or speaker-responsible) language (Shen, 2015). In other words, for English, after the addresser has expressed something, this is almost all of what he intended, and the responsibility of the addressee is simply to take it as what it is. But for Chinese the balance of taking responsibility tilts to the side of the addressee, who plays a rather important role to interpret what the addresser intended.

The salient role of the Interpretantii for Chinese is also related to culture. Nisbett and Miyamoto (2005, p. 467) claim that, in terms of attention and perception, “people in Western cultures focus on salient objects and use rules and categorization for purposes of organizing the environment. By contrast, people in East Asian cultures focus more holistically on relationships and similarities among objects when organizing the environment”. For Western cultures, rules and categorizations (also a kind of rule-based system) are crucial for organizing the environment. By doing so, salient objects can be highlighted (e.g. to be put in the subject position), and meanwhile non-salient or less important objects are arranged in the less salient grammatical positions. In Eastern cultures, however, relations between objects are emphasized, and these relations can only be well grasped in a holistic way by evaluating all influential factors. Since Chinese is characterized by a flexible grammar, it is rather difficult for the addresser to express things precisely and comprehensively,

so the addressee, in order to decode meaning accurately, has to make the best use of contexts (both linguistic and situational) to get to a personalized understanding. Thus, a common understanding, approved of by both the addresser and addressee, and a personalized understanding, a result of the Interpretant<sup>ii</sup>'s forceful interference, are two major but distinct styles for English and Chinese linguistic sign understanding.

## Notes

- 1 <https://www.merriam-webster.com/dictionary/bang>
- 2 In Chinese history, a certain character may have gone through many formal changes ranging from the earliest primitive form, such as the inscriptions of bones or tortoise shells in the Shang Dynasty, all the way to the simplified Chinese. Here the ancient forms of 蘋菓 simply stand for the stage used before the application of the simplified Chinese on Mainland China.

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