

THE ICONIC COGNITIVE PRINCIPLES OF MANDARIN CHINESE WORD ORDER: PEDAGOGICAL AND LEARNING PERSPECTIVES

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Among the approaches dedicated to studying Mandarin Chinese (MC) word order, the cognitive-functional approach inaugurated by Tai (1985, 1989, and 1993) is particularly interesting because of its potential from the pedagogical point of view. Central to this approach, which was resumed in several studies on word order (e.g., Ho 1993; Hu 1995; Jiang 2009, 2017; Loar 2011; Morbiato 2017, 2019), is the exploration of recurrent patterns in MC syntax to formulate specific principles that motivate the mapping between form and function within the linguistic structure. Given its theoretical premises, this strand of analysis is well placed in that diverse landscape of approaches that can be labeled under the nomenclature of Cognitive Linguistics (CL), so much so that Tai's studies are considered "to mark the beginning of work on CL in China" (Shu *et al.* 2019: 17). In the present study, the focus is placed exclusively on the most cited cognitive iconic principles, leaving aside those of a functional nature for two different reasons, in addition to space constraints. First, because the poten-

tial for L2 instruction arising from the teaching of these principles is, to this day, almost unexplored, when on the other hand, the notions pertaining to functionalist approaches have already managed to integrate, albeit still too marginally, into the teaching curricula (e.g., topic-comment dichotomy, the notion of focus)¹. Secondly, the concept of motivation evoked by the conceptualizations of these principles is consistent with the fundamental assumptions underlying CL, such as the non-autonomy of syntax and the embodied nature of language. Listed below are some of the most discussed cognitive principles in the literature on the Cognitive-functional approach to MC word order:

1. The Principle of Temporal Sequence (PTS).
2. The Principle of General-Preceding-Particular (GPP).
3. The Principle of Semantic Proximity (SP).
4. The Empathetic Principle (EP).

The choice to narrow the discussion to these principles is based on a critical analysis of the literature on the cognitive-functional framework. It aims to delimit a core set of fundamental iconic principles sound in motivating MC word order from a pedagogical perspective. The present paper, therefore, aims to provide a review of the iconic principles related to the cognitive-functional framework, highlighting how the application of cognitive principles to the pedagogy of L2 MC is entirely in line with the key assumptions underlying the Applied Cognitive Linguistics (ACL) subfield. This will be suggested by first introducing the topic of linguistic motivation and iconicity as understood in CL and the cognitive-functional approach to MC word order (Section 1). Afterward, the four cognitive principles mentioned above will be briefly introduced and illustrated, providing an overview of their explanatory power according to the literature on the subject (Section 2). Finally, the explanatory power of these principles in L2

¹ See in this regard the provisions of *Il sillabo della lingua cinese* ('The Syllabus of the Chinese Language') (Ministero dell'Istruzione, dell'Università e della Ricerca 2016), a syllabus drafted by Italian Mandarin Chinese language teachers and scholars in order to standardize the linguistic contents to be presented in the curricula of MC classes held in Italian High Schools.

learning and pedagogy will be suggested by tying their treatment to the assumptions underlying the broader ACL framework (Section 3). It is hoped, therefore, that this paper will contribute to providing fresh perspectives within ACL approaches to L2 pedagogy.

1. Linguistic motivation and iconicity as a linguistic phenomenon

In the words of Dirven and Verspoor (2004: 13), motivation “refers to non-arbitrary links between a form and the meaning of linguistic expressions” (see also Radden and Panther 2004, 2011; Panther 2021). In the ACL literature, the term refers mainly to the pedagogical field. It is therefore used as an extension of the concept of ‘semantic explanation’, which refers primarily to grammatical structure in a vision that sees vocabulary and grammar unfolding in a single continuum. According to Taylor (2002, 2004), one of the strongest supporters of a pedagogical grammar based on the theoretical foundations of CL, the term ‘motivation’ is preferable to the latter because it would also include the connections within the linguistic system. In contrast, the former would motivate expressions only based on their conceptualization.

Among the various manifestations of linguistic motivation, iconicity is the one that pertains to the connections between form and meaning (Boers and Lindstromberg 2006; Radden and Panther 2004). There are numerous interpretations of iconicity in linguistics, starting with Charles S. Peirce’s semiotic studies, according to which an icon is a sign that resembles its object (e.g., Peirce 1998 [1902]). A definition of iconicity often adopted in the literature on the subject is derived from the studies of Haiman (1980, 1985), where iconicity is understood as “a similarity between form and meaning as conceived by a human mind” (Tabakowska 2009: 133). Iconicity, and consequently motivation, can be intralinguistic or extralinguistic. The former refers to correspondences between units within the linguistic system, while the latter links linguistic signs to the phenomenological world, or rather to the conceptualization of reality as filtered by the cognition of the human being. The intralinguistic type is most studied in the generativist literature (e.g., Krivochen and Lackova 2020: 97), being committed

to sounding out the internal dynamics of a system considered autonomous. The assumptions underlying CL, on the other hand, see extralinguistic iconicity as proof of the inadequacy of the formalist view of the autonomy of syntax.

Iconicity is a crucial notion in the study of typological features of MC. Its manifestations are not limited to the writing system (*imagic* iconicity, cf. Tai 1993) but refer to the entire linguistic structure. The phenomena of syntactic iconicity are among the various manifestations of *diagrammatic* iconicity, a term used by Haiman to emphasize its relational nature. Scholars agree that the morphosyntactic structures of isolating languages as the MC are more iconic than morphologically richer languages, where the motivation behind different syntactic constructions has often lost its transparency (Haiman 1985). Tai (2002: 348), in this regard, states:

It is important to point out that very few researchers of iconicity deny the existence of arbitrary grammatical principles. What they have attempted to show is that not all of the grammatical principles are arbitrary and autonomous. In my recent series of works, I have shown that Chinese grammar is more conceptually based and iconically motivated than English.

One of the basic assumptions of the cognitive-functional approach is the strong iconically motivated nature of MC grammar (Biq *et al.* 1996), in which the iconic principles have preeminence over the abstract ones in the symbolization process (Hsieh 1989). The MC word order regulating principles considered in this paper (cf. Section 2) are all extralinguistic iconic principles. The meaning of iconicity we refer to in the present study is, therefore, one in which content motivates a form, in which the external or the conceptual world is the model and the linguistic phenomenon is the icon (cf. Greenberg 1995). Consequently, the term ‘motivation’ refers to an ‘external’ one, i.e., based on the physical and socio-cultural reality in which the speaker is embodied. The concept of embodiment refers “to understanding the role of an agent’s own body in its everyday, situated cognition” (Gibbs 2006: 1). It is a central assumption for theories about CL, which see language

as not distinguished from general cognition. These considerations imply multiple repercussions for L2 instruction, which will be discussed in more detail in Section 3.

2. Mandarin Chinese word order iconic principles

2.1 The Principle of Temporal Sequence (PTS)

The PTS is a principle based on the linear order proposed by Tai (1985) as independently motivated. It states, “the relative word order between syntactic units is determined by the temporal order of the states which they represent in the conceptual world” (Tai 1985: 50). In other words, the sequence in the surface structure of linguistic units corresponds to the series of events in the phenomenological or conceptual world. It is a manifestation of what Langacker (2008: 80) calls ‘temporal iconicity’, in which “correspondence between conceiving of events in a given order and the order in which they are conceptualized and linguistically described by the speaker”. Although it is a principle with universal characteristics, according to Tai (1985), this principle would be able to motivate the behavior of the majority of syntactic categories of MC, so much so that a violation of it would result in an ungrammatical syntactic order.

In (1) (cf. Tai 1985: 54), it can be observed that if the order of the two events *zuò gōnggòngqìchē* ‘to take the bus’ and *dào zhèr* ‘to arrive here’ is reversed this is also reflected in the meaning of the sentence. In (1a), the subject or topic *tā* ‘he’ first takes the bus and then arrives at the destination *zhèr*, whereas in (1b), the VP *dào zhèr* occurs temporally before the action of riding the bus.

- (1) a. 他 坐 公共汽车 到 这儿
Tā zuò gōnggòngqìchē dào zhèr
 he ride bus arrive here
 ‘He came by bus’
 ‘È arrivato qui prendendo l’autobus’

- b. 他 到 这儿 坐 公共汽车
Tā dào zhèr zuò gōnggòngqìchē

he arrive here ride bus

‘He came here to ride in a bus’

‘È arrivato qui per prendere l’autobus’

The translations in (1a) point out that English and Italian are not required to respect this order, and the PTS can therefore be violated while still producing a grammatical sentence.

In addition to Tai’s work, various studies have attempted to demonstrate the validity of this principle in word order analysis (Ho 1993; Hu 1995; Huang 2013; Jiang 2009, 2017; Loar 2011; Morbiato 2017; Zhang 1995, 2019). The literature generally agrees that the sentence internal constituents regulated by PTS can be verbal, prepositional (co-verbs), resultative, and, albeit limited to some types, adverbial (Loar 2011; Morbiato 2017). The PTS would also regulate the order between the main and subordinate clauses in the complex sentence: in MC, in the unmarked sentence, the subordinate clause typically precedes the principal clause (Loar 2011). This can be motivated in terms of PTS since the subordinate is processed conceptually earlier than the principal (Ho 1993; Jiang 2009) or otherwise delineates its frame of validity (Morbiato 2019).

Ho (1993) is the first scholar to explicitly extend the motivational range of PTS to the placement of preverbal temporal expressions. According to Ho, their order is “determined by their temporal relation to the verb” (1993: 153), and punctual time expressions thus occupy a preverbal position since they provide the temporal scope in which the action expressed in the predicate takes place. Ho does not elaborate further on his interpretation, which would seem to resemble the motivation given by Tai (1985) in the elaboration of another principle, the Principle of Temporal Scope (PTSC), according to which “if the conceptual state represented by a syntactic unit X falls within the temporal scope of the conceptual state represented by a syntactic unit Y, then the word order is YX”. Jiang (2009) elaborates further on the remarks introduced by Ho by stating that the logic behind the preverbal positioning of time expressions is reflected in the fact that they represent “a temporal state that happens earlier than an action or marks the beginning of an action”. Look, for example, at (2), taken from Tai (1985: 61):

- (2) a. 他昨天走了
Tā zuótiān zǒu le
 b. 昨天他走了
Zuótiān tā zǒu le
 c. *他走了昨天
Tā zǒu le zuótiān
 ‘He left yesterday.’
 ‘Se ne è andato ieri.’

The ungrammaticality of (2c) according to PTSC would derive from the fact that the action expressed by the verb falls within the temporal scope of the time expression *zuótiān* 昨天 ‘yesterday’ and would therefore go after it. Reasoning instead from the perspective of PTS, *zuótiān* is a temporal state whose inception precedes the action expressed by the verb. A visual representation of the action range of *zuótiān* at the temporal level, adapted from Huang (2013), is proposed in Figure 1.

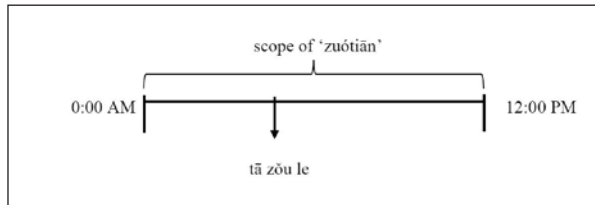


Figure 1. Temporal relations of ‘*tā zuótiān zǒu le*’.

In her cognitive-functional taxonomy of MC word order errors, Jiang (2009) thus does not explicitly include PTSC as a foundational principle and prefers to motivate the placement of temporal expressions relative to the verb according to PTS². Instead, the relative order of time expressions is traced by Jiang to the more generic scope of conceptualization evoked by the Whole-Before-Part principle (cf. Section 2.2), and PTSC is considered as one of its sub-principles. Given these considerations, I agree with Jiang that the placement of time expres-

² More specifically, Jiang considers it as a sub-principle of the Whole-Before-Part (cf. General-Preceding-Particular, Section 2.2) in motivating the relative order of time expressions (she uses the term ‘time expressions’ in her taxonomy).

sions in relation to the verb can only be motivated for pedagogical purposes through PTS and that the relative order of time expressions is instead traceable to the principle of General-Preceding-Particular (cf. Section 2.2).

During instruction, the simplicity of the conceptual scheme underlying PTS can be represented by employing schematic visual diagrams consistent with the concept underlying dual coding strategies (cf. Section 3), as in the case of Figure 1 previously illustrated or in Figures 2 and 3 below, adapted from Huang (2013), where two different conceptualizations relevant to the adverbial or complement nature of the locative syntagm *zài chuán shàng* 在船上 ‘on the boat’ are represented, defining its preverbal or post-verbal placement in temporal frames (TF).

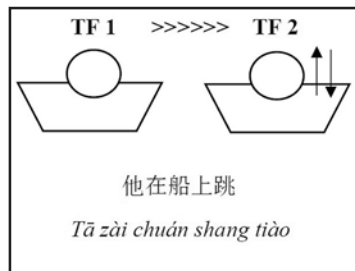


Figure 2. ‘He is jumping on the boat’.

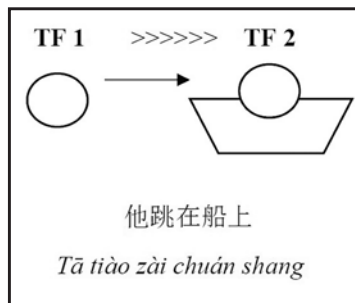


Figure 3. ‘He jumped on the boat’.

2.2 The Principle of General-Preceding-Particular (GPP)

It is a principle that should be understood using the notion of logical scope (e.g., Morbiato 2020; Tai 1985), and therefore in-

cludes several labels with which the literature over the years has described principles of organization in frames and based on an image containment schema, such as the Principle of Whole-Before-Part (WBP, cf. Tai 1989), The Principle of Contained-Before-Contained (CBC, cf. Hu 1995) and The Principle of Temporal Scope (PTSC, cf. Tai 1985) previously discussed. These principles regulate word order patterns that can be traced back to the broader logical diagram expressed by the notion of ‘general’ and ‘particular’. In the words of Ho (1993: 161), “constituents representing a global scope (general or whole) should precede those that represent a smaller scope (particular or specific)”. I propose using the GPP label to define this conceptual scheme within a pedagogical grammar because it is the most logically inclusive and lends itself to including conceptualizations derived from principles such as WBP, CBC, and PTSC³.

(3) a. 台湾，台北，罗斯福路三段，99号

Táiwān, Táiběi, Luósí fú lù Sān Duàn, Jūshíjiǔ Hào

‘Taiwan, Taipei, Roosevelt Road, Section 3, No. 99’

b. 2334, North High Street, Columbus, Ohio, U.S.A.

c. Largo Agostino Gemelli 1, Milano, MI, Italia.

The most obvious manifestation of the iconic motivation of the GPP is shown in the relative order of spatial expressions as demonstrated by Tai (1989: 202) in (3a), where the most general entity, ‘Taiwan’, is placed first and the most particular one, the house number ‘99’, is at the end of the address.

Differently from PTS, GPP is a language-specific principle. In the organization of spatial expressions, English presents an opposite pattern, ‘particular-before-general’ (or ‘part-before-whole’), as demonstrated in (3b), and Italian resumes this arrangement, except for a single constituent (‘1’, the number) as shown in (3c). This diagrammatic difference is given by the nature of the iconic motivation of the principle, which is perceptual and experiential in nature and grounded in a culture-specific perception and con-

³ Cf. the definitions by Hu (1995), Jiang (2009) and Morbiato (2020).

ceptualization of spatial relations (Morbiato 2017). It is a principle that reflects one of the theoretical tenets underlying CL, consistent with a weak position of linguistic relativism, namely that differences in word order patterns are partially due to language-specific conceptualizations resulting from different construal of the real world in different cultural experiences (Tai 2005: 563). The scope of iconic motivation of the GPP is not limited to the relative order of spatial expressions but also extends to various phrase-level constructions (e.g., percentages, fractions, partitive relations), clause-level constructions (e.g., preverbal spatial and locative constructions, double topic constructions, quantifier-float constructions) and to existential sentences that develop from a reference object or place (e.g. existential ‘you’ sentence). Structures such as the latter, exemplified by Hu (1995: 42) in (4), present particular difficulties for English and Italian-speaking learners whose L1 prefers a different spatial mapping.

- (4) 桌子 上 放 了 一 本 书
Zhuōzi shàng fàng le yī běn shū.
 desk top put PRT one CL book
 ‘There is a book on the desk’
 ‘C’è un libro sul banco’

A further addition to the explanatory capabilities of the principle is given by Loar (2011), who traces the internal order of positional compound words (General Noun + Position Word) to the conceptualization of the containment schema of the Principle of Whole-Before-Part, which, as I have previously discussed, it is nothing more than a manifestation of the GPP. According to Loar (2011: 101), the spatial relationship between the two components forming the compound is grounded in the concepts of coincidence, interiority, superiority, inferiority, anteriority, posteriority, laterality, and opposition. In compound words such as (5), the superiority relation reflected by the containment scheme is rather concrete and transparent if one considers *shàng* 上 ‘top’ as a ‘part’ of the desk seen as ‘whole’ (i.e., its surface).

- (5) 桌子 上
Zhuōzi *shang*
 desk top
 ‘Sopra il banco’
 ‘On the desk’

The schema takes on more abstract characteristics if we consider *shang* as the space projected from the table surface upward. In this case, the table NP is seen as the referent object that sets a reference frame for the position word (PW), consistent with the containment scheme evoked by the GPP. The conceptualization of the GPP is also extensible to the ordering of time expressions. The logic underlying the extension of a principle based on an image schema that has more properly to do with space is consistent with the view of the spatiotemporal-existential cline as a cognitive universal (Givón 1979). While in MC, as demonstrated in (6a), the order of temporal expressions conforms with the GPP, this is not the case in British English (6b) and Italian (6c), where constituents with a minor scope generally precede those with a major scope.

- (6) a. 1980年, 12月, 22日, 上午, 10点钟
 1980 nián, 12 yuè, 22 rì, shàngwǔ, 10 diǎnzhōng
 b. 10 am, day 22, December, 1980
 c. 10:00 di mattina, giorno 22, Dicembre, 1980

As with the PTS, the image schemas evoked by the GPP conceptualizations can be conveniently reproduced with visual diagrams that can be easily used in a pedagogical context.

The containment schema is represented in Figure 4 (own work), in which the scope of element X also includes those of entities Y and Z. In contrast, Y is superordinate to Z, which is the most ‘particular’ entity. However, representations employing two-dimensional spatial diagrams are also easily interpretable, such as the one in Figure 5 (own work), where the laterality relationship between the NP and the *yóu-bian* 右边 PW ‘on the right’ is represented by a selection of a single and ‘particular’ projection among the possible ones projected by the schematic surface of the ‘general’ reference object ‘NP’.

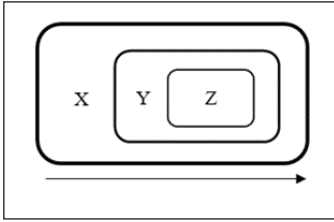
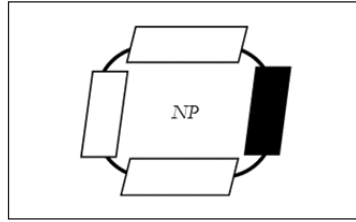


Figure 4. Visual diagram of containment.

Figure 5. Visual diagram of 'NP + *yóubian*'.

2.3 The Principle of Semantic Proximity (SP)

The principle is based on one of the manifestations of diagrammatic iconicity that has been most investigated in the literature, that of 'distance' (*distance motivation*, e.g., Haiman 1985). This is an application to the MC word order of the *principle of proximity* enunciated by Givón (1991: 89): "entities that are closer together functionally, conceptually or cognitively will be placed together at the code level, i.e., temporally or spatially". One of the first applications of this principle to the study of MC can be found in the work of Tai (1993), who notes that the presence or absence of the structural particle *de* in linking modifier and head in nominal phrases reflects their semantic closeness: the lack of the particle would express a closer or more intimate link between head and modifier. The notion is taken up extensively by the studies by Lu (1998, 2009), who proposed the label of *Semantic Proximity* (SP). SP, although universal, is believed to have a higher motivational power in a language like MC, where the match-up between syntax and semantics is relatively more transparent (Tai 1993, 2005) and where word order plays a strong role in determining syntactic relations. Loar (2011) emphasizes several manifestations of the principle, including its pervasiveness in motivating the position of preverbal adverbials and the internal word order of the MC noun phrase, stating that the structural distance of a modifier from its head reflects in full its semantic proximity (proximity based on features such as inherence, relevance, intrinsicity, essentiality, and cruciality). (7) represents the general order of bare adjective modifiers proposed by Lu (1998: 65). The semantic proximity to the noun is motivated by their constancy. For example, in (8), the material *mù* 木 'wood' is considered to be a more constant property than the color *bái* 白 'white', the color is more

constant than the size *xiǎo* 小 ‘small’, and the size is more constant than the more transient modifier indicating ‘age’, *xīn* 新 ‘new’.

(7) age > size > color > origin > material > manner > function > noun

(8) 新小白木房

xīn xiǎo bái mù fáng

age > size > color > material > N

new small white wood house

‘A new small white wood house’

‘Una nuova e piccola casa bianca di legno’

The translations in (8) show that the relative order of modifiers in MC is also valid in English and Italian. Loar’s study (2011) shows how the principle can motivate the order of different types of adverbials and complements (e.g., the order of action measure complement concerning verb-object compounds), which may be challenging to comprehend in the English or in the Italian language. More specifically, in the case of the iconic motivations of different types of adverbials that do not present proper temporal aspects (e.g., adverbials of modality, focus, emphasis, etc.), Loar states that it is necessary to resort to principles such as SP since the PTS cannot hold any explanatory power in these instances. A more recent study by Zhang (2019), in agreement with what has already been observed by Lu (1998), comes to the conclusion that SP plays sometimes a more significant role than PTS in motivating word order, also because it is capable of motivating particular constructions (e.g., the relative order of preverbal adverbials) in which the latter does not hold any explanatory power.

2.4 The Empathetic Principle (EP)

The designation of the principle is given by Ho (1993) and it is afterward adopted in Jiang’s (2009) taxonomy, which includes the principle in a third domain apart from the cognitive and functional ones that she refers to as ‘the sociocultural domain’. This is a macro-principle whose structuring stems from Kuno’s (1987) studies on empathy and the notion of familiarity as understood by Siewierska (1988). Its motivational factor is grounded in the manifestation of two main iconic

principles, the ‘principle of sociocentrism’ and the ‘principle of egocentrism’. Ho (1993: 167) summarizes the logic behind the principle: “speakers are preferentially more interested in themselves than in others, more interested in what is socially, spatially and temporally nearer than what is socially, spatially and temporally farther away”. Egodeictic iconicity is, for example, manifested by the fact that a sentence such as ‘My sister is your daughter’ is processed faster than a sentence such as ‘Your daughter is my sister’, because the speakers tend to mention themselves first or, on this specific instance, a person with whom they have a more intimate and personal relationship⁴. On the other hand, the order of the juxtaposed kinship terms in (9) is an example of sociocentric iconicity. Chinese society has strong Confucian and patriarchal roots, which is reflected in (9) by the precedence of the male kinship term *fùqin* 父亲 ‘father’ over the female term *mǔqin* 母亲 ‘mother’.

- (9) 父亲 母亲
 Fùqin *mǔqin*
 father mother
 ‘Father and mother.’
 ‘Padre e madre.’

While the egodeictic principle could be considered a universal principle, the sociocentric principle is specific because it reflects different social structures. For example, Panther (2021) points out that in English, male kinship terms are more frequently ordered in the first position than female ones (e.g., ‘husband and wife’, ‘brother and sister’, ‘boy and girl’). This order would reflect the patriarchal nature of the Anglo-Saxon socio-cultural model. In the Italian language, spoken in a country with evident patriarchal roots, the order of terms is sometimes interchangeable (as in English), e.g., *papà e mamma* / *mamma e papà* ‘dad and mum/mum and dad’, except for some juxtaposition with a more marked lexicalization (e.g., brother and sister, husband and wife)⁵. A reversal in the juxtaposition of the two terms still produces appropriate sentences. Note, how-

⁴ See Ho (1993) for other manifestations of this iconic principle.

⁵ Note that in some instances other types of motivations, often of prosodic nature, may concur in shaping the order of the juxtaposition (e.g., ‘mum and dad’).

ever, that the literature considers the asymmetry at the base of this principle to be more compulsory in MC, so much so that according to Jiang (2009), a reverse order of (9) would produce an inappropriate sentence. Given that this principle belongs to the broader extralinguistic area related to cognition (cf. Ho 1993), I do not consider it necessary to include the following principle in a separate domain, and it has therefore been included in the cognitive principles.

3. Learning and Pedagogical Perspectives

The centrality given by CL to linguistic motivation (and iconicity as one of its main manifestations) is one of the most promising features from the point of view of L2 learning and instruction, mainly because of its strong explanatory power, exploitable during classroom teaching and for the creation of pedagogical grammars aimed at promoting in teachers and learners a process of ‘awareness-raising’ of the target language structures (Taylor 1993).

Several scholars have tried to apply or suggest the use of CL’s theories and linguistic motivation to second language learning and teaching (e.g., Achard 1997; Achard and Niemeier 2004; Boers and Lindstromberg 2006; De Knop and De Rycker 2008; Hijazo-Gascón and Llopis-García 2019; Holme 2009; Langacker 2001, 2008; Littlemore 2009; Pütz 2007; Pütz *et al.* 2001; Taylor 1993; Tyler 2008). Liu and Tsai (2021: 543) point out that a widespread belief in the literature is that the ‘arbitrary’ view of language given by formalistic theories is reflected in the production of equally arbitrary rules used in teaching strategies: this would lead the learner to an “overreliance on memorization, making language learning uninteresting and likely less effective”. Boers and Lindstromberg (2006: 305) argue that “presenting segments of language as motivated is likely to be beneficial for learners as it may enhance comprehension, retention, cultural awareness and positive affect”. Regarding comprehension, the assumption is based on the fact that learners are more likely to understand linguistic structures that reflect the phenomenological world they experience rather than an arbitrary explanation based on abstract mental rules. As Lakoff (1987: 346) states, “it is easier to learn something that is motivated rather than something that is arbitrary. It is also easier to remember and use moti-

vated knowledge than arbitrary knowledge”. Considering grammar as semantically motivated would thus add a step to the language teaching process: in the illustration of grammar rules in traditional instruction, given the arbitrary view of morphosyntax, the step of comprehension is often glossed over, moving directly from rule discovery to its application (Daloiso and Pascual 2017). Concerning long-term memorization (retention), Boers and Lindstromberg (2006) refer to the concept of *semantic* and *structural elaboration* as discussed in Barcroft (2002). These two mental operations are related respectively to the evaluation of meaning and form of linguistic items. According to Barcroft (2002: 324), semantic elaboration “can lead to greater recall and recognition of items than does structural elaboration”. Mapping form and meaning through motivation leads to a semantic elaboration that should be capable of fostering deep processing, i.e., to stimulate the learner’s mental operations of memorization at a deeper level, thus facilitating learning. The activation of this level of depth is studied, for example, in the theory of *dual coding* (cf. Clark and Paivio 1991), according to which a structuring of the input that stimulates a figurative representation of its semantic content is helpful in facilitating recall and therefore retention. In other words, inducing a reflection on the motivation of a connection between form and meaning could favor learning, bringing learners to process information at a ‘deeper’ level, thus increasing the possibility that the information remains imprinted in long-term memory and facilitating its acquisition. It is clear that the deep encoding that favors memorization pertains in fact to the semantic level more than to the more strictly syntactic one. Although dual coding theory and many other studies on the role of linguistic motivation have been concerned mainly with vocabulary and semantics, I believe that marked iconicity of MC word order would fit well to be applied to this strand of theory and approaches (cf. Section 2).

Further interesting implications from a pedagogical perspective lie in the nature of the motivations behind a language segment, which may reflect universal conceptualizations or culture-specific ones (cf. Tyler 2012). A deeper metalinguistic understanding of culture-specific motivations can help not only in increasing the learner’s cultural awareness of the sociocultural context in which the target language is

spoken but also in defining teaching strategies to cope with so-called conceptual errors resulting from the transposition (calque) of the L1 conceptual system to the L2 (cf. Danesi and Grieve 2010).

Finally, talking about the benefits of the “positive affect” previously mentioned by Boers and Lindstromberg (2006), it seems that linguistic motivation is able, indirectly, to positively influence also motivation (now considered in psychological terms), making the learning experience more stimulating and encouraging the learner to continue in the longer term the study of the target language. Learners’ appreciation has been suggested by a series of satisfaction surveys administered to learners following linguistically motivated teaching (Boers and Lindstromberg 2006).

I conclude this section by recalling, however, a fundamental instance: while it is true that the strand of studies ascribed to CL agrees in seeing linguistic motivation as an explanatory concept (Radden and Panther 2011), it does not always hold an explanatory value that is easily understood by the learner for learning purposes. According to Boers and Lindstromberg (2006): “sometimes the motivation of meaning is pretty straightforward, but at other times it may be quite abstract and may even come across to learners [as] far-fetched”. Meunier (2008) even underlines how, at times, it may even be the learners who expect a ‘formalistic’ (and therefore, arbitrary) illustration of the rules of grammar of the target language, because they are not used to a conceptually motivated teaching of L2. The motivation to which I appeal in this study, therefore, holds a useful explanatory power for structuring pedagogical interventions aimed at the learners, assuming first of all that, unlike the professional linguist, they hold limited metalinguistic knowledge, even in their L1, and they are not willing to make a considerable cognitive effort because it is seen as unnecessary or beyond their learning habits. For this reason, I believe it is useful to look for the help of linguistic motivation not only in the illustration of less salient grammatical rules or in those considered to be more difficult to acquire but, whenever possible, to start presenting grammar as motivated starting from the most elementary levels of competence, accompanying the learning process in parallel with the learner’s acquisitional sequences. In this way, it is possible to accustom the learner to ‘motivated’ teaching from the beginning of his L2 learning process.

Within formal learning contexts, the introduction and illustration of language segments as motivated would occur predominantly in an explicit manner, during those interventions focused on the linguistic form aimed at stimulating and fostering the learner's language awareness. On some occasions, implicit teaching would not be sufficient to illustrate those linguistic structures based on different conceptual and cultural systems: instructional methodologies in which grammar is taught using an explicit approach, which motivates the conceptual steps that lead the L2 to be constructed differently from one's L1, would therefore have an explanatory power useful to facilitate learning (cf. Ellis and Robinson 2008; Yu and Wang 2018). However, unlike inductive or deductive approaches based on the explicit teaching of individual grammatical rules, in the ACL-inspired approaches what is explicitly illustrated by the language teacher are the conceptual and constructional schemas, each of which holds explanatory power with great grammatical generalizability. As for the iconic principles of MC word order illustrated in Section 3, it could be assumed that a recollection of the conceptual diagrams underlying the principles immediately preceding the production of the target language, during the planning phase, could help the learner to prevent possible word order errors, and therefore bring more tangible benefits from the point of view of appropriateness at the level of language production. In practice, this is facilitated by the fact that a few iconic diagrams dominate several syntactic patterns, and their evocation is therefore cognitively less expensive than the activation of a plurality of arbitrary rules. Their conceptualization could also be easily evoked during the post-production phases of monitoring and repair, particularly in written production. I have also shown that these principles' iconic motivations are universal (e.g., PTS) and language/culture-specific (e.g., GPP). If it is conceivable that the universal ones are easy to understand in the field of L2 learning because they are already part of the cognitive-conceptual system connected to the L1, the application of WO patterns governed by those language/culture-specific ones indicates the need for a repositioning of the conceptual apparatus towards that connected to the L2. If we start from the critical assumption for CL that the target language system is influenced by the cultural environment in which the native speaker is embodied, explicitly teaching these principles would foster the learner's metalinguistic and cultural awareness.

Several are the theoretical studies that have hypothesized a benefit in applying linguistic motivation in L2 teaching and learning; scarcer are the empirical ones, which have, however, generally found positive effects⁶. This type of study, applied to almost exclusively European target languages (mainly English, see Taylor and Huang 2018), has focused primarily on the conceptual teaching of vocabulary (idioms, phrasal verbs, prepositions) and morphemes (aspect and tense). Concerning MC, a pioneer series of works on the subject are collected in the 2011 volume *Rènzhī yǔfǎ yǔ duìwài Hànyǔ jiàoxué lùnjí* 认知语法与对外汉语教学论集 ‘Cognitive Grammar and the teaching of Chinese as L2’ edited by Cui Xiliang. A review of acquisitional studies conducted on MC was more recently presented by Yu and Wang (2018). This study displays the expansion of theoretical studies about the potential of CL applied to MC pedagogy while highlighting the scarcity of empirical studies, primarily focused on categorization, construal, conceptualization, classifiers, figurative language, and specific constructions (see also Shu *et al.* 2019). On the other hand, studies on syntactic iconicity with clear implications for acquisition and learning are still scarce, although this is a line of research with great pedagogical potential. In addition to the work of Loar (2011) and the taxonomy of Jiang (2009), I recall the more recent study of Morbiato (2017), which is the first one to consider Italian-speaking learners and the different conceptualizations in the process of meaning construction and discourse organization between English, Italian, and MC.

To the best of our knowledge, empirical studies on the effects of an instruction motivated through word order iconic principles are still non-existent, if we exclude a quasi-experimental attempt by Tucci (2021), a cross-sectional investigation based on Italian language learners. In the study, an experimental group instructed on the role of PTS in the motivation of the preverbal and postverbal placement of the locative phrase ‘*zài* 在 + NP’, outperformed in a post-treatment written test a control group instructed following the leading textbooks used in Italian Secondary Schools.

⁶ For a comprehensive and up-to-date review of studies inspired by CL, see Liu and Tsai (2021).

4. Conclusion

This paper sought to present the pedagogical potential of the cognitive-functional approach to MC word order by tracing the iconicity of some of its founding principles to the concept of linguistic motivation as understood in ACL. The review presented in Section 2 suggested that the motivations evoked by the principles are capable of holding a high explanatory power, so that their application in language pedagogy could replace the memorization of arbitrary rules, or at least could accompany their illustration. In the words of Loar (2011: xviii), “rules are easier to apply if one knows about the general principles upon which they are based”.

The power of these principles in language pedagogy is thus primarily based on the fact that they are easy to understand and remember (Morbiato 2019) and hold a high explanatory value (Jiang 2009). This conceptual simplicity is essential to overcome one of the critical issues on which several scholars active in the field of ACL have drawn attention (cf. Broccias 2008; Tyler 2012), namely, to what extent it is effective to present motivations subordinated to conceptualizations of high complexity within formal education settings, where for curricular reasons the time to devote to linguistic awareness activities may be limited. In Section 2, it was also suggested how such simplicity could be well combined with visual instruction techniques (e.g., use of diagrams or images) during guided learning.

It is true that without adequate longitudinal studies it is difficult to speculate the benefit that the conceptualizations evoked by the principles can bring to the process of acquisition (understood in its unconscious and long-term aspect) of word order patterns. A preliminary illustration of the aforementioned principles suggested that they hold a different explanatory power based on the word order patterns they can motivate and on the conceptualizations evoked by their iconicity. In the case of conceptualizations where the interface between a syntactic construction and the semantics of the principles reaches such an abstract level that it excessively raises the cognitive load for the learner, an arbitrary and cognitively less demanding presentation would perhaps be more effective in illustrating the language. To answer this question, it is necessary to start conducting targeted experimental research on individual principles applied to specific syntactic constructions.

In conclusion, the present review suggests that the iconic principles pertaining to the Chinese language functional cognitive framework may prove to be a valuable tool in testing the assumptions inherent in ACL, given the commonality between their theoretical underpinnings and the similarity of their areas of application, first among them L2 learning and pedagogy. The strong iconicity of the Chinese language would also make it possible to broaden the scope of ACL analysis to word order, an area still almost entirely unexplored in this theoretical framework.

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