| **RESEARCH ARTICLE**

Features of Mandarin Chinese in Parameters

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| **ABSTRACT**

This paper focuses on the features of Mandarin Chinese in terms of head parameter, V-to-T parameter as well as the order of subject, verb and object. The purpose of this study is to show the performance of Mandarin Chinese in the scope of three major parameters. The study compares manifestations in parameters among multiple languages and examines previous views and related findings to illuminate some areas of the features of Mandarin Chinese. It is concluded that Chinese seems to have a mixed word order with head-final and head-initial properties co-exiting and exerting differences in different syntactic structures. The paper also raises an already heated topic and renders a possible explanation that other than all the parameters in hand, Mandarin deserves a new one to fit into.

| **KEYWORDS**

Mandarin Chinese, head parameter, word order, SVO, SOV.

1. Introduction
Three parameters are employed to observe and test whether features of Mandarin fit into certain essential requirements to be included.

1.1 Head parameter

Head-initial	French	VO - Preposition	C - TP	T(aux.) -V
Head-final	Japanese	OV - Postposition	TP - C	VP - T

In terms of head parameters, world languages can be classified roughly into two categories—head-final and head-initial. Take Japanese, the typical head-final language that takes an object-before-verb and postposition order. While a head-initial language, such as French, goes the other way around. Besides, syntactically, a head-final language is used to put TP before C and VP before T, generating a V-T-C hierarchy. Head-final languages turn out in a reversed tree order.

However, instead of crudely dividing languages into two extremes, it is better to regard head-final and head-initial as two ends of a continuum, where each language is a dot. The more the order of that particular language presents, the closer it is to which end. Under this, languages such as English and German would be in a relatively middle position of the continuum, while Japanese would be placed near the head-final end.

1.2 Order of subject, verb and object
The order of subject, verb and object is actually one particular aspect of the head parameter, but reversely, it is the order of the three components that represent the most whether a language is head-initial or -final. According to The World Atlas of Language Structures (WALS), the order of subject, verb and object is classified into seven (SOV, SVO, VOS, VSO, OSV, OVS, and No dominant

order) and is spread across 1 376 recorded languages. Among them, putting languages without dominant word order aside, those with an order of SOV and SVO constitute by far the largest classes, accounting for 47.5% and 41.1%, respectively.

Order	Illustration	Language	Number
SOV	John cake ate.	Japanese	564
SVO	John ate cake.	English	488
VSO	Ate John cake.	Welsh	95
VOS	Ate cake, John.	Malagasy, Madagascar	25
OVS	Cake ate John.	Mangarrayi, Australia	11
OSV	Cake John ate.	Warao, Venezuela	4

1.3 V-to-T parameter
A V-to-T parameter is a specific head-movement option defining whether a given language has V-to-T or not. French is known for its V-to-T movement, where V generated in its low original position moves higher above T.

1.4 Features of some languages
It is studied that word orders in languages like German, English, French and Japanese are relatively clear, as shown below:

The WALS lists German as a language with two dominant orders of Subject, Object, and Verb, specifically SOV or SVO (Lederer 1969). But it has been studied that German word order, in particular, is verb second (V2) rather than SVO or SOV in main clauses (Meinunger, 2006) and contains a T-to-C movement and XP to Spec C' movement in all main clauses. Generally in terms of head parameter, German is head-final in VP and TP, but head-initial in CP, and it allows for a V-to-T movement.

English is a typical head-initial language. When it comes to the V-to-T parameter, there is no V-to-T movement in English syntactic structure, but it allows affix-hopping a T-to-V lowering operation. The combination between T and C is achieved via T-to-C movement in main-clause interrogatives. Besides, English also generates Wh-XP to Spec C' movement in wh-interrogatives.

French is another canonical head-initial language other than English. Different from English, French has a V-to-T movement.

Under normal circumstances, Japanese is head-final in its word order with OV-Postposition order and V-T-C hierarchical structure deeper inside.

The hot topic of the word order in Mandarin Chinese has been dragged under the spotlight for years. One of the reasons is that the features of Mandarin are a bit more vague compared to that of the languages mentioned above and therefore, it is worth debating.

Inspired by the head parameter, the S-V-O order parameter and the V-to-T parameter, in this paper, I am going to explore how Mandarin Chinese is manifested and interpreted in these aspects.

2. Mandarin Chinese in head parameter
If we put Chinese in the head parameter, the results differ according to different scholars. Based on Tai's (1973) findings, a more comprehensive comparison between word order parameters for head-initial and head-final languages and those of Mandarin shows that 17 or the majority of the 24 features of Mandarin examined are typical of head-final languages.

The discovery of 17 head-final versus 9 head-initial features in Mandarin supports the idea that Mandarin is primarily a head-final or SOV language. In fact, in Dryer's (1992) view, Mandarin is the only supposedly head-initial language that shows OV properties.

Liu (2014) compares 24 head-position related features in Mandarin against some parameters figured in Greenberg's (1966) word order universals. He studies the "bǎ + gěi" structure and finds the juxtaposition of the active voice and the passive voice in Mandarin. It reflects on an emerging split case-marking system where the perfective "bǎ + gěi" structure usually allows for the Nominative-Accusative marking while elsewhere, zero. It is regarded as part of the SVO-to-SOV word-order change suggested by Tai (1973) and Li & Thompson (1974).

He relates to facts found in Hindi, Georgian, and Dyirbal to name the occurrence as "split case-marking" and uses data from Korean, Japanese and Russian to further support the possible reanalysis in the creation of the case-marking system in the "bǎ + gěi" structure, more of a feature of an SOV language. He gains inspiration from Chappell, Ming & Peyraube (2007), who contribute the

perplexing head-ordering typology of Mandarin and other Sinitic languages to their contact with head-final Altaic languages in the North and Tibetan-Burman languages in the South (Li & Thompson 1974, Gao 2008).

3. Mandarin Chinese in S-V-O order parameter

Joseph Greenberg (1966) has deduced a range of 45 linguistic implicational word order universals from identifying and classifying syntactical patterns found in thirty different natural languages across the world. One of his logic is that "if a language has some word order P, then it also has word order(s) Q." Greenberg's universals have been commonly used to explain word-order type and change in languages, many of which have been referred to in the follow-up studies.

In the spirit of Greenberg's (1966) word order universals, as well as McCawley (1970), Bach (1971) and many others, Tai (1973) puts forward that the underlying word order of Mandarin Chinese is SOV, along with which come the following ordering features in Mandarin Chinese in support of his argument: (1) relative clauses before nouns, (2) adjectives before nouns, (3) genitives before governing nouns, (4) adverbials before main verbs, (5) adverbs before adjectives, (6) proper nouns before common nouns, (7) identical order for questions and statements, (8) final particles for yes-no questions, (9) postpositional, (10) standard markers before adjectives in comparative constructions.

Later, an investigation of the features of Mandarin brings Li and Thompson's ideas.

Firstly, they, in their 1974's work, suggest that Mandarin is midway towards an SOV language from the current SVO state, or rather, is back to the SOV order. As elaborated in the following quote:

"If the existence of OV characteristics is regarded as a causative factor in the shift from VO to OV, one may then wonder: what brought about such OV characteristics in Archaic Chinese in the first place? Speculation about their source, based on evidence, is possible. Such speculation would designate pre-Archaic Chinese (before the 12th century B.C.) as an SOV language. This pre-Archaic Chinese had changed into SVO by the Archaic period (3rd to 10th century B.C.).

However, before the SOV stage could fully mature, i.e., before all SOV characteristics had been supplanted by VO characteristics, the language embarked upon another pathway to shift back to SOV." (Li & Thompson, 1974, p. 208)

And they argue that the SVO to SOV drift has been in slow motion, going on for some two millennia until it gets to the present state. Modern Chinese, in their view, is regarded as having a word order of S + PP + V, where PP contains both a preposition and an NP. They note that Modern Mandarin Chinese still allows for instances of S + V + PP in cases of monosyllabacity or the "lack of complex morphological structure of the verb" (Li & Thompson, 1974: 202), which is summarized from some author-generated examples. But, they believe that these structures only occur under particular constraints and pay homage to the dominant monosyllabic verb forms of Archaic Chinese, a vestige of Proto-Sino-Tibetan (Li & Thompson, 1974: 202). They also suggest that this change from SVO to SOV that Mandarin is now undergoing turns out to be a representation of the grammaticalization of some verb constructions.

Besides, Li & Thompson (1975) denote that the SOV order characteristically codes definite objects, while SVO codes indefinite objects. It is to be proven by bǎ-constructions like "S + bǎ + Direct Object + Verb", where the use of "bǎ" implies a definiteness to the direct object.

A complete version of their hypotheses regarding Mandarin's word order and its functional distribution are as follows:

"TENDENCY A: Nouns preceding the verb tend to be definite, while those following the verb tend to be indefinite (Li & Thompson 1975:170). This is subject to the following refinements:

Refinement 1: The noun in postverbal position will be interpreted as indefinite unless it is morphologically, inherently, or non-anaphorically definite.

Refinement 2: A sentence-initial noun must be interpreted as definite; it may not be interpreted as indefinite even if preceded by the numeral "yī".

Refinement 3: The noun following "bèi" (the agent-marker in the passive construction), although preverbal, is immune to TENDENCY A.

Refinement 4: Nouns in prepositional phrases are immune to TENDENCY A.

TENDENCY B: Mandarin is currently undergoing an order change from SVO to SOV" (Li & Thompson 1975:185).

The WALS simply groups Mandarin Chinese in the word order of SVO, and it can be referred to Li and Thompson's *Mandarin Chinese: a Functional Reference Grammar* (1981: 26). But their full and accurate proposal is that "Chinese is in the middle of a transition from SVO to SOV", for the following reasons: firstly, Archaic Chinese has word order like S+V+PP, while Modern Chinese, S+PP+V. Secondly, the emergence of the bǎ-construction in the late Tang Dynasty. Thirdly, the appearance of the bèi-construction. Fourthly, the occurrence of compounds, post-positions and verbal suffixes, all of which are characteristics of SOV languages. Finally, the general shift of verb-object constructions to preposition-object-verb constructions.

The table below shows a few features of Mandarin Chinese when regarded as an SVO language or an SOV one.

Table 1: Word order in Mandarin (Li & Thompson 1981:24)

SVO	SOV
VO sentences occur prepositions exist Aux <V SVO complex sentences	OV sentences occur PP <V except for time/place postpositions exist relative clauses <N genitive phrases <N V <aspect markers certain adverbials <V

Examples (1)-(8) are from Li & Thompson (1981: 23-26).

Mandarin … has many SVO features as well as many SOV features. (Li & Thompson 1981:26)
(1) a.我喜欢张三 (SVO)
   b.张三把他骂了 (SOV)
(2) 他在厨房里炒饭 ([P-NP-P] <V)
(3) 他能说中国话 (Aux <V)
(4) 我听说你买了他的书店 (SVO complex sentence)
(5) 会讲国语的那个小孩是我的儿子 (relative/genitive <N)
(6) a. the book that the student bought (English: SVO, N <Rel)
   b. 学生が買った本 (Japanese: SOV, Rel <N)
(7) 我去过台北 (V <Asp)
(8) 你慢慢地吃 (Adv <V)

These assertions have triggered heated debates and have won Li and Thompson a lot of supporters. Those who support the drift theory also believe in the order of Mandarin Chinese: (1) The V + PP pattern in Archaic Chinese has been replaced by PP + V, (2) The frequently used bǎ-structure employs an SOV order, (3) Passive voice has the S + bèi/gěi (+ Agent) + V structure, (4) Postpositions occur, (5) Compound nouns, compound verbs, and verbal suffixes have become exceedingly common, which is a tendency towards agglutination, characteristic of SOV languages.

However, in terms of aspect-marking and adposition, Mandarin shows properties that belong to both "pre-" and "post-" groups. Mandarin has both the pre-verbal progressive aspect marker "zài" and the post-verbal suffixal aspect markers "le, guò, zhe" for perfective, experiential, and durative, respectively. A similar phenomenon occurs in prepositions and postpositions (Gao 2008).

Specifically, when turning to the "bǎ + gěi" structure, Liu (2014) holds that it starts as a slip of the tongue but is gradually acquired by the new generation.

However, there are doubters. A notable dissent is conveyed by Light in 1979. Light (1979) argues that OV is a marked, emphatic, contrastive construction in Mandarin discourse.

Nonetheless, either the famous Li and Thompson or those who have followed them with either identification or denial base their studies on isolated, out-of-context examples, most often coming up by scholars themselves. Therefore, Chao-Fen Sun and Talmy Givón (1985) conducted their experiment on the original genuine texts with a quantitative discourse analysis of both written and spoken Mandarin Chinese.

They find that 90% of all syntactic objects occur after the head verb, which directly contradicts Li and Thompson's suppositions. The claim that word order in Mandarin Chinese is shifting from an SVO language to an SOV language due to the grammaticalization of serial verb constructions (Li & Thompson, 1974) is not supported by such data, either. On the other hand, they intend to demonstrate that "Mandarin is a rather typical SVO language, and that OV is a contrastive/emphatic device with rather restricted text distribution", which serves as a support for Light's (1979) proposal.

Their study is concluded with details. When it comes to the order type of Mandarin, they believe it is as rigid a VO language as, say, English or Biblical Hebrew. In both spoken and written forms, the VO order is predominant for both definite and indefinite objects, while the application of OV is essentially nonexistent in referential indefinite objects, which may account for Li & Thompson's intuition to some degree. Despite the fact that they lack flawless evidence for the emphatic/contrastive function of the OV order as a discourse device, the direction of support for Light's (1979) suggestions is clear-cut.

As for the word order change in Mandarin Chinese, Li and Thompson's Tendency B is not revealed in either their study of the synchronic distribution of VO and OV in both written and spoken texts or the functional distribution of the OV construction in Mandarin, both with and without the OM.

Additionally, they present a study done by Erbaugh (1982), where she studies the acquisition of Mandarin by native speakers in Taiwan. She notes that young children up to and beyond the age of 5 find the OM construction and the OV word order hard to manipulate, and their output frequency is much lower than in the adult language.

Tennison (2022) also turns to Greenberg's (1966) set of linguistic universals to determine how closely Mandarin Chinese's word order matches these "universals". In her opinion, it seems that the underlying structure of Chinese is that of SVO, but there is definitive evidence of SOV characteristics, such as modifiers preceding their heads.

4. Mandarin Chinese in V-to-T parameter

The Rich Agreement Hypothesis, which contends that the V-to-T movement is triggered by rich subject agreement on finite verbs, has received a lot of attention in the literature. Also, cross-linguistic reports have shown a relationship between rich verbal agreement and null subjects. (Taraldsen 1978, Rizzi 1986). However, counter-examples exist as discourse null subject languages like Japanese and Korean manifest the absence of rich agreement. On the other hand, they freely allow null subjects as long as their references are interpretable from the context.

With this, it is well known that Mandarin Chinese is produced without overt subject-verb agreement. However, since Mandarin can sometimes stand without a rigid subject position, the Rich Agreement Hypothesis is crushed again in this regard.

Now that Mandarin fails the requirement of V-to-T movement under the subject agreement, it is worth trying to compare it with the prototypical language with V-to-T movement, i.e. French.

The possible tree of French displaying the V sitting quite low moving up to the position of T is shown below:
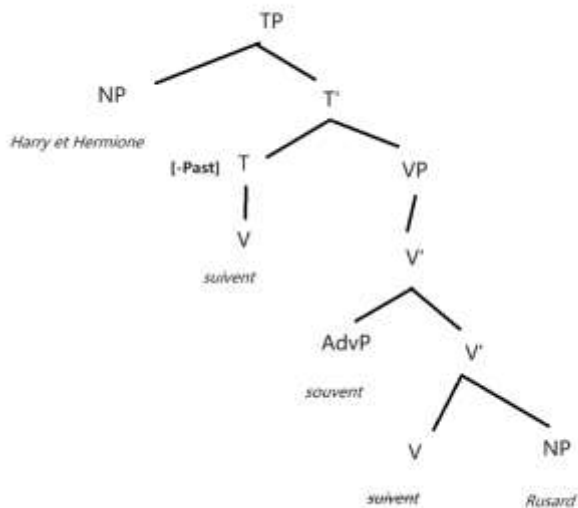
If I am to draw a similar tree for Mandarin Chinese, the result might go like this:

As we can probably tell, Mandarin Chinese does not allow a V-to-T movement but affix-hopping.

5. Discussion
Piled as ideas and documents are, I regard Mandarin Chinese as not so much a language in its word order transition as one with rather mixed features of order in head parameter and S-V-O order parameter.

Huang (1994) shows that Chinese is a language with disharmonic word order, rather than consistently head-initial or head-final across all categories: it selects the head-final value for all its phrase structures. The exception occurs with the complement rule. When the head is verbal in nature, the head-initial value is selected.

The trees below indicate the head parameter in Chinese:
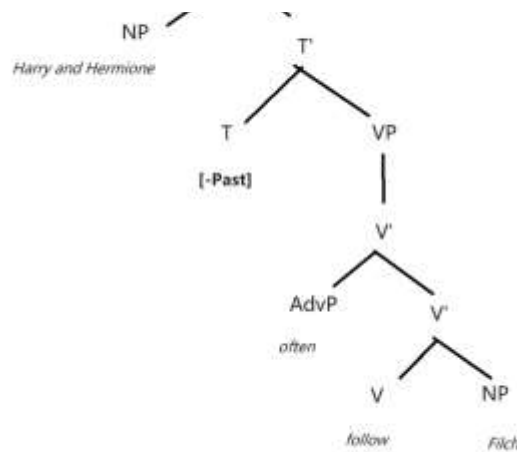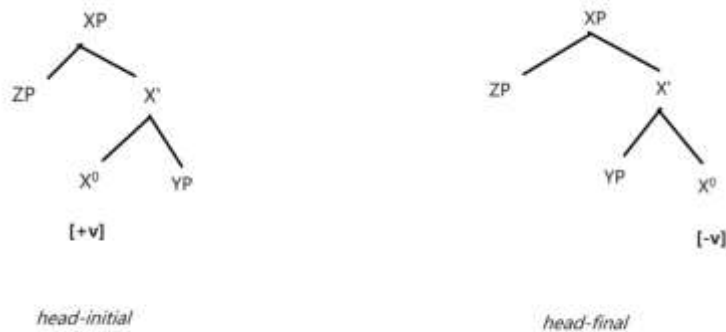
In the final part of Tennison's (2022) paper, she denotes that "Chinese is not easily explained in terms like Subject and Object." It echoes the view by Li and Thompson (1981: 19) that regarding Mandarin as a topic-prominent rather than a subject-prominent language seems to be sensible. They explain that it is the topic-comment relation, as opposed to the subject-predicate one, that provides a more insightful description of the fundamental structure of Chinese sentences. Thus, Chinese seems to have an SVO word order predominance, but it is likely that it simply does not fit into the established word order universals. So she proposes that a new word order typography should be developed for "topic-comment languages" like Mandarin, as well as Japanese, Lakota, and Turkish, in order to understand the syntactical structure of the language.

6. Conclusion
Features of Mandarin Chinese have long been discussed, and those underpinned by the parameters of the head, V-to-T, as well as the order of subject, verb and object, are more of a hot topic. This study aimed to present how Mandarin Chinese behaves from the perspective of the three parameters. With views and related findings collected, I might as well conclude briefly that Mandarin Chinese has V-to-T movement, and it is mixed in the head parameter. Besides, Mandarin is allegedly in the middle of SVO to SOV word order, but whatever the sequence, it entails features of both VO and OV in different structures under various scopes. Though

the study lacks an interpretation with features of the three major parameters combined, it explores Mandarin Chinese in the scope of parameters, which gives enlightenment both in Mandarin itself and in language comparison. More future research is expected to keep on the understanding of Mandarin Chinese with a richer corpus and hopefully dip into establishing a brand new parameter for Mandarin Chinese.

Conflicts of Interest: The authors declare no conflict of interest.
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