INTERACTION AND EXPLANATION:

# THE CASE OF VARIATION IN CHINESE VO CONSTRUCTION* 

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## ABSTRACT

Incorporating the concepts of competing changes (Wang 1969), modularity (Huang 1984, 1988), and grammatical interaction (Hsieh 1992a), this paper attempts another support for the claim that variation in structure is often the result of interaction between competing grammatical forces in history, and that competition may occur across modules (Hsich 1989. Her 1994). We establish explicitly a typology of VO sequences in Mandarin Chinese: 1) word, 2) idiomatic phrase, 3) dual status-*word and phrase. and 4) regular phrase, and interpret this variation of VO construction as the consequence of the interaction between two conflicting forces: lexicalization and ionization, of two distinct grammatical modules, lexicon and syntax, respectively.

## 0. BACKGROUND

A common approach in the scientific study of an elaborate intricate natural system is modularization, where the subject is factored into modular components to facilitate the separate study of individual components. Within this modular approach. the study of language has traditionally been factored into various largely autonomous components. such as phonology, morphology, syntax, semantics. etc. Although modularization diminishes interaction across components and optimizes interaction within components, in an integral system such as language. interaction across modules is necessary to provide a comprehensive account (c.g.. Du Bois 1985, Her 1991a, Newmeyer 1991a, Sadock 1991), or, as Newmeyer (1991b:104) plainly states: '...a modular approach to language is one in which the autonomous systems, each governed by a simple set of elegant principles. interact to yield the observed complexity of language'.

Within the thesis of grammatical interaction put forth in Hsich (1989, 1992a. 1992b) and Her (1992. 1993. 1994). synchronic structural variations are
considered the results of interaction between forces across modules. This view incorporates the two essential concepts, lexical diffusion and competing changes, of Wang's 'lexical diffusion hypothesis' (Wang 1969, Chen and Wang 1975) and further extends its applicability from diachronic phonology to virtually all areas of grammar. The lexical diffusion hypothesis maintains that a sound change, though phonetically abrupt, affects the applicable items in the lexicon in a gradual manner. Essentially, it recognizes that a sound change must take an extended period of time to complete; thus, before it reaches all the applicable lexical items, there may exist another concurrent sound change that competes for all or part of the same range of applicable lexical items in the language. Competing changes therefore may result in residue, or variation. The lexical diffusion hypothesis thus introduces two significant factors in linguistic changes:

1) the temporal duration of the course of a change and 2) the possible interference of other changes. Linguistic changes are thus only regular by default, and irregularity may occur when during the course of a change there is another change competing for all or part of the same domain of application.

Extending this concept of rule competition to the study of syntactic changes as well as variations of a synchronic grammatical construction, Hsieh (1989, 1992a, 1992b) derives a thesis of rule interaction, which holds that at any point in time, given a syntactic construction, grammatical rules applicable to this particular construction are engaged in a constant interaction of some sort. Variation or irregularity is viewed as the normal and natural consequence of such interaction. Thus. within such a view, the conventional distinction between irregularity in historical changes and variations in synchronic constructions is rendered superfluous.

In this paper, we assume the modularity of syntax and lexicon (Huang 1984, 1988) and offer an interactionist account of the variation of Mandarin VO construction and interpret this variation as the consequence of the interaction between the conflicting forces, Iexicalization and ionization, of lexicon and syntax respectively.

## 1. TYPOLOGY OF VO SEQUENCES

Chinese linguists have long recognized the ambiguous status of certain verb-object (VO) sequences, e.g., danl-xinl (carry-heart) 'be concerned' and observed that many of them exhibit both lexical as well as phrasal characteristics in different syntactic environments, as the examples in 1 and 2 seem to indicate respectively.

1. Ni3 danlxinl tal de bing4.
you worry he POSS illness
You worry about his illness.
2. Ni3 danl she 2 me xinl ne?
you carry what heart PTCL
What are you concerned about?

However, there is little agreement as to whether a certain [verb + object] structure should be considered morphological within a word or syntactic in a phrase. On the other hand, there has not been any attempt to account for the occurrence of this variation. Logically, there could exist three types of VO sequences that merit to be specified in the lexicon: 1) those that behave only as words, 2) those that behave only as idiom phrases, and 3) those that behave as words and phrases depending on the environments. Clearly, in terms of phrases, in the lexicon we are only concerned with idiom phrases whose meaning is not predictable from the compositional meaning of [verb + object] and hence has to be lexically encoded (Sciullo and Williams 1987). Therefore, as shown in Table 1. there is a fourth type: the regular [verb-object] syntactic phrases that have no place in the lexicon and are completely governed by syntactic rules. The typology of VO sequences can be shown as follows:

## Table 1. Typology of VO Sequences

Word Idiom Phrase Type
In determining the lexical and phrasal status of a VO sequence, we will
the modularity of syntax and lexicon embodied in the 'lexical integrity
esis' (LIH), stated in Huang ( $1984: 60$ ):

## The Lexical Integrity Hypothesis

No phrase-level rule may affect a proper subpart of a word.

This modularity hypothesis rectifics the lack of theoretical constraints in the traditional treatments of VO compounds; a VO compound can now be explicitly defined as a Icxical unit whose inner structure, though historically traceable to be [ $\mathrm{V}+\mathrm{O}$ ], is inaccessible to synchronic phrase-level rules (Her 1994).

### 1.1 VO Sequences as Words Only

We indeed observe certain VO sequences whose historically traceable [VO] structure is consistently concealed to all syntactic rules, in that no linguistic elements may have access to the composing elements and thus affect their lexical integrity. As shown in Her (1991a, 1994), genuine VO compounds can still be further classified into three subtypes in terms of their transitivity: 1) intransitive, 2) transitive, and 3) semi-transitive ${ }^{1}$. In Table 2 below are some examples of VO compounds that function only as words.

## Table 2. VO Compounds that Function Only as Words

1) Intransitive:

| de2yi4 | (gain sentiment) | be proud |
| :--- | :--- | :--- |
| chuan $2 \operatorname{shen} 2$ | (convey spirit) | be animated |
| wang 4 wo3 | (forget me) | be totally absorbed |

2) Transitive:

| guanlxinl | (shut heart) | be concerned about |
| :--- | :--- | :--- |
| cong2shi4 | (follow matter) | be engaged in |
| liu2yi4 | (keep mind) | pay attention to |

3) Semi-transitive:
zai4hang2 (at profession) be good at
na2shou3 (take hand)
wentjinl (ask ferry)
be good at show interest in

Aside from the fact that here the V and O cannot be separated, several other pieces of more specific syntactic evidence are available to dismiss their phrasal status. First, if verb-copying is possible (cf., Chang 1991), the second occurrence of the verb has to be the entire VO verb, never just the $V$ part. Similarly, the answer to a yes-no question and the V-not-VO or VO-not-VO question, if allowed. cannot be simply the V and must be the entire VO word, as in 3-5, whereas in a phrasal construction, such as $6, \mathrm{~V}$ alone is sufficient as the answer.

```
3.q: Tal de mioa3shu4 chuan2- bu4-chuan2shen2?
he POSS description CHUAN2 not animated
Is his description animated?
a: (Bu4) chuan2*(shen2).
4.q: Tal guanlxinl ni3 mal? he concerned you PTCL Is he concerned about you?
a: (Bu4) guan I* (xinl).
```

5.q: Yinglwen2, tal zai4-bu4-zai4hang2?

English he ZAI not good-at
Is he good at English?
a: (Bu4) zai4* (hang2).
6.q: tal jiaol-but-jiaol yinglwen2?
he teach not teach English
Does he teach English?
a: (Bu4) jiaol (ying1wen2).

Furthermore. a non-echo wh-question cannot be formed with she $2 m e$ 'what' in the place of the $O$ in VO compound verbs, again unlike phrasal VO sequences. Compare the VO compound verbs in 7-9 with the VO phrase in 10 below.

$$
\begin{aligned}
& \text { 7. *Tal de huat chuan2-shen } 2 \text { me? } \\
& \text { he POSS painting convey what } \\
& \text { 8. *Tal guanl-she2me ni3? } \\
& \text { he shut what you } \\
& \text { 9. *Yinglwen2, tal zai4-she2me? } \\
& \text { English he at what } \\
& \text { 10. Tal jiaol she2me? } \\
& \text { he teach what } \\
& \text { What does he teach? }
\end{aligned}
$$

Thus, what we consider Type 1 VO compounds include, but are not limited to, what Chao (1968:426) calls 'solid VO compounds' and what Huang (1984:71) considers the first type, both of which are unnecessarily over-restricted, when Huang's LIH is taken seriously. What Chao calls 'solid VO compounds' allow only the VO-not-VO question form, and thus omits genuine VO compound verbs that allow the V -not-VO form. We nonetheless contend that the V -not-VO form, an instance of the more general $\mathrm{A}-$ not-AB form of question, is by no means a syntactic process, whether we assume the solution of phonological reduplication in Huang (1984:75, 1988) or the morphological analysis of Dai's (1990, 1991), since both accounts prescrve the lexical integrity of Type 1 VO verbs in the V-not-VO construction. Even in the syntactic solution in Categorial Grammar proposed in Sheu (1991), albeit lexical integrity is violated (James Huang p.c.), true VO compounds still enter the syntactic component of the grammar as words but never as phrases. In other words, in all these previous accounts of the A-notAB question form, genuine VO verbs, i.c., VO sequences of our Type 1, are words only, not phrases, in the lexicon.

Huang (1984:71), on the other hand, seems to take both inseparability and transitivity as necessary conditions for a VO sequence to have the status of a word, thus our Type 1 here. Furthermore, due to his Phrase Structure Constraint (PSC) that a Chinese verb may not be followed by more than one constituent (Huang 1982:41). transitivity alone is a sufficient condition; hence the implication that the intransitive VO verbs we have listed in Type 1, e.g., de2yi4 'be proud' and chuan2shen2 'be animated', should still be considered phrases. This implication is counter-productive. First of all, it misses the lexical characteristics of these intransitive verbs, and secondly, treating them as words does not in any way violate PSC. Take chuan2shen2 'be animated' in 3 above as an example: the syntactic test indicates clearly that, unlike a $\mathrm{V}-\mathrm{O}$ phrase (idiomatic or not), the answer to a V-not-VO question here cannot be V only. Likewise, de 2 cannot be the answer to $d e 2-h u t-d e 2 y i f$ 'proud or not'. Since there is never more than one constituent allowed following these verbs, PSC is never violated. Lexical integrity of these lexical items is also preserved, since no syntactic rules may affect the internal structure either.

### 1.2 VO Sequences as (Idiom) Phrases Only

The second type of VO sequences always function as phrases, never as words. Again. the only VO phrases that need to be specified in the lexicon are idiom phrases. Unlike Type 1 VO sequences whose [VO] structure is word-
internal and entirely inaccessible in syntax. the structure [V-O] of Type 2 idiom phrases is in itself assigned through, and thus accessible to, syntactic rules ${ }^{2}$. Consequently, according to the LIH, they cannot be words. A host of VO sequences in Mandarin fit this description; examples are shown in Table 3 below ${ }^{3}$.

Table 3. VO Sequences that Function Only as Phrases

| chil..dou4fu3 (eat..tofu) | tease (flirtatiously) |  |
| :--- | :--- | :--- |
| chil.ruan3 fan4 | (eat..soft rice) | (man) live off a woman |
| chil..cu4 | (eat..vinegar) | be jealous |
| shengl..qit | (generate..air) | be angry |
| qiao-..bian4zi | (stick-up..pigtail) | die |
| kail..daol | (open..knife) | operate (surgically) |
| kail..wan2xiao4 | (open..joke) | joke |
| tai2..gang4 | (carry...lever) | argue |

Obviously, if the [V-O] structure is syntactically transparent, additional phrasal elements. such as aspect markers. possessive NPs. and various adjunctive modifiers, can intervene between the V and O . as shown in 11-14.
11. Tal si3huanl chil nent doffu3. he like eat tender tofu He likes to tease the young ones.
12. Tal hai2zai4 sheng1 zhe qi4. he still generate PROG air He is still being angry.

## 13. Tal dei3 kail ji3 ci4 daol?

he must open how-many time knife How many times must he operate?
14. Tal kail ni3 de wan2xiao4. he open you POSS joke He is joking with you.

In addition, verb-copying, yes-no question, and $\mathrm{V}(\mathrm{O})$-not-VO question again serve as tests. When a Type 2 VO sequence appears in the verb-copying construction, the second occurrence of the verb has to be the single V , never the entire VO. The answer to a yes-no question or and a $V(O)$-not-VO question may simply be the V by itself, or the entire VO phrase. Furthermore, due to their idiomatic nature, most of the Type 2 VO sequences, e.g., 11, may be ambiguous in that they have both a predictable literal compositional reading not specified in the lexicon as well as the conventionalized idiomatic reading. Again, only the idiomatic meaning together with the particular syntactic environments where such meaning is possible need to be specified in the lexicon. This is precisely the reason why when a non-echo wh-question is formed with she 2 me replacing the O , the idiomatic reading disappears. Lastly. precisely as noted in Huang (1984:73), in many previous discussions on 'VO compound' verbs. e.g., Chao (1968) and Li and Thompson (1981). (Type 2) VO idiom phrases are confused with (Type 1) VO compounds (i.e., words).

### 1.3 VO Sequences of Dual Status

Since Type 2 VO sequences do not exhibit any lexical characteristic, except that their meaning has to be lexically encoded, there is no justification whatsoever to consider them also as words. We do find, however, certain VO sequences that are of dual status and function both as words and idiom phrases. Instances of Type 3 VO sequences are relatively few, especially in comparison to Type 2: Table + gives some examples.

Table 4. VO Sequences of Dual Status

| fang1-xin1 | (put down heart) | rest assured |
| :--- | :--- | :--- |
| dan1-xin1 | (carry heart) | be concerned about |
| fu4-ze2 | (bear duty) | be responsible |
| bang1-mang2 | (help business) | help |
| youl-mo4 | (humor) | joke |

A word of strong caution first. by 'dual status' we do not mean that a VO sequence could be both lexical and phrasal simultaneously in a given context. Rather, a Type 3 VO sequence may act exactly like a word in a certain environment. and yet behave like a phrase elsewhere. To illustrate, when a VO sequence of Type 3 is followed by another NP it functions as a single transitive
verb whose internal [VO] structure is irrelevant to the structure of the sentence, as shown in the following tree.

```
15a. Ni3 danlxinl tal.
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you concerned-about he
You are concerned about him.


The only alternative is to argue that danl and xinl are two separate categories. each accessible to syntactic rules, and therefore 15 would have the following constituent structure.

15b.


Huang (1984) rejects this analysis, according to his Phrase Structure Constraint (PSC) that in Chinese a verb may not be followed by more than one constituent. However, other evidence is also available. This constituent structure of 15 b has to suggest that dan/ is ditransitive, similar to other ditransitive verbs such as gei 3 'give' and qiang3 'rob'. with two subcategorized NPs, i.e., direct object and indirect object. Nevertheless, the fact that danl and xinl can not be separated in this particular usage rules out this possibility.
16. *Ni3 danl le xinl tal.
you carry PERF heart he
You have been concerned about him.

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17. Ni3 gei3 le tal qian2.
    you give PERF he money
    You gave him money.
18. Ni3 qiang3 le tal qian2.
    you rob LE he money
    You robbed him of his money.
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Other syntactic tests, e.g., the V-not-VO question form (19) and yes-no question form (20), among others such as verb-copying, also show that transitive dan lxinl behaves as a word whose internal [VO] structure is invisible in syntax.

$$
\begin{aligned}
& \text { 19.q: Ni3 danl-bu4-danlxinl tal? } \\
& \text { you DAN not concerned-about he } \\
& \text { Are you concerned about him? } \\
& \text { a: }(\mathrm{Bu} 4) \text { dan l* }(x i n 1) \text {. }
\end{aligned}
$$

20.q: Ni3 danlxinl tal mal?

you concerned he PTCL

Are you concerned about him?
a: $(B u 4)$ dan $l^{*}(\sin 1)$.

Having established that dan $\langle x i n l$ as a transitive and inseparable [VO]v sequence is a genuine compound. thus a word, we also observe that elsewhere danl..xinl behaves like an idiom phrase. for the two parts may easily be separated, as shown in 21-24, and thus are subject to various syntactic operations.

> 21. Tal danl le ban4tian1 xin1.
> he carry PERF half-day heart
> He was concerned for quite a while.
22. Ni3 she2me sinl ye3 bie2 danl.
you what heart also don't carry
You don't have to be concerned at all.
23. Zheit zhong3 xinl ni3 bie2 dan1.
this kind heart you don't carry
Don't you be concerned about such a thing.

## 24. Tal danl shei2 de xin1?

he carry who POSS heart
Who is he concerned about?

To summarize, while Type 3 VO sequences are of dual status in that they function as words when followed by another NP and as phrases elsewhere, Type 1 sequences are always words and Type 2 sequences function only as idiom phrases.

## 2. INTERACTION BETWEEN STRUCTURE AND LEXICON

In this section we will examine the indispensable role of lexicalization in the rise of VO compounds and the secondary, nonetheless indispensable, role of ionization in the emergence of VO idiom phrases. Within the view that lexicalization and ionization are competing forces of the two respective distinct modules of Icxicon and syntax, we find an interpretation for the variations of VO sequences within the thesis of interaction.

### 2.1 Lexicalization and Ionization

Chinese linguists have long recognized various types of existing compounds in Chinese as the results of the lexicalization of earlier phrases, in part due to the disyllabification tendency and the increase of polysyllabic words in the language (c.g.. Li and Thompson 1981:68). In fact, as Huang (1984:71) aptly points out, the emergence of new lexical items through the process of lexicalization is common in all languages. The Chinese VO compounds are so called preciscly because their internal [VO] structure, though inaccessible to synchronic syntactic rules, was an external structure of [verb-object ]vp transparent in syntax historically.

Therefore. as mentioned earlier, the idiomatic expressions whose [verbobject $_{\text {vp }}$ structure is externally assigned in syntax, i.e. Type 2 VO sequences, should not be taken as compounds. More specifically, syntactically idiom phrases have not completed the process of lexicalization, although their semantic structure has been lexicalized and thus merits lexical encoding. Given this understanding, the number of VO compounds should be far smaller than previously conceived. Often. the original [ $\mathrm{V}-\mathrm{O}$ ] phrase, after lexicalization, loses its phrasal status. the result of which is a Type 1 compound. However, it is entirely conceivable that, while lexicalization produces a new VO compound, the original [ $\mathrm{V}-\mathrm{O}]_{\mathrm{vp}}$ phrase retains its phrasal status in the language, as evidenced by the Type 3 VO sequences like dan $/$-xin 1 . which functions both as a word and an
idiom phrase. Figure 1 below depicts, rather simplistically no doubt, the two stages of this historical process.

| Stage | Idiom Phrase | Process | Verb | Type |
| :---: | :---: | :---: | :---: | :---: |
| 1 | [de2] $\ldots . .[y i 4]_{n}$ | LXL --> | [de2yi4]v |  |
|  | [chil] ${ }_{\text {v. }}[\text { cu } 4]_{\text {n }}$ |  | $\varnothing$ |  |
|  | [dan1] ${ }_{\text {v. }}[\text { [xinl }]_{\text {n }}$ | LXL --> | [danlxinl], |  |
| 2 | $\varnothing$ |  | [de2yi4]v | 1 |
|  | [chil] $]_{\text {r. }}\left[\right.$ cu4] ${ }_{\text {n }}$ |  | $\varnothing$ | 2 |
|  | [dan1] ${ }_{\text {[ }}$ [xin1] ${ }_{\text {n }}$ |  | [danlxinl], | 3 |

Fig. 1. Historical process of lexicalization

However, lexicalization cannot account for the current state of what we will call 'pseudo-VO compounds', e.g., youlmof 'tease', and 'pseudo-VO idioms', e.g., xiao3..biant 'pee' and you 1..yil mot 'tease..a bit'. Historically, a pseudo-VO compound is not a lexicalized $\mathrm{V}-\mathrm{O}$ phrase, and yet synchronically it must have a corresponding pseudo-VO idiom phrase. A pseudo-VO idiom phrase, unlike genuine V-O phrases, attains its V-O structure only in the strict syntactic context where the idiomatic meaning is possible; in other words, its composing verb and noun may not function as such elsewhere. Although these are relatively rare, their sheer existence has interesting implications.

You Imof was originally a loan word in Chinese from English humor. Although originally a noun, it now also functions as a verb, intransitively (25) and transitively (26) ${ }^{4}$, and in a strictly constrained syntactic environment youl and mo + appear to function as a $[\mathrm{V}-\mathrm{O}]$ idiom phrase (27).
25.q: Tal youl-bu4-you1mo4?
he YOU not humorous
Is he humorous?
a: (But) youl* $(\mathrm{mot})$.
25. Tal chang2 youlmot ni3.
he often tease you
He teases you often.
27. Wo3 youl le tal yil mo4.

I YOU PERF he one MO I teased him a bit.

The fact that youl docs not function as a verb nor mof a noun individually positively identifies the verb you Imof (most likely in its transitive reading) as the source of the by-now VO phrase youl someone yil mot. We will refer to this historical process as 'ionization', a term first used in Chao (1968) in referring to the phenomenon or process where the composing elements of a lexical item. e.g. the two syllables in a VO compound, become separate independent constituents and thus accessible by syntactic rules (cf. Huang 1984:76. Jin 1991). Notice that. like lexicalization, ionization does not necessarily prevent the input base form from retaining its original lexical status; thus, youlmot still functions as a single word. In this sense, its (mis-)perceived VO internal structure is in actuality due to back-formation.

Instances are also found of verbs losing their word status while gaining their VO phrasal status via ionization, for example, xiao3..biant 'pec' and ju2..gongl 'bow'. In the following sentences, 28-29 indicate the phrasal status of the $\mathrm{V}-\mathrm{O}$ sequences by separability, while $30-31$ by the possible answers to the V -not-VO question form.

> 28. Ni3 xiao 3 le san1 cit bian4. you pee PERF three time body-waste You peed three times.
29. Ni 3 ju 2 le san1 ge gongl. you bow PERF three CLS bow You made three bows.
30.q: Ni3 xiao3-but-xiao3 bian 4 ? you XIAO not pee body-waste Do you pec?
a: (But) xiao3 (biant).
31.q: Ni3 ju2-bu4-ju2 gong1?
you JU not bow bow
Do you bow?
a: (Bu4) ju2 (gong1).

However, unlike loan words, the (now defunct) compound verbs xiao3biant and juzgong1, from which ionized phrases came, were themselves words which came from lexicalization. Figure 2 sketches the three stages of the evolution of some of the ionized words in the language.

| Stage | Phrase | Process | Verb | Type |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $[\mathrm{de} 2]_{a} \ldots[\mathrm{yi} 4]_{n}$ <br> [xiao3]_..[bian4], <br> $\varnothing$ | $\begin{aligned} & \text { LXL --> } \\ & \text { LXL --> } \end{aligned}$ | [de2yi4], <br> [xiao3bian4], <br> [youlmo4]v |  |
| 2 | [xiao3] $\left.{ }_{\text {v. . [bian4 }}\right]_{\text {n }}$ [you1] $]_{\text {.. }}\left[\mathrm{mo}^{4}\right]_{\mathrm{n}}$ | $\begin{aligned} & <--\operatorname{INZ} \\ & <-\mathrm{IN} Z \end{aligned}$ | [de2yi4], [xiao3bian4] [youlmo4]v |  |
| 3 | [xiao3] [..[bian4] [you1] $]_{\text {. }}\left[\mathrm{mo}^{4}\right]_{\mathrm{n}}$ |  | [de2yi4]v <br> $\varnothing$ <br> [youlmo4]v | $\begin{aligned} & 1 \\ & 2 \\ & 3 \end{aligned}$ |

Fig. 2. Historical process of ionization

### 2.2 An Interactionist Interpretation

An essential notion of the lexical diffusion hypothesis is that a sound change affects the applicable lexical items in the lexicon one at a time; in other words, it diffuses through the lexicon in a gradual manner (Wang 1969, Chen and Wang 1975). This notion of diffusion may be extended to grammatical changes (e.g., Her 1990b. 1994) as well as dialectal deviations (Hsieh 1992a, Shen 1990). At any given point in time, among the V-O phrases which are candidates for lexicalization, only a portion of them have become words, since the lexicalization process affects them only one at a time. Likewise, same kind of effect is observed with ionization: only a few of the applicable words have been ionized into phrases. Furthermore, the lexical diffusion hypothesis also recognizes the possibility for competing changes and thus the possibility that a change does not run its entire course.

Hsich (1989. 1992a, 1992b), extending Wang's (1969) notions of lexical diffusion and competing changes. puts forth a general scheme of grammatical interaction to account for synchronic variations as well as diachronic
irregularities. He suggests that, assuming a grammar consists of various distinet parallel planes or modules. these modules are constantly interacting with one another, and thus at any point in time given any grammatical pattern, grammatical rules or processes, which may be of the same or different linguistic modules, applicable to this particular pattern are engaged in interaction such as competition or complementation. Variation or irregularity is the consequence of such interaction. Within the study of Chinese linguistics, there has been a number of papers supporting this thesis of interaction, an extended version of the lexical diffusion hypothesis; refer to Her (1993) for an overview and a summary of such works.

Given the modularity hypothesis embodied in Huang's (1984) LIH, syntax and lexicon, being two separate modules in grammar. each has its inherent force to claim its integrity. Ionization thus can be viewed as a force of syntax, which preserves accessible phrasal categories and also disintegrates lexical items into syntactically transparent phrases. Lexicalization, on the other hand, enhances the lexicon by maintaining the integrity of existing words as well as by integrating phrases into syntactically opaque compounds. Within this broader interpretation of ionization and lexicalization where they not only represent the process but also the state, ionization and lexicalization are two opposing counteractive forces. Four consequences may obtain due to the competition between these two forces, as shown in Table 5 below.

Table 5. Interaction of Lexicalization and Jonization

| Ionization | Lexicalization | Consequence |
| :---: | :---: | :--- |
| - | + | Type 1. Word only |
| + | - | Type 2. Phrase only |
| + | + | Type 3. Dual status |
| - | - | Type 4. Obsolete expressions |

A linguistic expression, whether a phrase or a word, that is by now obsolete in the current language is thus taken to be one that serves neither as a phrase nor a word. Words are those whose internal structure, if any, remains inaccessible to syntax and thus unaffected by ionization; they may originate in the lexicon, e.g.. loan words like luozjiz 'logic', or they may be lexicalized compounds such as Type 1 VO compounds. In contrast, those whose structure is
assigned through syntax and thus unaffected by lexicalization are phrases, regular or idiomatic, including Type 2 V-O idiom phrases. And again, either they originate in syntax, e.g., mai3 shul 'buy books' and chil cuf 'be jealous', or they are ionized words such as xiao3..biant 'pee'. Finally, those affected by both lexicalization and ionization are of dual status. They can still have emerged through two entirely different paths: 1) a phrase which retains its phrasal status after lexicalization, e.g., dan I-xin 1 'be concerned', or 2 ) a word which retains its word status after ionization, e.g., youl-mot 'tease's.

The interaction thesis thus provides an interpretation of the variations of VO sequences: words, phrases, and dual status, as the consequence of the interaction between lexicalization, a force of lexicon, and ionization, a force of syntax. However, as we have observed, a great deal more phrases are lexicalized into words compared to words ionized into syntactically transparent phrases; undoubtedly then, lexicalization is a much stronger force than ionization. A plausible interpretation for this is given in Huang (1984:71):

> Ionization involves the increasing of the complexity of a structure, or increasing the depth of embedding in a tree. Lexicalization, on the other hand, has the effect of regularizing a more complex structure into a simpler one: making a simple word out of a phrase.

## 3. CONCLUSION

We have first distinguished a typology of four explicit types of VO sequences, assuming the modularity of syntax and lexicon. and of them there are three types that need to be specified in the lexicon. While they are many VO sequences that function cither as words only (Type 1) or phrases only (Type 2), a relatively few are found to be of dual status (Type 3). Historically, most VO compounds in modern Chinese are indeed originally VO phrases and have undergone lexicalization, but there are also a rare few so-called 'pseudo-VO idioms' recognized as ionized words. We interpret the idiosyncrasies of VO idioms and compounds as consequences of lexical diffusion, and the variation of VO sequences as the consequence of the interaction between ionization and lexicalization, two competing forces of structure and lexicon. In cases where lexicalization, the foree of Iexicon. prevails over the foree of syntax, ionization, compounds, or words in more general terms. obtain; where ionization prevails, phrasal status obtains. Lexical status and phrasal status coexist when the competition between Iexicalization and ionization is unresolved or still on-going.

This constant. dynamic counteraction and balancing between these two forces thus not only accounts for the variation of VO construction in modern Chinese, but also provides a theoretical foundation for Langacker's (1977) claim that the constant changing in language does not appear to decrease nor increase in overall complexity in the long run. The interaction thesis thus predicts that the grammar is naturally in a state of dynamic equilibrium of state (Hsieh 1989, Her 1990b, 1994).

## NOTES

* Earlier versions of this paper were presented at the First International Conference of Chinese Linguistics in Singapore. June 24-6, 1992 (Her 1992), and also at the Linguistic Workshop at National Chengchi University on October 28, 1992, and at the Graduate Institute of Linguistics. National Tsinghua University on December 21, 1992. I would like to thank the several professors for their insightful discussions and suggestions: they are Hsin-I Hsich, Claire Chang, Chin-Fa Lien, and Feng-Fu Taso. However, I alone shall be responsible for any remaining errors or inadequacies.

1. See Her (1991a. 1994) for a comprehensive description of their different bchaviors, an LFG account for such behaviors, and also an interactionist account of the occurrence of this variation in transitivity among VO compounds, where the variation is attributed to the conflicting forces of transitivity and intransitivity along two autonomous dimensions within syntax: the c-(onstituent) structure and the f-(unctional) structure.
2. Huang (1987. 1990). in an LFG account. does not assign the object function, O, to the NP in Type 2 VO sequences. Such a position is problematic; we maintain that, in agreement with the position held by Bresnan (1982:46), Her (1990a, 1991b), and Her et al (1994), syntactically, in terms of both c- and f-structures that is. Type 2 idiom phrases are identical with regular [V-O] phrases and that the difference between them is in semantics. not in f-structure (Her in preparation). Such a position is also implicit in the work on idioms by Wasow et al (1983).
3. In this paper. a VO sequence analyzed only as a word is transcribed continuously, such as guan/xinI 'to be concerned'; a sequence analyzed only as a VO phrase is written as V..O. e.g., kail..daol 'to operate (surgically)'; and a sequence of the dual status has a dash between V and O . e.g., dan 1 -xin 1 'to be worried', an abbreviation of [dan Ixin/ plus dan I..xin I].
4. It is of course via lexicalization that the intransitive state verb youlmo4, meaning 'humorous', and the transitive verb, meaning 'to tease', have come about.
5. Both paths are also followed in English; here we list some examples.
1) kick someone's ass -> kick-ass (adj)
cut someone's throat -> cut-throat (adj)
stick to it -> stick-to-itiveness (n)
who've done it $->$ whodunit ( n )
others such as wannabes, has-beens, might-have-beens
2) smoking or non-smoking $\rightarrow$ smoking or non pro-capital punishment or anti-capital punishment
$\rightarrow$ pro or anti-capital punishment
skin diving or scuba diving
$\rightarrow$ "skin or scuba diving is prohibited" (Santa Cruz Fishermen's Wharf)

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互動與解釋：論漢哣動實結構的變化

## 何燤順

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－本文整合了三個概念：王士元（Wang 1969）的 蝯化 競 爭（competing changes），黄正德（Huang 1984）的模塊（modularity），及謝信一（Hsieh 1992a）的語法互動（grammatical interaction），并以此垚漢語中動實結構的 数化 （variation）做出分析和解釋。我們首先建立并驗證 漢湢中動實結構的幾種可能的形態：一，（復合）詞，二成語詞組，三。雙重語位：單詞及詞組，四•一般詞組 ；接䓊進一步地將這數種形態變化的潑生臨因于詞？（lexicon）與句（syntax）追兩個不同模塊之間的競爭，而詞集勢力的具體表現就是詞集化（lexicalization）的過程，句法勢力的援張則是經由離子化（ionization）的
是各種不同的競爭的或互動的势力之間的互動 關係所造成的結果（Her 1994）•

