Each stem, theme, and derivational process has a specific presuppositional component that figures in the total surface construction in lexical derivation.

This specifically lexical structure is at once generative in its way and yet distinct from morphosyntax. It is not structurally or semantically irregular, as the Saussurean--Bloomfieldian tradition, in which as linguists we still live, would have it. It is regular, but the regularity is of a different order from what we like to see as grammar. In this morphologically complex language, the surface materials of lexical derivation are coextensive with those of morphosyntax, but the processes and their semantics are distinctive to what Sapir would call the "art" and "history" in words.

Notes

[1]The meaning of any word or expression must then be a product of the grammatical and lexical aspects of "meaning." For a congenial development of such a multi-source notion of "meaning," see Putnam's (1975) interesting but linguistically oversimplified account.

[2]Note the parallel transformation, realized in historical time, of Indo-European "impersonal" constructions of cognitive and sense experience, with dative/accusative experiencer, to "personal" constructions, with overt nominative experiencer.

[3]Certain verbs appear to be rank-shifted from antipassive constructions with unmarked hierarchically specified $-[]_4-\underline{1}_5-$ allowing the necessary indirect mediopassivization. These quasi-stems have the form ...-|$\underline{x}$+$\underline{i}$-$\underline{gi}$-√Root-..., where the surviving cross-referencing Absolutive$_3$ codes the semantic 'Agent'.

[4]Compare English babble, Greek βάρβαροι, and similar delocutionaries.

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In Papers from the Parasession on Lexical Semantics CLS (1984)

ed D. Testen, V. Mishra & J. Drogo

Verbs and Times in Chinese: Vendler's Four Categories

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0. Introduction

The semantic structure of Chinese verbs involving the notion of time is still relatively little understood.[1] The purpose of this paper is to identify some essential characteristics of the temporal structure underlying the Chinese verb system with a special reference to the four Vendler categories, and to venture a conjecture regarding a fundamental difference between Chinese and English with regard to the notion of time.

In his study of the time schemata of verbs in English, Vendler (1967) has arrived at four classes of verbs, i.e., activities, accomplishments, achievements, and states. These four classes of verbs have recently been studied in greater detail by Dowty (1979) in the context of lexical decomposition theory and Montague grammar. With several important modifications and improvements on the original Vendler work, Dowty has also correctly observed that Vendler's classification of surface action verbs once and for all as activities or accomplishments is somewhat misguided, since, among other reasons, we must take into consideration the whole predicate and not just the verb to distinguish activities from accomplishments. For instance, when with a goal or an extent expression, an activity verb such as 'to walk' behaves like an accomplishment verb. Or using Vendler's own example, 'to run' is an activity but 'to run a mile' is an accomplishment. Nevertheless, in view of the fact that verb semantics in Chinese pertaining to time has not yet been studied in relation to Vendler's four categories, it serves some purpose to start with the original four Vendler categories.

In this paper, I wish to focus on differences rather than similarities between Chinese and English, and thereby lead to some observations with theoretical imports.

1. The Four Vendler Categories

For purposes of discussion, the time schemata for the four categories of English verbs are given in (1), Vendler's original examples in (2), and some additional examples identified by Dowty in (2)'.

(1) Activities: Continuous tenses with no set terminal point.
Accomplishments: Continuous tenses with set terminal point.
Achievements: Lacking continuous tenses, predicated only for single instants of time.
States: Lacking continuous tenses, predicated for a shorter or longer period of time.

(2)	Activities	Accomplishments	Achievements	States
	run	paint a picture	recognize	know
	walk	draw a circle	find	love
	write	run a mile	lose	have
	drive a car	write a letter	die	desire
(2)'	seek	build	understand	be tall
	listen to	kill	hear	hear
	look for	put	see	see

As can be seen from (1), while activities and accomplishments allow continuous tenses, states and achievements don't. It is on the basis of this difference that Vendler considered the first two categories belonging to one 'genus' and the second pair belonging to another. However, he also noticed that while the notion of time, either periods or instants of time, is unique or definite in accomplishments and achievements, it is somehow not unique or definite in activities and states. Therefore, accomplishments and achievements share some properties which the other pair doesn't have. For example, the former pair can occur with an adverbial such as 'in an hour', the latter can't (as shown in (3) and (4)).

(3) He painted the picture in an hour/He found the answer in an hour.
(4) *He ran in an hour/*He loved Mary in an hour.

2. Activities and Accomplishments in Chinese

Accomplishment verbs in English, when in past or perfect tenses, necessarily imply an attainment of the goal. Their supposed equivalents in Chinese do not contain such an implication as an inherent part of the meaning, even though the implication in question can sometimes emerge from the composite meaning of the whole predicate or the context explicitly or implicitly provided. To insure the attainment of goal, Chinese resorts to resultative verb compounds, of which the first element indicates action, the second the result. For example, 'to study' is an activity verb, but 'to learn' is an accomplishment verb. This can be detected by means of Vendler's tests as shown in

(5) He has studied Chinese for five years.
(6) *He has learned Chinese for five years.
(7) *He has studied Chinese in five years.
(8) He has learned Chinese in five years.
(9) *It took him five years to study Chinese.
(10) It took him five years to learn Chinese.

The fact that 'to learn' but not 'to study' implies the attainment of goal can be further discerned from the contrast between (11) and (12) in grammaticality.[2]

(11) He studied Chinese but he still didn't know it.
(12) *He learned Chinese but he still didn't know it.

It appears that the Chinese equivalent for 'to study' is xue, and that for 'to learn' is xue-hui 'study-know (how to)'. Xue-hui is a resultative verb compound with xue denoting action and hui result, or more specifically, the attainment of goal in this kind of verbs. Thus, the Chinese pair exhibits the same syntactic differences as the English pair. This is illustrated in

(5)' ta xue-le wunian de zhongwen (=5)
(6)' *ta xue-hui-le wunian de zhongwen (=6)
(7)' *ta zai wunian nei xue-le zhongwen (=7)
(8)' ta zai wunian nei xue-hui-le zhongwen (=8)
(9)' *ta hua-le wunian cai xue-le zhongwen (=9)
(10)' ta hua-le wunian cai xue-hui-le zhongwen (=10)
(11)' ta xue-le zhongwen, keshi hai bu hui (=11)
(12)'*ta xue-hui-le zhongwen, keshi hai bu hui (=12)

'To kill' in English is also an accomplishment verb which necessarily implies the death of the recipient of the action. Thus, (13) is ungrammatical.

(13)* I killed John but he didn't die.

Most English-Chinese dictionaries translate 'to kill' as sha or sha-si. The latter has si 'to die' as the resultative complement. For many native speakers, sha alone normally implies the death of the recipient of the action. However, the fact that (14) is grammatical shows that it doesn't necessarily so imply. The ungrammaticality of (15) shows that only the resultative verb compound sha-si can guarantee the attainment of goal.[3]

(14) Zhangsan sha-le Lisi liangci, Lisi dou mei si.
John performed the action of attempting to kill Peter, but Peter didn't die.
(15) *Zhangsan sha-si-le Lisi liangci, Lisi dou mei si.
*John killed Peter twice, but Peter didn't die.

Similarly, Vendler's examples of accomplishment expressions such as 'to paint a picture' and 'to write a letter' may or may not imply the attainment of goal in Chinese, depending on the particular context which a native speaker happens to be in. Thus, it is true that for many native speakers, (16) and (17) may imply the attainment of goal. Yet, again, (18) and (19) suffice to show that the implication is not absolute.

(16) wo zuotian hua-le yizhang hua
I painted a picture yesterday.
(17) wo zuotian xie-le yifeng xin
I wrote a letter yesterday.

(18) wo zuotian hua-le yizhang hua, keshi mei hua-wan
? I painted a picture yesterday but I didn't finish it.
(19) wo zuotian xie-le yifeng xin, keshi mei xie-wan
? I wrote a letter yesterday but I didn't finish it.

(20) and (21), on the other hand, show that when resultative verb compounds are used, there is no escape for the implication.

(20) *wo zuotian hua-wan-le yizhang hua, keshi mei hua-wan
*I finished painting a picture yesterday, but I didn't finish it.
(21) *wo zuotian xie-wan-le yifeng xin, keshi mei xie-wan
*I finished writing a letter yesterday, but I didn't finish it.

I have shown that the accomplishment verb is expressed in Chinese in the form of a resultative verb compound. Yet, the two are different in a fundamental manner. While an accomplishment verb in English has both action and result aspects, a resultative verb compound in Chinese has only the result aspect. Thus, while an accomplishment verb in English can occur in the progressive tense just like an activity verb, a resultative verb compound in Chinese can't, although its first element is identical to an activity verb and can occur alone with the progressive. Sentences (22) - (25) illustrate their difference with respect to the progressive.

(22) wo zai xue zhongwen
I am studying Chinese.
(23) *wo zai xue-hui zhongwen
I am learning Chinese.
(24) wo zai sha Zhangsan/ *wo zai sha-si Zhangsan
I am killing John.
(25) wo zai hua yizhang hua/ *wo zai hua-wan yizhang hua
I am painting a picture/ I am finishing the picture.

It is important here to notice that while a simple activity verb in Chinese can take the progressive just as in English, its corresponding resultative verb compound can't.

The fundamental difference in question is also manifested in interpretating adverbial and negative scopes. For instance, it has been pointed by Dowty (1979) that (26) has two readings:
" (a) John had the intention of painting a picture but changed his mind and did nothing at all, or (b) John did begin work on the picture and he almost but not quite finished it." (p. 58).

(26) John almost painted a picture.

This scope ambiguity can be attributed to the fact that as an accomplishment term, 'to paint a picture' in English has both action and result aspects. This kind of scope ambiguity doesn't exist in Chinese. Thus, the Chinese sentence (27) with the resultative verb compound hua-wan 'paint-finish' has only the (b) reading, namely, result reading. And the one with simple activity verb hua 'to paint' in (28) has only (a) reading, i.e., action reading.

(27) Zhangsan jihu hua-wan-le yizhang hua (result reading only)
John almost painted a picture.
(28) Zhangsan jihu hua-le yizhang hua (action reading only)
John almost painted a picture.

Similarly, while it seems that the negative scope in (29) is ambiguous with both action and result interpretations, it has only the result interpretation in (30), and only the action interpretation in (31).[4]

(29) John didn't learn Chinese.
(30) Zhangsan mei xue-hui zhongwen
John didn't learn Chinese.
(31) Zhangsan mei xue zhongwen
John didn't learn Chinese.

It should be clear from the previous discussions that Chinese doesn't have the category of accomplishment verbs. It should also be clear that it does, however, have the category of activity verbs. Furthermore, it should be kept in mind that a resultative verb compound in Chinese doesn't have the action aspect, notwithstanding that it is built with a corresponding activity verb, which has only the action aspect.

3. States and Achievements in Chinese

Among those achievement verbs identified by Vendler and Dowty, many of them are realized in Chinese also in the form of a resultative verb compound. For example, 'to find' in Chinese is zhao-dao 'seek-reach', 'to receive' is shou-dao 'collect-reach', 'to see' is kanjian 'look-for-perceive', and 'to hear' is tingjian 'listen-perceive'. These resultative verb compounds are no different from those equivalent to accomplishment verbs in English with respect to the syntactic and semantic phenomena which we have discussed in connection with accomplishment verbs: in particular, the fact that they have only result aspect. Other achievement verbs take the form of a simple verb in Chinese, of which the focus is on the ending point of an event, and which must co-occur with the inchoative aspect marker -le 'become'.[5] For example,

(32) ta si-le/ *ta si
He died (he is dead).

Our discussion at this point needs to turn to the category of states in Chinese. A typical state verb in Chinese can co-occur with a degree adverb such as hen 'very' as in (33) and (34).

(33) ta hen ai wo
He loves me very much.
(34) ta hen gao
He is very tall.

Needless to say, they can not occur in the progressive tense. Now, the Chinese equivalent of a achievement verb, be it in the form of a simple verb or verb compound, cannot take a degree adverb, nor the progressive tense. This can be illustrated in

(35) *ta hen si/ *si-le
? He is very dead.
(36) *ta zai si/ *si-le
He is dying.
(37) *ta hen xue-hui-le zhongwen
? He learned Chinese very much.
(38) *ta hen zhao-dao nei ben shu
He found that book very much.

The ungrammaticality of (35) and (36) points to the necessity to distinguish a resultative state such as si 'to die' from a more permanent quality-like state such as ai 'to love'. The fact that a resultative verb compound, be it equivalent to accomplishment or achievement in English, (as shown in (37) and (38)), cannot take a degree adverb such as hen 'very' suggests that it is not a state par excellence. Resultative verb compounds and resultative simple verbs can be considered to belong to one single category, that is, results. The time schema for this category has a definite point, in contrast with states and activities, of which the time schemata both have no definite points. This distinction is no different from that made by Vendler between the pair of accomplishment and achievement and that of activity and state. What I wish to propose here is that the category of results in Chinese has a definite point of time corresponding to the ending point of an event and more significantly, it looks backward from the ending point.

5. Conclusion

In sum, Chinese exhibits three categories of verbs pertaining to the notion of time. They are states, activities, and results. The time schemata for states and activities are no different from those in English. The time schema for results

doesn't have continuous tenses and it has a definite time instant which corresponds to the ending point of an event from the point of view of the result rather than the action. Most of the results in Chinese are expressed in the form of a verb compound. The rest surface as simple verbs, which normally co-occur with the inchoative suffix -le 'to become'. Furthermore, a resultative verb compound in Chinese consists of two parts, the first indicating a presupposed activity and the second an asserted result.[6]

In the face of these observations, one cannot but be tempted to raise the question as to why Chinese and English share the same schemata for state and activity but differ in accomplishment and achievement. The answer seems not far to be reached. Since both state and activity involve no unique time point, the possibility is limited for different languages to their time schemata from different angles. In contrast, both accomplishment and achievement involve a unique time point corresponding to the ending point of an event. This ending point allows a language to view it either from the beginning of an event or from the ending. As an agent-oriented language, English looks at the ending point from the viewpoint of an agent and thus allows action verbs to have implicational structures. By contrast, as a patient-oriented language, Chinese looks at the ending point from the viewpoint of an affected patient and therefore its action verbs do not exhibit implicational structures. Instead, it allows the action part of a resultative verb compound to be presupposed and the result part to be asserted. This contrast can be visualized in

(39) English Agent (action)---------->
Chinese <----------Patient (result)

This conjecture can be substantiated by other independent evidence pertaining to some systematic syntactic differences between Chinese and English. For example, an affected patient, animate or inanimate, can serve as the subject of a transitive verb without a passive marking or passive meaning. This is illustrated in

(40) shu mai-le (Someone) bought the book.
(book) (buy) (Asp.)
(41) Zhangsan da-le (Someone) hit John.
(hit)

Pending proof of the validity of this type of evidence, the present conjecture does point to a non-trivial typological parameter for further research.