New Horizons in Chinese Linguistics

Edited by
C.T. James Huang and Y.H. Audrey Li

Studies in Natural Language & Linguistic Theory
CHAPTER 3
RECENT DEVELOPMENTS IN
FUNCTIONAL APPROACHES TO CHINESE

1. INTRODUCTION

The study of Chinese grammar from a 'functional' point of view reflects the general functional, cognitive, and discourse tradition in current linguistics (see Chafe 1992; Hopper, 1992; Langacker, 1987, 1991; Nichols, 1984; Thompson, 1992). We understand the central tenet of this tradition to be an emphasis on linguistic structure as reflecting the role of language as a tool of human communication rather than as an instantiation of an abstract set of mental representations.

This approach is thus first and foremost a functional one. It takes the position that the primary function of language is for human beings to communicate about their ideas, experiences, feelings, and attitudes in the physical world around them, and that grammatical structures arise from those functions. This position thus challenges the conventional and dominant view of linguistic symbolization, that grammar is an arbitrary, autonomous, self-contained formal system that humans use to interpret, and communicate about, the world. The basic tenet of the functionalist approach is that forms are derived from functions rather than vice versa, thus contrasting with the formalist position, which treats forms as independent of functions. Hence, this approach adopts a strong form of functionalism, not only in postulating natural correlations between form and function, but also in asserting that forms can be, and should be, accounted for in terms of functions.

With respect to linguistic explanations, this approach looks for grammar-external, functional explanations. This also contrasts sharply with a formalist approach, which seeks grammar-internal, formal explanations for linguistic phenomena. Formalists account for linguistic structures using abstract principles and mechanisms. Functionalists, on the other hand, are not satisfied with grammar-internal formal explanations, which they consider to be descriptions but not explanations. Moreover, in our view, genuine explanations lie in both the structure of the real world, as conceptualized by the language user, and the linearity of human speech. Linguistic structure is further shaped by humans by memory capacity, processing strategies, and interactional principles.
Thus functionalist scholars are interested in the way particular structures are used, how their meanings interact with their use, how the grammatical patterns in one language relate to those serving similar functions in other languages, and how grammatical patterns are related to discourse patterns. In this chapter we first provide a brief history of functionalism in Chinese linguistics. We then discuss approaches to Chinese grammar from the point of view of their meaning and use, and finally we discuss the recent research which explores the relationship between discourse and grammar.

2. A BRIEF HISTORY OF FUNCTIONAL APPROACHES TO THE GRAMMAR OF CHINESE

2.1. Early Precursors to Chinese Functionalism

Current functionalist research in Chinese linguistics has its roots in the structuralism of pre- and post-World War II China, particularly Ding (1961), Gao (1957), Lü (1941, 1955), Wang (1947, 1955), and Zhu (1956). Four other major forebears working outside China were Dragunov (1960), Chao (1968), and Mullie (1932), who all made landmark contributions to the functionalist tradition, and Kratochvil (1968), whose description of Mandarin morphology remains one of the best.

2.2. The Emergence of Functionalism in the 1970s

Just as functional linguistics began to flourish and attract a large number of scholars in the 1970s, so did Chinese functionalism come into its own at about this time. Important work by, for example, Alleton (1972, 1973, 1977), Cartier (1972), Chu (1973, 1976), Hagege (1975), Henne et al. (1977), Huang (1974a, b), Li (1971, 1972, 1974, 1976), Li and Thompson (1974a, b, 1975, 1976, 1978), Light (1979), Lu (1973, 1977), Paris (1977a, b, 1979a, b), Peyraube (1977, 1978, 1979), Ross (1978), Tai (1973, 1976), Teng (1973, 1974a, b, 1975, 1977, 1979a, b), Thompson (1973a, b), Tsao (1976, 1979a, b), and others formed a solid body of contributions to the understanding of Chinese grammar, influenced by the semantic insights in Fillmorean Case Grammar (Fillmore, 1968), as well as by the contemporary burgeoning interest in typology and universals and the attendant revival of descriptive accounts from a typological perspective. Cheng et al. (1979), a significant collection of papers from a 1977 symposium on Chinese linguistics, captures the essence of this tradition.

One of the most widely discussed issues during this period was that of the 'topic-comment' nature of Chinese. According to Chao (1968: 70), prototypical 'subject-predicate' sentences account for only about fifty
percent of Chinese sentences. Following Chao, Barry (1975), Henne et al. (1977), Li and Thompson (1976, 1981), Teng (1974b), and Tsao (1979a) devoted considerable attention to this issue; allowing for differences in details, all agreed that a ‘topic-comment’ relationship must be acknowledged as part of the grammar of Chinese.

2.3. Chinese Functionalism in the 1980s


During the 1980s and 1990s research in the general domain of ‘functionalism’ can be roughly divided into five broad groups: (1) semantic studies, (2) cognition-based studies, (3) functional syntax studies, (4) pragmatic studies, and (5) discourse studies. We will discuss each of these in the sections that follow.

3. SEMANTIC STUDIES

A number of significant semantic studies have appeared during this period. The general relationship between syntax and semantics with respect to various constructions is the focus of Chu (1982, 1988).

Several studies consider problems in Mandarin grammar in terms of the meanings of specific morphemes. For example, three studies have discussed the semantics of modality. Alleton (1981) proposes a relationship between final particles and the category of modality, while Iljic (1985) concerns himself with the modal auxiliary hui, and Kanesisa (1981) looks at the various ways of expressing the concept of ‘possibility’. Huang (1981) and Lu (1980) discuss Chinese quantifiers from the point of view of semantic scope. The semantics of aspect has received perhaps the most attention, with contributions from Chan (1980), C.

Other semantic studies have taken a particular theory of meaning and examined certain issues in Chinese in terms of this theory. Thus, following the semantic theory outlined by Wierzbicka (1972, 1980), Chappell (1986a, b) considers the meaning of the Mandarin passive and Chappell (1993) provides a semantic analysis of the passive as compared to causative and benefactive constructions. Chappell (1995) investigates the ‘double subject’ construction from the point of view of the semantic category of ‘inalienability’.

Following proposals in Lakoff (1987), S. F. Huang (1994) analyzes 30 highly polysemous words in Chinese and English and concludes that, cross-linguistically, nouns tend to resort to metonymic sense development while verbs tend to exploit metaphoric mappings for sense extension.

Also following Lakoff’s (1987) theory of idealized cognitive models, King (1989) and Liu (1992) show that a large number of seemingly unrelated and non-compositional compounds made up of xin ‘heart’ and qi ‘air’ in Chinese are in fact semantically compositional and systematically related.

4. A COGNITION-BASED FUNCTIONAL APPROACH TO CHINESE GRAMMAR

4.1. Theoretical Preliminaries

A cognition-based functional approach was initially proposed in Tai (1989). It is a synthesis of three functional approaches; namely, the cognitive approach developed by Lakoff (1987) and Langacker (1987), the semiotic approach developed by Haiman (1985a,b), and the discourse approach developed by Hopper and Thompson (1980, 1984). It aims to understand the grammar of natural language in general, and of Chinese in particular, in terms of human cognition in conjunction with pragmatic and discourse principles in human communication.

Tai’s functional approach is, moreover, cognition-based, in that human beings’ conceptualization of the real world imposes constraints on linguistic structure. This means that both the structure of the human body and the structure of the real world are reflected in grammatical structures. The neuro-physical structures of our eyes, ears and body are
independent of our linguistic faculty; nonetheless, they affect linguistic structure. For instance, our spatial orientation is structured in relation to the position of our eyes in the front, upper part of our body. Thus, the oppositions between ‘front’ and ‘back’, and between ‘up’ and ‘down’, are structured in relation to the human body and the metaphorical extension of these opposition to objects, such as houses and cars, is based on the projection of the human face to the imagined bodies of houses and cars.

Furthermore, people prefer ‘front’ to ‘back’, and ‘up’ to ‘down’ because of our human canonical upright body position, because our eyes are in our face and not in the back of our head, and because we walk forwards instead of backwards. Therefore, the asymmetry in the structure of our physical body is reflected in the asymmetry in the conceptual structure of our language. This important asymmetry is not arbitrary, and cannot be explained simply on the basis of the innate structure of the mind. Furthermore, as all humans live on the same planet, Earth, where there are trees, stones, mountains, rivers, and so forth, all human languages share a similar set of such vocabulary to describe the world around them. In short, Tai’s cognition-based approach recognizes the close relationship among the physical world, human perception, and linguistic structure.

In this approach, syntactic structures are viewed as motivated by conceptual structures. Tai treats them as resulting from the physical structure of the world, humans’ biological structure, and humans’ cultural experiences, viewing the relationship as a one-way, transparent mapping, from conceptual structures to syntactic structures.

The fact that humans have the same biological make-up and live in the same physical world does not necessarily mean that all human languages have the same conceptual structures. Languages share many conceptual universals, but they may also exhibit differences in conceptual structures. This is because humans are endowed with the ability to conceptualize the same object or situation from different perspectives according to their experiences, imagination, and creativity. Thus, the same reality may be organized into different patterns, depending on the selection of different principles of organization. Consider, for example, how the conceptual schema of action-result can structure different situations, as represented in the following three sentences: (1) Ta zou-jin gongyuan (he walk-enter park) ‘He walked into the park.’; (2) Ta da-si-le yige ren (he hit-die-ASP one person) ‘He killed someone.’; and (3) Ta jia-cuo-le ren (she marry-wrong-ASP person) ‘She married the wrong person.’ The situation in (1) involves directional, spatial relations, that in (2) a typical causal relationship, and that in (3) a situation wherein a mistake has occurred. The three situations are construed as related patterns in Chinese, sharing in common the action-result schema. This is
reflected in the use of action-result verb compounds in all three sentences. In contrast, in English, as shown in the English translations, these three situations are construed as three different schemata that are reflected in three correspondingly different syntactic patterns. Situation (1) uses the directional preposition, ‘into’, to express the spatial relationship. Situation (2) lexicalizes the action-result into an action verb with the resultant state incorporated into the verb. Situation (3) attributes the ‘wrong’ result to the target rather than the action per se.

It is important to note that this approach does not subscribe to the strong form of the Whorfian Hypothesis, namely, that different conceptualizations of the same reality in different languages necessarily entail overt behavioral correlates. Instead, what this approach subscribes to is a form of neo-Whorfianism that assumes a non-objectivist view of cognition (Lakoff, 1987). This view holds that, whereas the physical world may or may not have its inherent structure, our understanding of the physical world is mediated through human conceptualization in different cultural contexts. Hence, different linguistic structures describing the same situation may be the result of different conceptualizations, as shown in situations (1) through (3) above, rendered with one syntactic pattern in Chinese and three different ones in English sentences.

This non-objectivist view of cognition is an explicit rejection of the objectivist view of cognition that underlies truth-conditional semantics and model-theoretic semantics. Formally elegant and rigorous though they are, truth-conditional and model-theoretic semantics assume that linguistic structures are arbitrary symbols, which are meaningless in themselves and are made meaningful only by being associated with things and events in the world. In this kind of objectivist cognition, human experience, imagination, and creativity in different cultures play no role at all in mediating between the linguistic structures that surface in different languages, and the conceptualizing and understanding of the physical world. In short, we reject both linguistic objectivism and the strong form of linguistic relativism; we adopt in their place a weak form of linguistic relativism, as found in works by Lakoff (1987) and Langacker (1987).

Three core areas of a cognition-based functional grammar are: space and time, categorization, and iconicity. These three areas will be discussed briefly in turn in the following sections.

4.2. Space and Time

Space and time constitute two of the most important cognitive domains underlying human languages, and are explored in Tai (1989, 1993b) with respect to spatial and temporal expressions in Chinese grammar. Fol-
lowing the well-known localist hypothesis (cf. Anderson, 1971; Miller and Johnson-Laird, 1976), spatial expressions are treated as more basic, conceptually and grammatically, than non-spatial expressions of various kinds, including time expressions.

Regarding spatial expressions, Chinese observes certain universal functional principles. First, Chinese uses a reference object to locate a focal object. Consider the following sentence: Shu zai xiangzi-de litou (book be-located box-PRT inside) ‘The book is in the box.’ Here, shu ‘book’ is the focal object and xiangzi ‘box’ the reference object. The focal object is the trajector and the reference object the landmark (Langoacker, 1987) in humans’ identification of the location of an object. Second, as observed by Talmy (1983), both focal and reference objects are schematized in terms of geometric relations. Furthermore, the geometry of a focal object is typically reduced to a geometric point, while some particularity of the geometry of the reference object is preserved. Thus, in our example, the physical shape of the book is reduced to a geometric point, while that of the box is construed as a three-dimensional geometric enclosure.

Nonetheless, this example also shows that, despite certain functional commonalities, the syntax of Chinese spatial expressions differs from that of English. The English preposition in indicates the spatial relationship between the focal object and the reference object. In Chinese that same spatial relationship is accomplished by using the word zai ‘to exist, to be located’, to indicate the existence of an object in some location, and then adding the place word litou ‘inside’ after the reference object, to pinpoint more precisely the nature of the spatial relationship between focal and reference object. For this and similar sentences, is there any way to explain the differences in the syntax of spatial expressions in Chinese versus English? It cannot be readily accounted for within a formalist approach. Within the cognition-based functional approach, the differences can be accounted for by recognizing that spatial relationships are conceptualized differently in these two languages. It appears that Chinese employs a more transparent, two-step strategy in conceptualizing the spatial relationship between focal and reference objects. English, in contrast, employs a more opaque, one-step strategy, by lexicalizing that spatial relationship in the form of spatial prepositions (‘in’, ‘on’, ‘at’, etc.). Furthermore, as demonstrated in Tai (1993b), the relationship between the reference object and the place word is patterned after the part-whole relation. It is based on the part-whole schema that body-part terms can be extended to indicate spatial relationships, as in shan-tou (mountain-head) ‘top of a mountain’, shan-yao (mountain-waist) ‘halfway up a mountain’, and shan-jiao (mountain-foot) ‘foot of a mountain’. Spatial relations in Chinese, as illustrated in this subsection, together with the examples of grammatical
patterns in Section 4.1, suggest that Chinese syntax tends to be fairly transparent in reflecting conceptual structures.

We now turn to temporal expressions. Parallel to spatial expressions, temporal expressions follow the principle of placing the whole before the part in word order. Thus, the word order for temporal expressions is from the largest chunk of time to the smallest, as in ‘year--month--day--a.m./p.m.--hour--minute--second’. This is parallel to the word order for spatial expressions, from the largest geographical area to the pinpointing of the smallest location, as in ‘country--province--city--street--building number--floor number--apartment number’.

In treating time as a spatial metaphor, one can account for the use of the locative word zai ‘to be located’ in temporal expressions indicating an action in progress, as in Wo zai kan shu (I be-located read book) ‘I am reading a book.’

Poteet (1987) similarly shows that the ‘achievement’ and ‘extent’ meanings of duo ‘arrive at, to’ can be accounted for in a cognitive framework involving metaphors from spatial expressions.

The metaphorical extension from spatial domain to temporal and other semantic domains constitutes one of the central topics in cognition-based functional grammar (see also Poteet, 1987). The topic deserves to be fully explored in Chinese grammar.

4.3. Categorization

Categorization is one of the most important aspects of human cognition. Human language deeply involves categorizing objects and events in the physical world as well as linguistic structures. Lexical items in a language automatically classify objects and actions. In addition, we categorize these lexical items under various parts of speech, such as nouns or verbs. We can further subcategorize nouns into count nouns, mass nouns, and so forth, and verbs into action verbs, stative verbs, etc. Therefore, it is important for a cognition-based functional grammar to have an accurate view of human categorization.

In the classical approach to categorization, a category is formed by a set of discrete properties that serves as necessary and sufficient criterial conditions to define that category. Accordingly, an object is a member of a category if and only if it meets all the criterial conditions defining that category. This categorizational approach has played a central role in various formal theories of syntax and semantics, as it allows models of discrete mathematics to be implemented in those theories.

More recently, however, many psychologists and linguists have become convinced that an alternative approach, known as ‘prototype theory’, is more compatible with the facts of human categorization than the classical one. Prototype theory holds that categorization can be
achieved through association with the prototype(s) or the central member(s), and that members of a category may be associated with one another in the fashion of ‘family resemblance’ (as suggested by Wittgenstein, 1953). Categories are then formed through ‘typicality’ conditions rather than ‘criterial’ conditions. It is thus not necessary for all members of a category to possess a common objective property that criterially defines that category. Instead, the notions of ‘centrality’ and ‘marginality’, ‘continuum’ and ‘gradation’, as well as ‘fuzziness’ and ‘borderline’ are the essential aspects of human categorization in this theory. As a result, statistics is compatible with prototype theory, whereas discrete mathematics is not.


Chinese grammar has a rich system of classifiers, which categorize nouns into different classes, thereby allowing ample scope for applying prototype theory and the non-objectivist experiential view of linguistic categorization. The first study of this kind was conducted by Tai and Wang (1990), showing that the semantics of the classifier tiao is cognition-based, in that it is used to classify objects that are long-shaped, and not just to classify different types of nouns. For example, among objects designated as gua ‘melon’, only those gua that are long-shaped can be classified with tiao. Thus, included under the classifier tiao are huanggua ‘cucumber’, kugua ‘bitter melon’, and sigua ‘towel melon’, and excluded are those that are fatter and not so obviously long-shaped, such as xigua ‘watermelon’ and donggua ‘winter melon’. Tai and Wang also describe the metaphorical extension of tiao to classify abstract entities, such as xinwen ‘news item’, falü ‘legal article’, and mingling ‘order, command’. This metaphorical extension is built on native speakers’ experience, wherein news items, legal articles, and so forth have traditionally been written vertically on the page in Chinese. A subsequent study of classifier systems across Chinese dialects by Tai (1992a) shows that these systems are also cognition-based in employing shape, size, consistency and the part-whole relation, and that their pattern of distribution can be accounted for by prototype theory. It is true that the use of classifiers in Chinese dialects is often based on the ‘conventional’ image of an object; nonetheless, the conventional image is not formed arbitrarily without experiential and cognitive bases.

Genuine classifiers, such as tiao, for classifying long-shaped objects and zhang, for classifying flat-surfaced objects (Chao and Tai, 1994),
should be distinguished from measure words, such as qun ‘a group/flock (of)’ and bang ‘a pound (of)’. Functionally, while classifiers are used to ‘categorize’ objects in reference to their salient perceptual properties, measure words are used to ‘measure’ the quantity of objects or collections of objects. Cognitively, classifiers refer to relatively ‘permanent’ properties of entities, whereas measure words refer to ‘temporary’ properties. This cognitive functional distinction between classifiers and measure words provides a semantic basis for their different syntactic behavior. For example, the modifier marker, de, can be inserted between a measure word and the head noun, but not between a classifier and the head noun; to wit, yi bang de yu ‘one pound of fish’ versus *yi tiao de yu ‘one fish’.

Categorization of nouns and verbs forms the cornerstone of the cognition-based functional approach to grammar. The cognitive basis for prototypical nouns is the set of physical, tangible objects such as books, houses, and trees, and that for prototypical verbs is the set of visible, dynamic actions such as jump, run, and hit. Nouns, in turn, can be subdivided into count nouns and mass nouns. This subcategorization is cognition-based, in that count nouns denote objects with ‘heterogeneous’ structure, and mass nouns denote objects with ‘homogeneous’ structure. Count nouns correlate with concrete, individuated objects, and mass nouns with concrete, non-individuated objects. Prototypical, or central, members of nouns in Chinese are those nouns that refer to concrete and individuated objects. Included are shu ‘book’ and zhuozi ‘table’, which can co-occur with prototypical classifiers. Less prototypical are tangible mass nouns, among which are liquids and solids. Liquids such as shui ‘water’ and niunai ‘milk’ can only occur with certain measure words, for example, wan ‘bowl (of)’ and jialun ‘gallon (of)’. Solids such as fan ‘rice’ and mianfen ‘flour’ take such measure words as wan ‘bowl of’, as well as such measure words as dui ‘pile (of)’.

Observe that there is also a cognitive basis for the use of different measure words for liquids versus solids; solids can be piled up, for example, whereas liquids require some kind of container. Furthest from the prototypical nouns are those nouns that denote abstract concepts, such as daode ‘virtue’ and fuqi ‘luck’, which can only occur with a very restricted subset of measure words, namely those that are themselves abstract, such as zhong ‘kind/type (of)’ and xie ‘some’.

Parallel to the distinction between count and mass nouns, verbs can be subdivided into those that denote actions and those that denote states. Cognitively, actions have a ‘heterogeneous’ structure, and states a ‘homogeneous’ one. Action verbs correlate with processes that have inherent temporal structures, and stative verbs with states that indicate atemporal relationships. Prototypical members of the category of verb in Chinese are those action verbs that depict physical activities visible
to the human eye, such as *ti* ‘kick’, and *da* ‘hit’. In terms of temporal structure, these actions are durative, covering beginning and ending point. Therefore, these action verbs can take various aspect markers to indicate their internal, temporal structure. For example, *chi* ‘to eat’ can take the perfective aspect marker, *le*, as well as the imperfective aspect markers, *zhe* and *zai*. Furthermore, these action verbs can co-occur with verbal measures; for example, *ti* (*ta*) *yi* *jiao* ‘give (him) a kick’ (literally, ‘kick (him) one foot’), *da* (*ta*) *yi* *quan* ‘give (him) a punch’ (literally, ‘hit (him) one fist’). Less prototypical are verbs that depict non-physical activities and are thus not visible to the human eye. Examples include *ai* ‘to love’ and *xiang* ‘to think’. Although they have temporal structure similar to prototypical verbs, these actions do not involve physical movement of body parts, and thus cannot co-occur with verbal measures (e.g., *xiang* *ta* *yi* *tou* (literally, ‘think (him) one head’), *ai* (*ta*) *yi* *xin* (literally, ‘love (him) one heart’). Even less prototypical are stative verbs whose temporal structure coincide with the resultative ending point and thus can only take perfective *le* and not imperfectives *zai* and *zhe*. Examples include *si* ‘to die/be dead’ and *faxian* ‘to discover’. Then, furthest from prototypical verbs are stative verbs, which indicate atemporal, abstract relations. These verbs do not have temporal structure, and thus are incompatible with aspect markers. An example is the stative verb, *xiang* ‘to resemble’, which cannot take any aspect markers.

From the above discussion, it can be observed that the more prototypical the noun or verb, the more it exhibits the clusters of syntactic behaviors associated with its respective syntactic category of nouns or verbs. This observation coincides with that made by Hopper and Thompson (1984) in their discourse approach to the study of nouns and verbs in universal grammar. For further discussion of the categories of ‘noun’ and ‘verb’, see Zhu (1985), Tan (1993), and Thompson (1984).

4.4. Iconicity

The simplest as well as the most economical way for linguistic structures to reflect humans’ conceptual structures of the physical world is through iconicity. Therefore, iconicity plays a crucial role in a cognition-based functional grammar. The existence of iconic patterns in human language constitutes a notable exception to Chomsky’s (1972, 1986) influential view that linguistic cognition is ‘innate’, modularized, and independent of humans’ general cognitive system. The existence of iconic patterns also raises questions about the validity of the autonomy thesis that underlies various formal grammatical theories.

It is obvious that the Chinese lexicon, including the classifier system, reflects Chinese conceptualization of the world within its cultural milieu.
We have also seen, from the preceding two sections, that Chinese grammar is transparently conceptually based, reflecting the structuring of space and time, as well as categorization, in the culture. In this sense, Chinese grammar is, to a great extent, iconically motivated.

That iconicity is pervasive in the language has been shown in detail in a series of works on Chinese grammar by Tai (1985, 1989, 1992a,b, 1993a,b). Brief summaries of those works follow below.

In Tai (1985) it is shown that word order often parallels the temporal sequence of events and situations in the conceptual world. The Principle of Temporal Sequence (PTS) is so deeply entrenched in the grammar that it cannot be treated merely as a pragmatic principle, as argued by Newmeyer (1992). In Tai (1989, 1993a,b), it is shown that word order also tends to follow the whole-before-part schema. As discussed above, Tai and Wang (1990) and Tai (1992a) show that classifier systems among the dialects are cognition-based, reflecting human categorization in the context of Chinese cultural experience, and Tai (1992b) shows that the syntactic categories of nouns and verbs in the language correlate very closely with the ontological categories of objects and actions, respectively. In Tai (1993a), besides word order, other iconic motivations (viz., distance, separateness, juxtaposition, and reduplication) have been identified for various grammatical patterns in the language. For instance, iconic motivation accounts for various reduplicative constructions and patterns of verb-copying.

The study of iconicity in Chinese grammar has thus far been limited to iconic motivations. Two other areas of iconicity, isomorphism and automorphism (cf. Haiman, 1985a), have not been well studied in Chinese grammar. Further investigation of isomorphism will reveal additional conceptual structures of the Chinese lexicon. The projection of the spatial domain to other semantic domains is within the realm of automorphism. Further study of automorphism is needed, along with metaphorical structures of the Chinese language, to develop a more comprehensive view of the conceptual structures in Chinese grammar.

5. FUNCTIONAL SYNTAX

As discussed above, the goal of the research in functional syntax is to determine to what extent a given structure can be related to a given communicative function or set of functions.

This research can be divided broadly into three groups: (a) that which considers the function of certain morphemes; (b) that which considers particular constructions; and (c) that which is concerned with certain theoretical issues.
Literature on specific morphemes is exemplified by Kimura (1984) on the directional complements *lai* and *qu*, work on the function of the particle *de* (Paris, 1977b, 1979b; Ross, 1983; Chu, 1987b; Iljic, 1987b, and C-R Huang, 1989); and Li, Thompson, and Thompson (1982) on the final particle *le*.


As examples of research concerned with specific issues from a functionalist perspective, we can point to articles by Chu (1981, 1984a), LaPolla (1992), Mei (1980), and D. Xu (1990) on word order, LaPolla (1993) on grammatical relations, and explorations of word formation (Chi, 1985; Packard, 1990).

In addition to these studies, just as at the end of the 1970s, at the end of the 1980s a seminal collection of papers again appeared which defined the essence of the functional work throughout the decade: Tai and Hsueh (1989) (reviewed in C-R Huang, 1990, and Ross, 1990). At this time, too, another important general functional contribution appeared in Tsao (1990), examining the entire issue of sentence and clause structure for Mandarin.

6. PRAGMATICS

In the early 70s, scholars began to be attracted to certain language philosophers’ advocacy of language in use in order to understand the complex relationship among language, mind, and society (Austin, 1962; Grice, 1975; Searle, 1969). In particular, Grice points out that language in use is the result of not only the application of the speaker’s linguistic knowledge but also the implications of the assumption that, all other things being equal, interlocutors intend to be, and expect each other to be, cooperative. Based on this Cooperative Principle, Grice further proposes a set of Maxims as a characterization of the way this Cooperative Principle is enacted. The Gricean Maxims and the issues arising from them have since been debated, revised, and further developed by
various scholars, but it is probably fair to say that Grice, among philosophers of his time, offers the most fruitful theoretical foundations for the study of pragmatics.

Grice (1975) further distinguishes two notions that are at the center of the interface between semantics and pragmatics. First, conversational implicatures are about the set of general principles that speakers apply to language use as a form of socially interactive behavior. They are concerned with the inferences, or the pragmatic calculations, that interlocutors make with respect to issues such as how the reference of a deictic term is determined by the context of the use of that term. In Chinese, an application of the neo-Gricean framework with regard to conversational implicature can be found in Y. Huang (1991). In this analysis, the interpretation of (intrasentential) anaphora is largely determined by the regulated interaction of two pragmatic principles (briefly, ‘Don’t use a marked form without reason’ and ‘Say as little as necessary’), constrained by a set of conditions on conversational implicature.

By contrast, conventional implicatures are language-specific conventions that contribute to the non-truth-conditional part of sentence meaning. They are concerned with the fact that the use of certain linguistic expressions (or constructions) does not alter the truth conditions of the sentence in which they appear but plays a significant part in the interpretation of that sentence. The expressions even, only, and let alone in English are good examples. Many of the monosyllabic ‘movable’ adverbs in Chinese also manifest conventional implicature. Biq’s studies of cai and jiu (1987, 1988a), you (1988b), and ye (1989b) show that the two adverbs do not contribute to the truth-conditions of the sentences in which they occur, but that the interpretations of cai sentences and jiu sentences are opposite in many contexts (e.g., condition, time, or quantity). They each carry a distinct characterization of the described situation from the speaker’s point of view vis-à-vis his/her expectations/assumptions about that described situation.

Biq’s studies of cai, and jiu, (1987, 1988a), you (1988b), and ye (1989b) find that these adverbs not only provide excellent examples of conventional implicatures, but have a variety of meanings/senses, distributed in a systematic way over a number of ‘planes’ in language use. In other words, the same form can display different (but related) senses in three spheres of language use, the propositional (ideational, intra-sentence) plane, the textual (inter-sentence) plane, and the utterance (interactional, interpersonal, discourse) plane. Biq’s (1989a) investigation of how mei and bu are respectively used with certain expressions reveals that negation markers can also be used to index the utterance plane in a way different from their assumed truth-conditional function.
Y. Huang (1994) is a detailed treatment of these pragmatic principles to the problem of anaphora in Chinese. He argues that pragmatics plays a central role in Chinese grammar, and questions earlier autonomous accounts (see below for further discussion of anaphora in Chinese).

7. DISCOURSE APPROACHES TO CHINESE

7.1. Introduction

A natural outgrowth of the interest in functional approaches to the study of Chinese has been the emergence of interest in discourse. With impetus from such works as Labov (1972), papers in Givón (1979, 1983, 1984, 1989), and Hopper and Thompson (1980), the 1980s saw a strong move towards explanations of grammatical facts in terms of the structure of discourse. While Chinese linguistic research based on actual written texts dates back to the late 70s (Li and Thompson, 1979a, b; Tai, 1978), Tsao (1979b) is probably the first major linguistic work based on Chinese conversational data. However, systematic examination of naturally occurring Chinese interactional data in the spirit of such scholars as Sacks, Scheglof, and Jefferson (1974), Schiffrin (1987), and Tannen (1984) is just now beginning to appear (see below).

The increasing emphasis on discourse is a natural extension of several research trends. It is first a natural extension of the interest in pragmatics discussed above in Section 6: if linguists are to understand language in use, then examining actual written texts and audio and video recordings of everyday interactions is the best way to pursue such an understanding. It is also a natural extension of the interest in semantics, cognition, functional syntax, and pragmatics discussed in Sections 3-5, in that if we ask what makes grammars of languages behave the way they do, then one major answer to this question is that grammar itself arises from patterns in the way people talk in their ordinary interactions (Hopper, 1987, 1988, 1992; Du Bois, 1985, 1987).

In the field of Chinese linguistics, several of the earliest discourse studies to be widely read and discussed were Li and Thompson (1979a) on question constructions in discourse, Li and Thompson (1979b) and Tai (1978), the first two serious studies of anaphora in Chinese discourse, and Tsao (1979a), a ground-breaking investigation of the notion of 'topic' from a discourse point of view using actual conversational data. In the 1980s and 1990s, we can see several trends continuing this line of research, using actual written and spoken discourse data.
7.2. Constructions Examined in Their Discourse Contexts

Several scholars have begun to extend the study of various constructions to their function in their discourse contexts. Cumming (1984a, b) considers the discourse motivations for the notion ‘sentence’ in spoken and written Chinese. Two studies are concerned with the issue of word order from a discourse perspective: Sun and Givón (1985) re-examine the earlier word order claims and conclude that both written and spoken narrative discourse provides evidence in favor of an SVO order, while Tai and Hu (1991) take up the post-verbal occurrence in natural conversation of various elements which are not normally thought of as appearing post-verbally, such as subjects. Chang (1991) returns to the verb-copying construction discussed in several papers in the 1980s, and provides support for Tai’s Principle of Temporal Sequence (Tai, 1985, 1989), and Liao (1986b) examines connectives in Chinese discourse. Sanders (1991) concludes that Pekinese speakers use a variety of constructions to express ‘disposal’ or, roughly, what Hopper and Thompson (1980) call ‘affectedness’. Finally, based on both spoken and written data, Chappell and Thompson (1993) propose an account of the semantic and pragmatic factors determining the variation in the use of the associative de in phrases of the type [NP de NP].

7.3. Anaphora and Final Particles


Biq (1991) is the first to consider the second-person pronoun ni in its discourse context. In addition to its familiar deictic use, ni shares with its counterpart in English (and in many other languages) the capacities of being used for an indefinite referent (the impersonal use) and for impersonation when there is a shift of frame of reference from the discourse situation to the described situation (the dramatic use). However, ni has another curious use, frequently encountered in spontaneous speech, i.e., as a vocative at the onset of a unit of talk in argumentation calling the hearers attention to and underscoring the speakers
emphasis on what s/he is saying. Given that this use does not spread to the plural form *nimen*, Biq (1991) argues that although the use of *ni* is still deictic, the indexicality does not operate at the propositional plane but rather at the utterance plane, where *ni* refers to the participant role of the intended recipient(s) of talk rather than to the individual(s) in that role.

The third person singular pronoun *ta* has two uses seen almost exclusively in spoken discourse. First, it is often used to refer to an indiscriminate portion of the preceding discourse (‘extended reference *ta’*). Second, *ta* often immediately follows its coreferring nominal in speech, thereby superseding its anaphoric function at the propositional plane by its emphatic function at the utterance plane (‘highlighting *ta’* Biq (1990c) argues that the instantaneous and irrecoverable nature of speech provides the motivation for the emergence of these two uses: making continual references to what has been talked about is one way of securing continuity and coherence. Further discussion of *ta* can be found in Chan (1985).

Final particles have received a fair amount of attention in the literature of the last decade. Chu and Chang (1987) is a recent effort to establish the functions and meaning of Mandarin verbal *-le*, proposing that the discourse function of *-le* is basically to mark non-continuing factual actions/events. Chappell (1986c) considers the discourse function of the ‘double *-le’*, that is clauses containing both a verbal suffix *-le* and a sentence-final *-le*.

Modal particles which have been examined in their discourse contexts include *me* and *ne*: Chappell (1991) shows that the discourse functions of *me* include its expression of ‘obviousness’ and ‘impatience’, and Lin (1984) suggests that *ne* expresses ‘contrastiveness’. Using a group of four plays produced by the Performance Workshop of Taipei between 1985 and 1989, McGinnis (1990) gives a sociolinguistic analysis of the pragmatics of *ma*- particle questions versus A-not-A questions, showing that both types of questions are approximately equally divided between what he calls ‘question-posing’ and ‘question-asking’ structures. A series of humorous but useful articles in JCLTA discuss the various functions of the sentence-final particle *ne*: Chu (1984b, 1985), King (1986), and Shifu (1984, 1985). Zhang (1991) applies to Chinese the correlations between mood markers and social and interactional role relationships discussed by Halliday (1985) for English.

7.4. Discourse Markers

The work of Schiffrin (1987) has influenced a number of studies of ‘discourse markers’ in Chinese. For example, Biq (1990a) finds that, like *so* in English, the Chinese connective *na(me)* connects not only clauses
of condition-consequence relations, but also points of talk or text that have thematic relationships with one another. However, in contrast with its propositional and textual connective functions signaling continuation, *na(me)* is often used in conversation as a preface to a transition to new topics. Biq argues that the connective function is still present, but that it operates at the utterance level, pointing to the interactional status the interlocuters are situated in.

*Na(me)* is also one of the discourse markers studied in Miracle (1991), who identifies *na(me)* as a continuation marker, *hao* as the marker for closure and transition (see Miracle (1989) for a detailed discussion), and *keshi, danshi,* and *buguo* as contrastive markers.

The question word *shenme*, like other Chinese question words, is not only a interrogative word but can also mark totality in certain syntactic constructions. Moreover, it displays at least three discourse functions in speech (and less frequently in written language): as an interactional hedge (filler), a referential hedge (disclaimer), and an expressive hedge (mitigator in negation) (Biq, 1990b).

Using conversational data and historical data, Liu (1993) re-examines and re-characterizes the functions of *cai* and *jiu* in contemporary uses and traces their diachronic development in terms of grammaticization. She points out that the historical changes are motivated by recurring discourse patterns as well as cognitive and interactional mechanisms inherent in the communicative situation.

### 7.5. Discourse Strategies in Spoken Discourse

Both the ethnomethodological approach (Sacks *et al.*, 1974) and the ethnographic approach (Gumperz, 1982; Tannen, 1984) to the investigation of how conversational discourse is sequentially structured and interactionally organized have had a significant impact on the recent developments in conversation and discourse analysis. Studies of the structure of spoken Chinese discourse and the communicative strategies particular to Chinese are just beginning to appear. Most of the published works in this area are fairly recent and deal with inter-language situations.

Günthner (1991) discusses the use of Chinese proverbs in conversations between Germans and Chinese in German and between Chinese in Mandarin and concludes that Chinese speakers use proverbs to back up their statements on social norms and ethics. Günthner (1992) investigates gender-linked differences between the communicative strategies of Chinese and those of German speakers.

Tao and Thompson (1991) examine the transfer of English backchannels to Mandarin conversation when bilingual speakers whose second language (English) is dominant speak their first language (Manda-
They find that, for these speakers, while their first language may not be noticeably affected grammatically or phonologically by their dominant second language, it is in the realm of pragmatics and discourse strategies where the most dramatic effects can be seen. On the other hand, Young (1982) analyzes the discourse strategies used by Cantonese speakers as displayed in their formal English speech contexts and argues that these strategies could be related to the Chinese preference for harmonious interpersonal relationships. Kuo (1992a) adopts an interactional sociolinguistic approach to discourse analysis to examine Chinese interpersonal and political conflict talk, and Kuo (1992b) examines Chinese formulaic opposition markers as disagreement strategies in conflict talk at casual, private gatherings, pointing out that the use of this direct disagreement strategy suggests the speakers’ strong desire to maintain a sincere and independent self within the interactive frame.

7.6. Discourse, Grammatical Units, and Information Patterning

One of the most influential lines of research in recent spoken discourse studies has been that on information flow (Chafe, 1987, 1992, 1994; Du Bois, 1985, 1987; Gundel et al., 1993). Information flow has to do, not with the content of what is said, but with the status of concepts as ‘given’ or ‘new’.

Investigating the relationship among language, information flow, and text-type variation, S. F. Huang (1992) analyzes the degree of accessibility of Chinese referring expressions by examining oral narratives and written texts. Low accessibility referring expressions, such as proper nouns or bare NPs, tend to be used for first mentions, while high accessibility markers, such as zero anaphora and pronouns, tend to be used for second or later mentions, even when their antecedents are located across clauses or sentences. Text types also influence the choice. For each anaphoric expression, its antecedents in the spoken texts consistently favor the more recent positions than those in the written texts.

Chui (1994) is an investigation of information patterning in which nominal referents in Chinese conversation and spoken narratives are examined. Specifically, she finds that new information tends to occur in postverbal syntactic roles, either O (the object of a transitive clause) or S (the single argument of an intransitive clause) while given information tends to appear in preverbal syntactic roles, either A (the subject of a transitive clause) or S or O, thus suggesting a pragmatic, not syntactic, motivation for word order. Compared to non-humans, humans are more likely to be mentioned again as topics. Moreover, while non-humans are usually mentioned again in O, human nominals introduced in any grammatical role tend to reappear in later mentions in A or S, where reference to humans typically occurs. As a result, a strong S/A alignment
is in evidenced in topic continuity in Chinese. Showing that grammatical role is not the primary determinant of information patterning, topicality, and syntactic processes, Chui concludes that there is an iconicity between Chinese discourse and grammar.

The nature of assumed grammatical units such as clauses and sentences comes into question immediately when one begins to examine discourse data, particularly spoken data, which typically consist not of complete, ‘grammatical’ sentences with neat breaks at sentential boundaries, but rather of fragments of speech with breaks of various lengths at various junctures. Given the fragmentary nature of spoken discourse, we are bound to ask what the units are that speakers operate with if ‘clause’ and ‘sentence’ are not playing a major role.

One promising answer to this question is that speakers operate with a unit which is defined in terms of prosody. Chafe (1987, 1988, 1993) has termed such units ‘intonation units’, and further research (Ford and Thompson, to appear) has shown the significance of such units in understanding spoken interaction (for discussion of the identification of intonation units, see Du Bois et al., 1992, and Schuetze-Coburn et al., 1992). Following this line of thinking, Tao (1991) reports that full NP agentive arguments in Chinese tend to be separate intonation units from the verb and the patient in spoken discourse, and Tao (to appear), based on 12 ordinary conversations, analyzes the grammatical makeup of the Mandarin intonation unit and proposes that the predominant grammatical correlates of the Mandarin intonation unit be recognized as basic units of linguistic structure.

7.7. Text Types

The resurgent interest in the differences and similarities between spoken and written language (see especially Chafe and Danielewicz, 1987, and Chafe and Tannen, 1987, and references cited there) have influenced the study of Chinese text-type variation since the 1980s. While Tsao (1983) has addressed himself to features of written Chinese as compared to written English, Li and Thompson (1982) and Simon (1980) are among those who have been concerned with linguistic variation across spoken and written modes in Chinese. Christensen (1994) uses the ‘pear story’ film (Chafe, 1980) to elicit both oral and written narratives from a group of Chinese subjects, identifying a number of significant differences between spoken and written discourse.

Exploring non-prototypical spoken and written text types, Biq (1993) analyzes how television talk is captioned in Chinese characters. Although capturing the propositional content of talk is the basic function of screen captioning, it is found that some discourse markers which are insignificant to the propositional content may be retained in
the caption due to their function in the mechanisms for conversational turn-taking. It is concluded that captioning is not just a written mode of communication, but a written representation of interactional talk.

Echoing the discussion about Chinese punctuation in Tsao (1980), Biq (1994) proposes that the topic-prominent characteristic of Chinese motivates the pervasive use of the comma in Chinese texts, creating an apparent 'run-on' sentence phenomenon. She suggests that the use of the comma in written Chinese is the result of a preference for an author-oriented strategy over a reader-oriented one for text production.

Analyzing spoken data taken from a seminar and from three press conferences, Kirkpatrick (1993) finds that a 'because-therefore' sequence is used at discourse level, such that a claim is made only after the reasons for the claim are presented. This information sequencing pattern is further pointed out to be recursive, and its saliency correlates with the degree of spontaneity of the speech genre.

8. DIRECTIONS FOR FUTURE RESEARCH IN CHINESE FUNCTIONAL LINGUISTICS

From the above review, which is inevitably neither exhaustive nor comprehensive, we already have ample evidence that the approaches discussed provide a rich basis for studying how language structure is motivated and shaped by, and in turn encodes and reinforces, factors originating from non-linguistic sources, such as human cognitive endowments and limitations, and principles of social interaction.

A number of promising directions are indicated by the work to date. We expect that the functional, cognitive, and discourse linguists working on Chinese will continue to explore the relationship between language structure and its socio-cognitive foundations. We conclude this chapter by submitting several directions for future research which, in our opinion, show the greatest promise of deepening our understanding of how language is shaped by its function as a tool of human communication.

8.1. Cognitive and Semantic Studies

Recent developments in the study of prototypes and categories, discussed above, have proved that this is a rich area for exploration for Chinese, particularly since the paucity of morphology renders semantic and categorial questions especially challenging. We look forward to further studies in this area.
8.2. Integration of Linguistic and Non-linguistic Signs

A largely unexplored area for discourse research is the interaction, collaboration, and coordination between linguistic and non-linguistic signs in communication, especially in face-to-face situations. The orchestration among language, gesture, and gaze has been widely discussed; see Goodwin (1986), Goodwin and Goodwin (1986), Schegloff (1984), and Streeck (1988) for discussions of the role of gesture in the organization of talk, Kendon (1972, 1980) for a demonstration of coordination between gestures and prosodic units, and Streeck and Hartge (1992) for a discussion of gestures at transition-relevance places. The implications for Chinese of these studies has yet to be investigated; compiling an extensive video database of a variety of interactions in Chinese would be a first step towards such an investigation.

8.3. Grammaticalization across Historical Periods

The grammaticalization process by which new grammatical morphemes emerge over time is a rich and well-studied area; the mechanism by which this happens, by which grammar emerges from ordinary spoken discourse, has been discussed cross-linguistically by a number of researchers (Bybee and Pagliuca, 1985; Haiman, 1983; Heine and Traugott, 1991; Heine et al., 1991; and Hopper and Traugott, 1993). We look forward to further research on how the grammaticalization process accounts for the development of grammatical morphemes in Chinese, such as auxiliaries and modality expressions.

Historical data for the Chinese language is another fertile area upon which to build an understanding of how language works. The stage-by-stage development of language over time can be contrasted with synchronic linguistic variation in order to discover recurrent grammaticalization patterns.

8.4. Orality and Literacy

In view of the large residue of Classical Chinese in both spoken Mandarin and written Chinese, the issue of linguistic variation across modes of communication becomes particularly complex and interesting. To what extent is the grammar affected by characteristics of Classical Chinese? Further, how are the grammars of spoken Mandarin and of written Chinese affected by the logographic nature of the writing system?
8.5. Variation across Text Types

More research is needed comparing different types of discourse, not only between prototypical spoken and written language, but also among different types of discourse within these two large groups. The careful study of text types constitutes one important approach to an understanding of the relationships among grammar, rhetorical organization, and communicative goals.

8.6. Variation across Chinese Languages

As noted above, we have reviewed only research relating to Mandarin, but it is obvious that research into other Chinese languages is of paramount significance in understanding the form-function correspondence. Given the genetic relationship and the increasing interactions among Chinese languages, such comparisons promise a fertile area for the study of grammaticization.

8.7. Conversation and Grammar

Work on the relationship between grammar and conversational discourse has just begun. Tai and Hu (1991) is a promising example of the application of the Conversation Analytic approach of Sacks et al. (1974) to issues of word order. What has emerged so far has been intriguing, and suggests that there is much to learn in this area. Important issues include the management of information flow and its influence on the grammar of noun phrases (P. Chen, 1987a; Tao, to appear), the grammar of interactional sequences, and the functions of various morphemes occurring only in spoken discourse, as described above, and the nature of 'backchannel' behavior in conversation (Tao and Thompson, 1991; Clancy et al., to appear b). Only if the principles of conversational organization are clearly articulated and related to more general principles of cognitive and social organization can we appeal to them in attempting to understand why grammatical systems have the properties they have. The particular challenge with Chinese is, of course, that morphology gives us so few clues to the organization of grammar; this suggests that studying grammar in terms of its discourse context may be critical if we are to go beyond current descriptions to try to explain why Chinese grammar works the way it does.

A particularly important area of study for which everyday conversational data appear to be especially critical is that of final particles. The studies of Kwok (1984) and Luke (1990) for Cantonese provide excellent models for the use of large databases of conversational language in ascertaining the functions of final particles.
8.8. Units of Grammar

As noted above, a new approach to grammatical units has been articulated in Ford and Thompson (to appear) and in Tao (to appear), moving away from assumptions about ‘clause’, ‘sentence’, and even ‘NP’, towards units which integrate grammar and prosody. Using a large database of conversational Mandarin, Tao takes as his point of departure the prosodically defined unit, the ‘intonation unit’, rather than a grammatical unit such as ‘clause’, and then proceeds to explore the grammar of these prosodic units. In this way, recurrent grammatical patterns can be established for actual spoken Mandarin without relying on notions of clausal structure which may be inappropriate for Mandarin. This approach opens up a new line of research into the relationship between grammatical and prosodic units, and between grammar and production vs. grammar and comprehension. Particularly noteworthy are studies that clearly show that the units that determine the use of ‘final’ particles are prosodically, rather than grammatically, defined units (Clancy et al., to appear a; Luke, 1990 (for Cantonese); and Maynard, 1989 (for Japanese)); pursuing the implications of these findings for Mandarin stands out as a major agenda item for the immediate future.

An extension of the project of re-examining the units of conversational language is an interest in the way in which these units are combined in everyday talk. Taking such pioneering studies as Chafe (1988) on intonation unit combining in English conversation, and Eifring (1993) on clause combining in modern standard written Chinese as starting points, the groundwork is well laid for an extensive investigation of connected spoken discourse to determine the cognitive, grammatical, and rhetorical processes that govern the production and comprehension of combining speech units, be they grammatical or prosodic.

8.9. Grammatical Relations

A major issue in Chinese grammar over the last 50 years has been the issue of grammatical relations. Most functionalists agree that grammatical relations are not universal, but language-specific (see Comrie, 1989, for an example of this point of view). There seems to be a general consensus among Chinese functionalists that grammatical relations are not useful in a grammatical description of Chinese; the arguments in LaPolla (1990, 1993) and Tao (to appear) are convincing, and suggest a number of avenues for further research into what a grammar of Mandarin without grammatical relations should look like.
8.10. Database Issues

When the focus of research is discourse issues, the need to build large databases of both written and spoken Chinese becomes obvious. With the emergence of scanners and CD-ROM technology, and models of English corpora to build on (e.g., Aijmer and Altenberg, 1991), building such corpora is no longer the daunting task it once was; in fact work has already begun at Academia Sinica in this direction (Huang and Chen, 1992; C-R Huang, 1994).

9. CONCLUSIONS

In summary, discourse and functional approaches to the study of Chinese have resulted in a deeper understanding of how Chinese grammar arises from and is related to the cognitive and social systems within which it functions. We enthusiastically look to future research to further explore these relationships and to becoming more knowledgeable about the way Chinese is used as a vehicle of communication by its speakers.

ACKNOWLEDGEMENTS

We thank Hilary Chappell, Ping Chen, Marie-Claude Paris, Randy J. Lapolla, and Hongying Tao for their comments on an earlier version of this chapter, and take responsibility for the way we have integrated their remarks into this version. Authorship of this work is shared jointly.

NOTES

1 Because we feel that the materials reviewed here should be generally accessible, we consider only papers and books that are published or in press in readily available forms; we therefore exclude papers presented at conferences, works in progress or in journals that are not easily accessible, and unpublished M.A. theses. We also exclude unpublished Ph.D. dissertations, except in our discussion of contemporary research, which has not yet had an opportunity to be published, and directions for future research. Although there has been valuable research on Chinese languages other than Mandarin, due to space limitations we have been constrained to limit our discussion to investigations involving Mandarin. For the rest of this paper, the terms ‘Mandarin’ and ‘Chinese’ will be used interchangeably.

In a survey of this type, there are bound to be some omissions due to difficulties in keeping up with a rapidly growing literature; omission by no means indicates lack of regard. We apologize in advance to any scholars whose work has either inadvertently escaped our attention or appeared too late to be incorporated here.

2 See also an application of cognitive grammar to the aspect marker le in Hsiao (1991).
ABBREVIATIONS:

BLS = Berkeley Linguistics Society
CAAAAL = Computational Analyses of Asian and African Languages
CLAO = Cahiers de linguistique - Asie Orientale
CLS = Chicago Linguistic Society
JCLTA = Journal of the Chinese Language Teachers Association
JCL = Journal of Chinese Linguistics
THJCS = Tsing Hua Journal of Chinese Studies
YY = Yuyan Yanjiu
ZY = Zhongguo Yuwen

Biq, Yung-O: 1987, The Semantics and Pragmatics of cai and jiu in Mandarin Chinese, Taipei: Crane. (Also distributed by the Indiana University Linguistics Club.)
FUNCTIONAL APPROACHES TO CHINESE


Chi, Telee R: 1985, A Lexical Analysis of Verb-Noun Compounds in Mandarin, Taipei: Crane.
Chu, Chauncey C.: 1985, ‘How would you like your ne cooked?’, JCLTA 20, 71-78.
Chu, Chauncey C.: 1988, ‘Yufa, Yuyi ji Yuyong zhi Xianhu Yingxiang’ [Interplay of Syntax, Semantics and Pragmatics in Mandarin Chinese], YY 14, 159-166.
FUNCTIONAL APPROACHES TO CHINESE


Hoa, Monique: 1983, ‘La réciprocité en chinois contemporain’, *CLAO* 12, 21-64.


Iljic, Robert: 1988, 'Is there a lexical category of absolute adjective in Mandarin Chinese?', JCL 16, 151-166.
King, Brian: 1986, 'Ne -- a discourse approach', JCLTA 21, 21-46.
Kuo, Sai-hua: 1992b, 'Formulaic opposition markers in Chinese conflict talk', Georgetown University Round Table on Languages and Linguistics (GURT).
Kwok, Helen: 1984, Sentence Particles in Cantonese, Centre of Asian Studies, University of Hong Kong, Hong Kong.
Lakoff, George and Johnson, Mark: 1981, Metaphors We Live By, Chicago: University of Chicago Press.
Li, Charles N. and Thompson, Sandra A.: 1974a, ‘Co-verbs in Mandarin Chinese: Verbs or prepositions?’, *JCL* 2, 257-278.


Li, Ying-che: 1972, ‘Sentences with be, exist, and have in Chinese’, Language 48, 573-583.


Lü, Shuxiang: 1941 (1957), *Zhongguo wenfa yaolue* [Outline of Chinese Grammar], Hong Kong: Shangwu.


Lü, Shuxiang: 1980, *Xiantai Hanyu babaici* [800 Words in Modern Chinese], Beijing: Shangwu.


Paris, Marie-Claude: 1979a, ‘Some aspects of the syntax and semantics of the lian .. ye/dou construction in Mandarin’, *CLAQ* 5, 47-70.


Shifu: 1985, ‘We’re still cooking ne!’, *JCLTA* 20, 95-97.


Tao, Hongyin: To appear, Units in Mandarin: Prosody, Discourse and Gramamar, Amsterdam: John Benjamins.


Thompson, Sandra A.: 1973b, ‘Transitivity and some problems with the ba construction in Mandarin Chinese’, JCL 1, 208-221.


Zhu, Dexi: 1956, ‘Xiandai Hanyu xingrongci yanjiu [A Study of Adjec-
tives in Modern Chinese], Yuyan Yanjiu 1, 83-112.

Zhu, Dexi: 1979, ‘Yu dongci gei xiangguan de jufa wenti’ [Syntactic problems associated with the verb gei], Fangyan 2, 81-87.
