The Mandarin Disposal Constructions:
Usage and Development[*]

Zhuo Jing-Schmidt[1,2] and Hongyin Tao[3]
University of Oregon[1]
University of Cologne[2]
University of California, Los Angeles[3]

The Mandarin Chinese disposal constructions involving *ba* and *jiang* have been considered synonyms that differ only in terms of register. This paper reexamines the status of *ba* versus *jiang* in the light of spoken and written corpus data and new insights that have arisen from recent hypotheses concerning the meaning of the *ba*-construction. We postulate a dynamic system of disposal in which *ba* and *jiang* share the basic meaning of disposal while contrasting in terms of subjectivity and emotionality. By treating meaning and broad discourse contexts (genres) as prototypically organized categories, which demonstrate conceptual and discourse principles, we are able to explain the precise distributional patterns of the two items across a variety of genres in two spoken and written language corpora. We conclude that dynamic language use gives rise to language change along the diachrony-synchrony continuum and beyond the simple speech and writing dichotomy. This study also shows that the symbiotic development of subjectification and objectification in the disposal system raises interesting questions for theories of grammaticalization.

Key words: disposal, *ba*-construction, *jiang*-construction, subjectivity, objectivity

1. Controversy surrounding *ba* and *jiang*

The Mandarin *ba*-construction is arguably the most famous grammatical construction in linguistics. Equally famous is the fact that it is one of the most poorly understood linguistic phenomena.[1] Because it is such a well-known construction, a brief description

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[1] We are reminded of this paradox of famousness by Scott DeLancey who points to the ritualized morning sessions uniquely devoted to the *ba*-construction at every meeting of the International

of its structure will suffice here and the interested reader may consult Jing-Schmidt (2005) for an extensive treatise. Typically, a sentence involving the *ba*-construction as predicate takes an agent-like subject. The subject is followed by the word *ba* which introduces the patient or direct object, which in turn is followed by a verb phrase describing the action along with its consequences on the patient. Although different names have been suggested to describe the function of *ba*, there seems to be a wide consensus among linguists that it is an object marker at the grammatical level. The same structural characterization holds for the *jiang*-construction, except that here *jiang* instead of *ba* is the object marker.

Traditionally, the *ba*-construction has primarily been analyzed at the clausal level; as such it is considered to contrast with VO structures and to denote disposal, transitivity, affectedness, or causativity (Chao 1968, Wang 1980[2001], Lü 1955, Thompson 1973, Li & Thompson 1981, Chappell 1991, Sun 1996, Sybesma 1999, B. Zhang 2000, among many others). For example, Li & Thompson (1981:483) compare the two structures in (1a-b) below:

(1) a. 我已經賣了我的汽車。
         wo   yijing   mai le   wo   de   qiche
         1SG   already sell PFV   1SG GEN   car
         'I already sold my car.'[2]
     b. 我已經把我的汽車賣了。
         wo   yijing   ba   wo   de   qiche mai le
         1SG   already BA   1SG GEN   car   sell PFV/CRS
         'I already sold my car.'

They state that the *ba*-construction, as exemplified by (1b), involves a specific and definite noun phrase denoting the patient and conveys the message of disposal, whereas the regular VO structure, as in (1a), does not need to have these features. While the notion of "disposal" remains contentious in Chinese linguistic literature (see Jing-Schmidt 2005 for a recent summary), it is not our main concern here. We take the term "disposal" simply to mean a high degree of transitivity expressed in a verbal clause whereby the object of the verbal clause is accompanied by a marker (typically *ba*, and as will be discussed later, also *jiang*) and is in some manner affected by the action named by the verbal expression.

Sino-Tibetan Linguistics Conference he has witnessed (p.c. to the first author, March 2008).

[2] Throughout this paper morphosyntactic glosses are provided only for the relevant portions of the example. Abbreviations used in the glosses are: 1PL=first person plural; 1SG=first person singular; 2SG=second person singular; ASSO: associative marker; BA=the object marker *ba*; CLF=classifier; CRS=Currently Relevant State; EXP=experiential; GEN=genitive; JIANG=the object marker *jiang*; NEG=negator; PFV=perfective; PRT=utterance final particle.

Recent studies of the *ba*-construction have begun to transcend constituent-oriented sentence grammar. Note that the semantics of the *ba*-construction is best characterized by subjectivity and emotionality. Shen (2002), for example, argues that *ba* denotes subjective disposal in terms of perspective and emotion. By comparing the *ba*-construction with the common VO-construction, he observes that *ba* is used to signify the speaker's subjective establishment of a disposal relationship between two participants of an event. The speaker assigns to the event the respective roles of agent and patient even though such a role relationship may not be readily mapped onto any real world interaction. The subjectivity of the *ba*-construction, according to Shen, reflects three separate factors: (i) the speaker's emotion; (ii) the speaker's perspective; (iii) the speaker's epistemicity.

Jing-Schmidt (2005) arrives at similar conclusions by examining the interaction of the *ba*-construction with both clausal and transclausal features including verbal dynamism, number of participants, verbal modification denoting change, information structure, textual linking, conceptual metaphor, and modality. She argues that the *ba*-construction is a construction signaling discourse dramaticity in terms of cognitive salience on the one hand and subjectivity and emotionality on the other. In a further attempt to establish subjectivity and emotionality as essential features of the semantics of the *ba*-construction, Jing-Schmidt (2007a) adopts a cognitive-affective model to explain Wang's intuition that the *ba*-construction is associated with something "unhappy or unfortunate" (Wang 1980[2001]:414). Based on the psychological principle of negativity bias, which is a specific representation of selective attention, she hypothesizes that, since language is an integral part of cognition, the use of the *ba*-construction should reflect this bias if it indeed is a device of construing subjectively and emotionally relevant events. Frequency counts confirm that significantly more negative events than positive or neutral events are depicted by using the *ba*-construction while the VO-construction tends to be used to describe neutral events. Jing-Schmidt thus concludes that subjectivity and emotionality are central to the semantics and pragmatics of the *ba*-construction.

Much less discussed in the literature are the similarities and differences between *ba* and its close "synonym" *jiang*, both of which can help form a disposal structure. Example (2) gives a case of *jiang* used in a disposal construction.

(2) 按 "删除" 按鈕可將存儲在文件中的邏輯字删除掉。
    an   "shanchu" anniu   ke   jiang   cunchu zai
    press delete   button can JIANG   save   in
    wenjian zhong de   luoji   zi   shanchu diao
    file   inside ASSO logic character delete complete
    'Pressing the 'delete' button can erase the logic characters saved in the file.'
    (From Tao 1999:ex.(8))

The disposal marker *jiang* in this example can be replaced with *ba* without significantly altering the meaning of the utterance.

Among those who have compared the *ba* and *jiang* constructions, it is generally agreed that the relationship between *ba* and *jiang* involves a historical perspective. It is also assumed, implicitly or explicitly, that their main difference is one of contrastive register. Wang (1980[2001]:408-416) contends that *jiang* was used in the disposal construction earlier than *ba* which was more commonly used in the disposal construction during and following the mid and late Tang dynasty (8th-10th century). He suggests that the two constructions have coexisted ever since without being functionally complementary.[3] In fact, Wang once posited that the use of *jiang* in *Hong Lou Meng*, a renowned mid-eighteenth century novel, was an attempt at archaism, a claim which he later amended. Whether his original observation is valid or not remains to be seen. As we shall discuss later in this paper, the use of *jiang* does seem to give rise to an archaic style.

More recently, a more dynamic proposal was made in Shen (2002). Shen suggests that the disposal construction (both with *ba* and with *jiang*) initially emerged in response to the pragmatic necessity of expressing subjectivity. With the increasing complexity of the syntactic structure, however, the disposal construction has come to lose its subjective sense as a result of the inner systemization of grammar. *Jiang* has been undergoing a weakening process in terms of expressing subjectivity since the end of the Qing dynasty (early 20th century). Shen hypothesizes that similar weakening processes are likely to happen to *ba*. Jing-Schmidt (2005), employing quantitative data, shows that *ba* replaced *jiang* to express dramaticity (including subjectivity and emotionality) by the 18th century. She maintains that *jiang* has since become a stylistic variant of *ba*, mainly used in writing.

In an attempt to pin down the contrast between *ba* and *jiang* more accurately, Tao (1999) investigates distributions of *ba* and *jiang* in written Mandarin and concludes that it is inaccurate to assume that *jiang* can be used in any written register. Many varying written genres are subsumed under the all-too-general concept of "written register", and Tao contends that, contrary to what many have assumed, *jiang* is not common in some of the most typical written genres (e.g. newspaper editorials). Rather, it is more restricted to written procedural discourse. J. Zhang's (2001) study of the distributions of *ba* and *jiang* in scientific discourse and conversational discourse confirms Tao's conclusion.

In our contemplation of the existing literature on *ba* and *jiang*, it is clear that recent text-based studies have made important inroads into the nature of *ba* and *jiang* constructions individually. There is, however, much to be understood about the interrelationship between *ba* and *jiang* and the underlying principles behind the interaction among their

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[3] Wang does indicate that *jiang* is associated with the written register and *ba* with the spoken register.

diachronic development and synchronic distributions. It is also clear that an integration of cognitive and discourse functional perspectives offers a promising solution for the issues at hand. To this end we note that two general issues are fundamental to solving the controversy about the status of *ba* and *jiang* in modern Mandarin Chinese. The first issue concerns the nature of "genre" and the second the nature of language. In the following sections, we shall discuss them in turn.

2. A conceptual definition of genre

What exactly is a genre? Even though the notion is difficult to define precisely, many linguists have come to the understanding that a genre is nothing more than linguistic conventions used in a particular context to fulfill certain social communicative needs (Bazerman 1994, Freedman & Medway 1994, Halliday 1978, Halliday & Hasan 1989, Swales 1990). Naturally, specific communicative needs are associated with specific objects of communication and particular modes of verbal expression; thus, members of a certain genre are likely to display what Wittgenstein (1953) calls "family resemblance". That is, members of a genre resemble one another in terms of conventionalized linguistic configurations in accordance with the given communicative intentions (cf. Schutte 1990: 58). In this family resemblance relationship, linguistic conventionality is necessarily a matter of degree and prototypicality for a number of reasons. First, the production of texts is essentially a personal creative act motivated by experiential peculiarities and sustained by linguistic creativity (Stierle 1981:538). Accordingly, individual texts within a genre are bound to represent varying degrees of typicality instead of all-or-none attributes (Swales 1990). Second, from the perspective of Cognitive Linguistics, individual texts almost always diverge in the manner of "construal" because of language users' individual "focal adjustment", to use Langacker's words (1987). Moreover, overlapping communicative needs within a given context are likely to disturb a strict categorization of genre based on criterial features, which in turn may further contribute to the fuzziness of the boundaries between genres. Thus, the conventionality of linguistic configurations associated with a genre is only conceivable at a highly schematic level which may be vaguely called "tradition". In reality, different genres pertain to different contexts of language use which is anything but a truth-conditional matter and is better handled with reference to the conceptual notion of prototypical categorization as explicated by Rosch and others (see Rosch 1975 and Lakoff 1987 on the psychological reality of prototype effects in human categorization in general, and Seiler 1993 and Taylor 1995 on prototypical categorization in linguistics).

Having hopefully demystified "genre" by specifying its use-based prototypical nature within a linguistic paradigm, we are confronted with the next question: what might have

motivated the different distributions of *ba* versus *jiang* in language use if, as it were, their uses contrast synchronically (i.e. across genres)? The answer lies in the nature of language.

3. Contrastive meanings in grammar as a dynamic conceptual system

We view grammar as essentially a dynamic system of constructions communicating meanings (Langacker 1987, Goldberg 1995) and arising out of language use (Hopper 1998). One immediate corollary of this view is that the employment of different constructions serves the function of communicating different intentions.

Within this conceptual framework the notion of "synonyms" must be judged as futile and rejected on account of its truth-conditional orientation. Following Goldberg's (1995: 67) formulation of "The Principle of No Synonymy" and the earlier functional linguistic tradition as represented in Bolinger (1977) and Haiman (1983), two syntactically distinct constructions must be semantically and/or pragmatically distinct. As far as the current analysis is concerned, it is crucial to view the *ba*-construction and the *jiang*-construction as irreducible wholes and to view the difference between *ba* and *jiang* in terms of constructional distinction rather than mere lexical alternation. On this view, any contrast in the use of the two constructions should be explained in terms of a semantic-pragmatic contrast. Note that instead of strictly separating semantic and pragmatic distinctions, we prefer to consider such distinctions as continuous, for semantics is dynamic in the sense that it is largely shaped by pragmatic use.

4. The dynamic system of disposal

Bearing in mind that semantic contrast is the conceptual basis of pragmatic use, a contrastive approach to *ba* and *jiang* suggests itself. Thus, we propose that the two entities form the system of disposal in which they share the basic meaning of ENTITY MANIPULATION but contrast in the semantic-pragmatic substance of subjectivity and emotionality. The basic meaning of the disposal system—ENTITY MANIPULATION— is understood as action, movement, and change in space, time, and ownership with regard to manipulable entities (Hopper & Thompson 1980) including objects, people, and abstract entities. The conceptual reality underlying this basic meaning pertains to cognitive salience or noticeability in terms of high interactivity, dynamicity, motion, and change as specified by Jing-Schmidt (2005).[4] The meaning of SUBJECTIVE MANIPULA-

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[4] Recent neuropsychological studies have uncovered the neural substrata of object manipulation in the human brain. Specifically, a particular class of neurons has been found to activate when

TION OF ENTITY involving *ba* is understood in terms of the subjective construal of events involving the creation of fictive entities and the construction of fictive motion and fictive change whereby metaphorical mappings between conceptual domains play an important role. (Jing-Schmidt 2007a; see also Langacker 1987 and Talmy 2000 on fictivity in construal). This meaning pertains to mental operations on the part of the speaker with regard to his/her interpretation of the world for the purpose of enacting his/her stance and making interpersonal investments.[5] By contrast, the meaning of OBJECTIVE MANIPULATION OF ENTITY involving *jiang* is conceived of in terms of increased objectivity, indicating that the speaker's stance and emotion are maximally removed from the proposition so as to allow a greater measure of precision, authority, formalness, and antiquity, as detailed by Tao (1999).

The system of disposal features the semantic opposition between subjectivity and objectivity. In this sense, it is essentially a sign-oriented analytical construct which draws attention to the fact that selecting one signal-meaning unit is simultaneously a rejection of the other signal-meaning unit (Huffman 1995, Kirsner 1993). This said, however, it is important to note that the system of disposal is understood as exhibiting a dynamic prototypical organization rather than a static binary distinction. That is, within

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people conduct goal-directed actions of object manipulation as well as when people watch other people carry out such actions (Rizzolatti et al. 2001, Gallese 2003, Gallese et al. 2004). Because of their ability to activate in mirroring others' actions of object manipulation, these neurons are called mirror neurons. The activities of mirror neurons are evolutionarily continuous, as they were first identified in the premotor cortex of the macaque monkeys (Gallese et al. 1996). The discovery of the mirror neurons confirms, among other things, the idea that goal-directed object manipulation and its mental representation have left biological imprints in the brain, thus providing powerful evidence that object manipulation is one of the most fundamental experiences in human evolution. Seen in this light, the basic meaning of ENTITY MANIPULATION that we postulate for the *ba*/*jiang* construction is psycho-physiologically grounded. It reflects the strengths of a conceptualist approach to grammar in the sense of Goldberg (1995) who argues that basic grammatical constructions encode basic human experiences.

[5] De Smet & Verstraete (2006) make an effort to provide a typology of subjectivity by distinguishing between different types of subjectivity. According to their proposal, pragmatic subjectivity is not semanticized but is a matter of the speaker's use of a linguistic sign; semantic subjectivity is inherent in the meaning of a linguistic sign. Within the class of semantic subjectivity, differentiations are made between two subtypes: Ideational subjectivity describes the speaker's attitude or belief states whereas interpersonal subjectivity works to enact them. While this categorization may help create the feeling of clarity and control with regard to the rather inconsistently defined notion of subjectivity, its descriptive strength is limited by the binary approach to a phenomenon that resists a clear-cut demarcation. Specifically, it fails to acknowledge the continuum between semantics and pragmatics, a continuum that reflects the ongoing process of language change whereby meaning and use co-evolve continuously.

the semantic system of disposal, *ba* and *jiang* share the core meaning of disposal in an abstract sense of entity manipulation. On the other hand, *ba* prototypically signifies subjectivity and emotionality whereas *jiang* prototypically signifies objectivity and precision. By recognizing the prototype effect in respect to the semantics of *ba* and *jiang*, we regard their semantic contrast as relative rather than absolute. On this view, the two signs contrast most strongly in their respective prototypical uses. Their opposition, however, is likely to be neutralized in the event that either sign is used non-prototypically. Consequently, in its prototypical instantiations, the *ba*-construction will display a high degree of attitudinal enactment and emotionality. As an example, consider (3) below:

(3)　女人把男人當大餐，
　　　nüren　ba　nanren　dang　　dacan,
　　　women　BA　men　　treat:as　banquet
　　　而男人把女人當點心的高反差生態 [...]
　　　er　　　nanren ba　nüren　dang　　dianxin　de　　gao　fancha　shengtai
　　　while men　　BA　women treat:as　snack　　ASSO　high　contrast　condition
　　　'[This is a] high-contrast condition in which women treat men as the banquet whereas men regard women as the snack.' (Jing-Schmidt 2007a:85, ex.(7))

In (3), we witness the highly subjective construal of two fictive events by means of the *ba*-construction. The mental process at work here is distinctly metaphorical: The speaker expresses her disapproval of, and dismay towards the imbalanced relationship between men and women by mapping the contrast between 'banquet' and 'snack' in the familiar and worldly domain of eating onto the different ways men and women treat each other in the socio-emotional domain. Importantly, almost all the parameters of prototypical transitivity as specified by Hopper & Thompson (1980) (e.g. telicity, punctuality, etc.) are missing here at the cost of the enactment of the speaker's stance and emotionality. It is therefore crucial to point out here that the situation being described does not lend itself to an aspectual analysis in terms of telicity and instantaneity, as some scholars (e.g. Liu 1997) have suggested. The agents do not bring about any real change in the spatio-temporal reality. Rather, the speaker perceives a fictitious transformation in the attitude held by the agents.

　　　In its prototypical instantiations the *jiang*-construction, as seen in example (2) of §1, exhibits exactly the opposite qualities including precision, authority, formalness, and antiquity.

　　　Emphasizing the prototypical organization of the semantic system of disposal is required both by the general reality of our conceptual organization characterized by fuzzy boundaries between categories and the gradation from center to periphery of a given

category (Rosch 1973, 1975, Langacker 1987, Lakoff 1987, Taylor 1995, Geeraerts 1997, Talmy 2000, Croft & Cruse 2004, Seiler 1993) and by the particular scalar nature of linguistic subjectivity/objectivity as the subject of the current investigation. Following from the prototypical organization of the system of disposal, we can further describe the relationship between *ba* and *jiang* in terms of a continuum along the cline from subjectivity and emotionality towards objectivity and precision which occupy the respective poles:
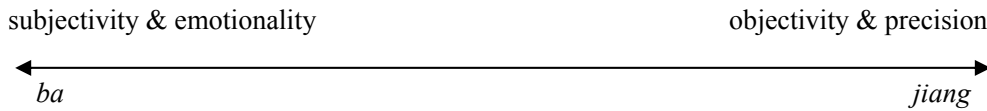
subjectivity & emotionality   objectivity & precision

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  ba   *jiang*

Figure 1: The semantic continuum of *ba* and *jiang* along the cline of subjectivity

As the figure above illustrates, subjectivity and emotionality are maximally profiled in the meaning of *ba* while objectivity and precision are maximally profiled in the meaning of *jiang*. This observation, however, does not imply that objectivity and precision are entirely absent in the meaning of *ba* or that subjectivity and emotionality are completely excluded from the meaning of *jiang*. Rather, the difference lies in the degree of profiling as determined by the specific communicative need central to a given discourse type. In other words, the language user prioritizes the choice of meaning on the strength of its relevance to the specific communicative intention underlying the discourse type (Sperber & Wilson 1995). By stressing the dynamic interaction between the communicative goal and the profiling of meaning, we treat the selection of construction in discourse as an integral part of human cognition and communication viewed in the large scheme of adaptive behavior (Gibbs 2006). Because such a dynamic view is crucial to the conception of the system of disposal, we consider the term "dynamic system of disposal" an apt characterization of the phenomenon in question.

Because of the prototypical fashion in which a genre is conventionalized, especially with regard to the suitability of expressing attitude and emotion, one may assume that different types of discourse (genres) are likely to differ in the degree of subjectivity and emotionality. Given this assumption and given our hypothesis of the dynamic prototypical organization of disposal along the cline of subjectivity and emotionality, we expect textual distributions of *ba* and *jiang* across genres to reflect the prototypical organization of the disposal system. Specifically, we predict that *ba* will be used significantly more in those genres where the construal of subjectively and emotionally relevant events predominates than in those that are primarily concerned with the objective and precise description of procedures and processes. On the other hand, we expect the opposite to be true with

regard to *jiang*. In the following section, we shall test our predictions on the basis of two types of natural language corpora.

5. Distributions of *ba* and *jiang* across genres in modern corpora
5.1 Data

We conducted frequency counts of *ba* and *jiang* as used in two modern Chinese corpora. The first is the Lancaster-Los Angeles Spoken Chinese Corpus (LLSCC) compiled by Richard Xiao and Hongyin Tao. This corpus contains one million words, with genres ranging from spontaneous conversations, telephone calls, and narratives to TV talk shows, edited narratives, and scripts of plays.[6] The second is the Lancaster Corpus of Modern Chinese (LCMC, McEnery & Xiao 2004). LCMC is a one million word corpus of written Chinese. Its design is modeled on that of well known modern English corpora such as the Brown Corpus (Francis & Kučera 1964) and the LOB Corpus (Johansson et al. 1978). The LCMC contains a variety of written genres, including but not limited to press reports, newspaper editorials, fiction, academic prose, skills, trades, and hobbies. The markup of the text genres in both corpora makes it possible to search tokens of language use based on genre categories.

Let us begin with the spoken corpus, the LLSCC. The LLSCC displays an over-whelming preference for *ba*, as shown in Table 1.

Table 1: Distribution of *ba* and *jiang* in the spoken corpus

	N	%
ba	3758	99.7
jiang	11	0.3
Total	3769	100%

Interestingly, all 11 of the instances of *jiang* constructions are found in the same source: *Beijing Ren* (Zhang & Sang 1986), which is a collection of narrative oral histories edited by two writers and published in print. This suggests that the written register may indeed be the preferred place for *jiang*.

In the written language corpus—the LCMC—the situation is, unsurprisingly, not as one-sided. Table 2 shows the respective observed frequencies of *ba* and *jiang* in the 15 categories of the LCMC.

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[6] For more information about this spoken corpus, visit the URL: http://bowland-files.lancs.ac.uk/corplang/llscc/.

Table 2: Observed frequencies of *ba* and *jiang* across written genres

Genre	*ba*	*jiang*	Row total
Humor	92	10	102
General fiction	154	34	188
Skills, trades and hobbies	184	181	365
Adventure and martial arts fiction	138	76	214
News editorials	116	10	126
News reviews	73	4	77
Biographies and essays	327	71	398
Romantic fiction	117	22	139
Mystery and detective fiction	93	33	126
Religion	61	15	76
News reportage	148	25	173
Science fiction	19	5	24
Popular lore	139	57	196
Academic prose	246	103	349
Reports and official documents	83	31	114
Column total	**1,990**	**677**	**2,667**

Since written language displays more complex patterns than spoken language and since our goal is to accurately determine the relationship between genre difference and the semantic-pragmatic contrast between *ba* and *jiang*, it would be more revealing if we could, for the moment, focus on the written language and its subgenres.

Our immediate task, then, is to investigate the correlation between the use of the two disposal constructions and the subgenres of the written language. That is, we want to compare the observed frequency (O) of each item in each subgenre with the expected frequency (E) of each item in each subgenre, should it be true that written genres have no impact on frequency distributions. Thus if we employ the null hypothesis that there is no difference between the frequencies found in each subgenre, we may decide what the frequencies might have been if there were no correlation between genre and frequency. In such a situation, the frequency ratio of *ba* to *jiang* across all 15 of the subgenres would be the same and equal to the ratio between the respective total frequencies of *ba* and *jiang*. To continue, it is necessary to calculate the Es on the basis of the Os and compare the two types of frequencies; any differentials between the two would yield useful information about the validity of the null hypothesis.

Table 3 shows the values of the Es of *ba* and *jiang* in the same 15 written genres.

Table 3: Expected frequencies of *ba* and *jiang* across written genres

Genre	*ba*	*jiang*	Row total
Humor	76.1	25.9	102
General fiction	140.3	47.7	188
Skills, trades and hobbies	272.3	92.7	365
Adventure and martial arts fiction	159.7	54.3	214
News editorials	94	32	126
News reviews	57.5	19.5	77
Biographies and essays	297	101	398
Romantic fiction	104	35	139
Mystery and detective fiction	94	32	126
Religion	57	19	76
News reportage	129.1	43.9	173
Science fiction	17.9	6.1	24
Popular lore	146.2	49.8	196
Academic prose	260.4	88.6	349
Reports and official documents	85.1	28.9	114
Column total	**1,990**	**677**	**2,667**

To allow an immediate and straightforward comparison between the Os and the Es, we present, in Table 4 below, the raw differentials between the Os and the Es for each item in each subgenre. The subgenres are then rearranged based on the value of the differentials (expressed with plus and minus of the same absolute number). The (O-E) ^{2}/E values, on the other hand, allow an estimation of whether the differences are statistically significant. On account of these values, the subgenres in which O and E differ significantly for either *ba* or *jiang*, i.e. with values larger than 3.84, are printed in bold type in Table 4.

Table 4: Differentials between OF and EF of *ba* and *jiang*

Genre	*ba*		*jiang*	
	(O-E) ^{2}/E	Diff.	(O-E) ^{2}/E	Diff.
Biographies and essays	**3.03**	**30**	**8.91**	**-30**
News editorials	**5.15**	**22**	**15.13**	**-22**
News reportage	**2.77**	**18.9**	**8.14**	**-18.9**
Humor	**3.32**	**15.9**	**9.76**	**-15.9**

News reviews	**4.18**	**15.5**	**12.3**	**-15.5**
General fiction	**1.34**	**13.7**	**3.93**	**-13.7**
Romantic fiction	**1.63**	**13**	**4.83**	**-13**
Religion	0.28	4	0.84	-4
Science fiction	0.07	1.1	0.20	-1.1
Mystery/detective fiction	0.01	-1	0.03	1
Reports/official documents	0.05	-2.1	0.15	2.1
Popular lore	0.35	-7.2	1.04	7.2
Academic prose	0.80	-14.4	2.34	14.4
Adventure/martial arts fiction	**2.95**	**-21.7**	**8.67**	**21.7**
Skills, trades and hobbies	**28.63**	**-88.3**	**84.1**	**88.3**

$\chi^2 = 214.93$, df=14, p<0.001

Figure 2 below visualizes the respective measures of the relative deviation of O from E obtained in Table 4 for *ba* and *jiang*. The horizontal axis (0 axis) represents the degree of deviation under the null hypothesis, which is 0.
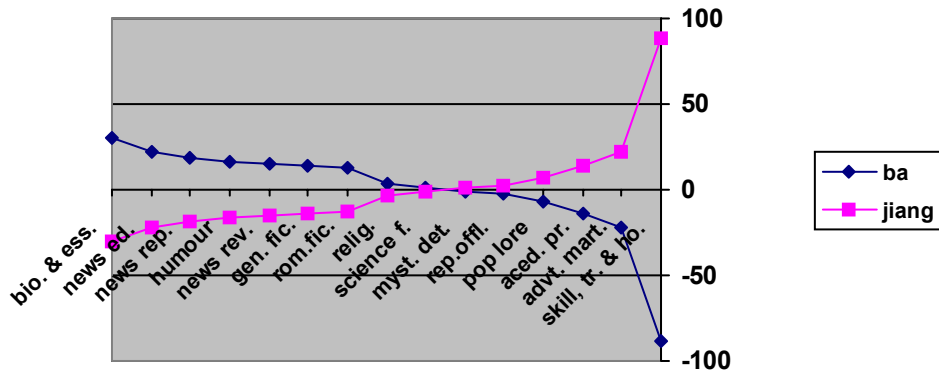

Figure 2: OF vs. EF differentials for *ba* and *jiang* across 15 written genres

As the figure shows, the inversely related curves representing the deviation patterns of *ba* and *jiang* lend themselves to the discrimination of roughly three ranges with respect to their distance to the 0 axis. If we operationally take 10 as the cutoff number, the seven subgenres on the left range of the curves all have a differential number of 10 or larger in favor of *ba*, while the same can be said of the three on the right, which are in favor of *jiang*. The middle five do not show any strong preferences even though the plus value slightly favors *jiang*. Note, however, that in the case of Academic Prose, although

the raw differential is larger than 10, the preference for *jiang* is weak according to the (O-E) ²/E values. The fact that the subgenres along the curves fall into three sets can be, for the sake of transparency in approaching the individual subgenres, envisaged vertically as a triple-tiered clustering, whereby the general tendency of alignment between the subgenres and the respective disposal constructions is schematized. We present this clustering in Figure 3.
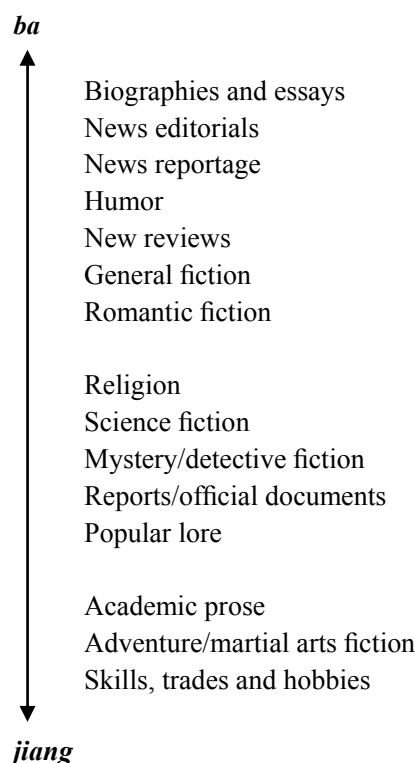
ba

Biographies and essays
News editorials
News reportage
Humor
New reviews
General fiction
Romantic fiction

Religion
Science fiction
Mystery/detective fiction
Reports/official documents
Popular lore

Academic prose
Adventure/martial arts fiction
Skills, trades and hobbies

jiang

Figure 3: Alignment of *ba* and *jiang* with different written genres

5.2 Discussion

The near total dominance of *ba* in spontaneous conversations and other spoken genres makes it clear that *ba* is well situated within the interpersonal domain while *jiang* is not. As has been widely acknowledged, interactive spoken discourse is the primordial site for social interaction (Schegloff 1989) and the achievement and maintenance of intersubjectivity (Schegloff 1992), emotionality, and affect (Ochs & Schieffelin 1989) define talk-in-interaction. It is natural, then, that *ba* is predominantly used in this register.

The very same reason can be applied to what we find in the written corpus. First, the overall distributional asymmetry, whereby *ba* occurs nearly three times as frequently as *jiang* in the entire written corpus, can be explained in terms of the general human conceptual tendency toward subjectivity and emotionality. That is, being human is essentially being subjective because of the embodiment of our cognition. Absolute objectivity is an ideal that will never be reached except in the domain of formal logic. Linguistic conceptualization and communication are accordingly more subjective than objective in nature. Thus, after all, the production of text as a personal and creative process is biased by our perspective, and our perspective is a human perspective which is inevitably subjective and arguably also emotional because of the mutual influence between emotion/affect and cognition (Damasio 1999, 2003). To put it plainly, as in the words of Ochs & Schieffelin (1989), "language has a heart." Second, as far as the subgenre related tendencies are concerned, the general bias toward subjectivity can be either reinforced or depressed in the individual subgenres depending on the extent to which the subgenre in question favors subjectivity and emotionality or the opposite thereof.

To explain the discrepancies between the observed and the expected values of the individual subgenres, we need to discuss the probable relationship between the individual subgenres and subjectivity and emotionality or the lack thereof. Before launching the discussion, we would like to point out that in the genre cluster surrounding *ba*, four subgroups were established: biography/essays, news media, humor, and fiction.

With Biographies and Essays, it is probably not controversial to postulate that the construal of events and expression of thoughts are maximally subject to personal perspectives, emotions, and attitudes. In discussing the complex verbal expression patterns (called Multiply Articulated Verbal Expression or MAVE), which can be seen in English vernacular written narratives, Hopper (1991, 1997) points out that the reporting of events in these contexts, which are arguably comparable to the category of biographies and essays here, is more of "a rhetorical construct that emerges out of speech acts of narration and is adapted to the perspectives and intentions of the narrator" (1997:17); as a result, "the event is wrapped in a cocoon of perspectives, ranging from subjective evaluative ones to 'epistemic' ones to quite conventional aspectual ones" (1997:16). Thus, the high degree of correlation between the use of *ba* and the texts within this category is entirely expected.

Similarly, in the three journalistic genres News Editorials, News Reviews, and News Reports, we witness a common asymmetry between the observed and the expected values whereby *ba*'s actual occurrences outscore the expectation and *jiang*'s observed occurrences are much lower than expected. This pattern again does not come as a surprise because, as commonly known, journalistic writing is highly biased to evoke an

emotional reaction (for discussions about Chinese journalistic practices, see Lee 1990, Porter 1992; for a case study of the creation of fear in American media discourse, see Altheide 2002). Scholars concerned with cognitive-affective principles of selective attention have repeatedly confirmed this pattern. Baumeister and his colleagues (Baumeister et al. 2001), for instance, have pointed out that the negativity bias, that is, the automatic tendency to attend to bad things, is pervasive, influencing various aspects of human existence,[7] including the way the media create theatrical effects by focusing on negative events.

Even though the category Humor may at first glance present a challenge to our explanation, this challenge is overcome if we accept the assumption that to create something ludicrous, comical or amusing requires linguistic choices that produce absurdity and incongruity (Veatch 1998), both of which contrast with reason. Naturally, objective descriptions with precision, which are *jiang*'s specialty, will not convey this sense of absurdity and incongruity. *Ba*, however, by construing events subjectively and emotionally, is better fit to communicate comical situations. That *jiang*'s actual frequency is much lower than expected for Humor should therefore be expected. The following example, where *ba* is used to denote a hypothetical and absurd event, illustrates the subjective manipulative nature of *ba* sentences in humorous texts.

(4) 庸醫說：
　　　yongyi　　　shuo
　　　inept doctor　say
　　　'The inept doctor thought:

　　　"我曾用人參再造丸治好過半身不遂，
　　　wo　　ceng　　yong renshen zaizaowan zhi　hao　guo　banshenbusui
　　　1SG　used-to　use　ginseng pellet　　cure　well　EXP　hemiplegia
　　　"I used to cure patients with hemiplegia with ginseng pellets.

　　　現在我將劑量加大一倍，
　　　xianzai wo　jiang　　jiliang　jia da　　yi bei
　　　now　　1SG　JIANG　dosage　increase　one time
　　　if I could simply double the dosage,

　　　不就能把死人治活了嗎？"
　　　bu　　jiu　　neng ba　si　　ren　　zhi　huo　le　　ma
　　　NEG　then　can　BA　dead person cure alive PFV　PRT
　　　wouldn't I then be able to make a dead person alive?'"

7　See Jing-Schmidt (2007b) for a discussion of the negativity bias in the context of human linguistic behavior.

A similar argument can explain *jiang*'s low frequency in General Fiction: Invented stories are the creation of imagination based on subjective and mostly emotional experience (Banfield 1982, Stein & Wright 1995). In fact, it is not an exaggeration to say that imagination thrives on subjectivity and emotionality. In this sense, Romantic Fiction represents no exception to the prototypical nature of fiction as subjective invention. Therefore, the higher-than-expected frequency observed with *ba* and the lower-than-expected frequency of *jiang* in this genre are not arbitrary, but are likely motivated by their respective semantic emphases with respect to subjectivity and emotionality.

Turning now to the cluster surrounding *jiang*, whose members are presented at the bottom of Figure 3, we note that the figures with regard to Adventure & Martial Arts Fiction require an account of the culture-specific relationship between the genre in question and the respective semantic profiles of *jiang* and *ba*. The adventure and martial arts fiction is marked by a distinct conformation to the idiosyncratic literary tradition of heroic legends that can be traced back to the Tang and the Song dynasties. Linguistically, verbal antiquity is one of the central features of this tradition. In fact, the language of this genre is so different from other modern literary genres that some literary scholars characterize it as "seemingly cryptic and elusive" (Mok 2001:3). In light of the literary uniqueness of this particular genre, it is now easy to see the special connection between this genre and the higher frequency of *jiang*. As has been noted by Tao (1999), *jiang* is characterized by an antiquated flavor associated with classic writings. Such a flavor is enhanced with the help of other lexical and syntactic devices that are considered antiquated as well. For example,

(5) 眨眼之間，又有四支長矛從兩側刺來，
zhayanzhijian   you   you   si   zhi chang mao cong liang ce   ci   lai
in-a-split-second again exist four CLF long   spear from two   side stab come
'In a split-second, four long spears again attacked from both sides,

張無忌屠龍刀一揮，
Zhang Wuji tulongdao   yi   hui
NAME   dragon-slaughter knife once   swing
Zhang Wuji quickly swung his dragon-slaughtering knife,

將四支長矛斬斷。
jiang   si   zhi chang mao zhan duan
JIANG four CLF long   spear cut   broke
and broke all four of the long spears.'

Example (5) contains a number of lexical items that are highly literary and formal,

including the temporal expression *zhayanzhijian* 'in a split-second, twinkling', *ce* (as opposed to *bian*) 'side', *hui* (as opposed to *baidong*) 'swing', and *zhan* (as opposed to *qie* or *kan*) 'cut'. The syntax is also formal, as demonstrated by the use of the motion verb *lai* 'come' instead of the more colloquial form *guolai* 'come' in the resultative position following the main verb *ci* 'stab'. Together with *jiang*, these linguistic devices help create a highly literary style with a strong sense of antiquity.

In our discussion of the diachronic development of *ba* and *jiang* in the next section, we shall return to this point with regard to *jiang*'s peculiar acquisition of such an antiquated flavor. In this discussion a more transparent connection between *jiang*'s objective tendency and its conveyance of antiquity will be made. For now it suffices to note that the semantic element of antiquity inherent in *jiang*'s meaning can be held responsible for its higher-than-expected use in this particular genre.

Of course, the genre that exhibits the strongest alignment with *jiang* is works about Skills, Trades, and Hobbies. Tao (1999, 2007) shows that this genre represents the "procedural discourse". It is characterized by distinct precision, objectivity, and authority, because the accurate description of methods and chronologically ordered processes is the primary goal of this genre (Farkas 1999, Longacre 1983, Werlich 1983). Given the genre-specific characteristics, the fact that *ba* and *jiang* are separated by a large differential of 80 is truly remarkable. Earlier we saw an example of *jiang* used in a computer-user manual (example 2); below is an instance of *jiang* used in a cooking recipe, another typical form of procedural discourse.

(6)　高壓鍋炒花生
　　　gaoyaguo　　　chao　huasheng
　　　pressure cooker　fry　　peanuts
　　　'Frying peanuts with a pressure cooker'

　　　將洗淨晾乾的花生放入高壓鍋內，
　　　jiang xi　　jing lianggan de　　huasheng fang ru gaoyaguo　　　nei
　　　JIANG wash clean dry　　ASSO peanut　put　in pressure cooker inside
　　　'Put the washed and dried peanuts in a pressure cooker,

　　　蓋緊後置火上 5 分鐘，每分鐘端起鍋搖晃幾下，花生均勻受熱，即可以得到脆香的花生。
　　　gai　　jin　　hou　zhi　huoshang　wu　　fenzhong
　　　cover　tight　after　put　fire:up　　five　minute
　　　mei　　fenzhong　duanqi　yaohuang jixia
　　　every　minute　　pick:up　shake　　few:times

huasheng junyun shoure
peanut   evenly heat
ji   keyi   dedao cuixiang   de   huasheng
then possible get   crispy:tasty ASSO peanut
cover the cooker tightly and heat it for 5 minutes. Lift the cooker and shake it
every minute or so, so that the peanuts inside can receive equal heat and will
become crispy and tasty.'

Precision and objectivity often go hand in hand with authority. While manuals and
cooking recipes may denote authority in implicit ways, other contexts may call for
displays of authority more explicitly, and this is exactly where *jiang* is found. Recall
that there are 11 instances of *jiang* in the edited spoken genre in *Beijing Ren*. Many of
them, though presumably speech-based, are used in the context of expressing authority.
Thus in example (7) two instances of *jiang* are used by a kungfu master in a mini-lecture
on the mechanisms and techniques of manipulating *qi* 'air, body energy' and transporting
it between bodies.

(7) "氣" 順著經脈遊走周身,
      qi   shunzhe jingmai   youzou   zhoushen
      air   follow   meridian path circulate whole:body
      'The air circulates the body along meridian paths;

      必要時,將氣運至某穴,
      biyao   shi, jiang qi yunzhi   mou   xue
      necessary time, JIANG air transport to certain node
      where necessary, one can deliver air to the desired meridian points,

      可發力,可折力。咱們可以試試。
      ke   fa li,   ke   zhe li.   zanmen keyi shishi
      possible increase:power possible decrease:power 1PL   can   try:try
      which can cause the energy to either increase or decrease. Let's give it a try
      right here.

      我現在運氣,將能量注入你體內
      wo   xianzai yun qi, jiang nengliang zhu   ru ni   ti   nei
      1SG now   gather air, JIANG energy   discharge into 2SG body inside
      I'll now gather air (from myself) and discharge it to your body.'

These instances illustrate the concomitant nature of precision, objectivity, and authority
as far as the use of *jiang* is concerned.

Another interesting comparison between the use of *ba* and *jiang* can be seen in example (4) above. In this example we find that, while both *ba* and *jiang* are used, *jiang* is used in a procedural descriptive clause:

現在我將劑量加大一倍，
xianzai wo jiang jiliang jia da yi bei
now 1SG JIANG dosage increase one time
'if I could simply double the dosage,

and *ba* is used to construe a hypothetical (and, in fact, wildly imaginative) scenario:

不就能把死人治活了嗎？
bu jiu neng ba si ren zhi huo le ma
NEG then can BA dead person cure alive PFV PRT
wouldn't I then be able to make a dead person alive?'

Finally, the discrepancy in frequency in Academic Prose, the last member of the *jiang* cluster, requires an explanation similar to that of *jiang*'s tendency to be employed for procedural discourse. Academic writings are intended to convince by means of scientific rigor which can be prototypically described as objective, logical, and accurate (Swales 1990, Biber 1988). Thus *jiang* will be, as it was, more appropriately used in this genre than *ba*. On the other hand, however, there is a significant difference between academic discourse and procedural discourse despite their common pursuit of objectivity. Critically, academic writing dwells on argumentation, which is essentially an act of establishing opinion and thus inevitably involves subjectivity. Procedural discourse, by contrast, is an impersonal process. Importantly, the impersonal nature of this subgenre explains the remarkably high frequency of *jiang* in procedural discourse as compared with all other subgenres including Academic Prose.

As far as the genres of Religion, Science Fiction, Popular Lore, Mystery and Detective Fiction, and Reports and Official Documents are concerned, we may notice that the discrepancies between the observed and the expected values are rather minor in these genres, especially in the last two categories. This lack of discrepancy can be due to a number of factors. It is crucial that we obtain more specific information about the extent to which these genres can be categorized in a prototypically coherent manner. Before such information is available, however, we can only speculate that in these genres neither of the two competing forces of subjectivity and objectivity wins out, which is entirely possible given the prototypicality principle and the dynamic nature of discourse profiling, which allow room for negotiation and hence borderline cases.

In summary, we have been able to explain the textual facts gleaned from the two natural language corpora concerning 1) the dominance of *ba* in spoken language and 2) the skewed distributional tendencies of *ba* and *jiang* in the majority (10 out of 15) of the written subgenres. For the most part, the analysis was done with regard to *ba* and *jiang*'s respective observed and expected values on account of the prototypical alignment or distance between the genres and subjectivity and emotionality vis-à-vis the respective semantic foci of these two disposal markers. Critically, the data invalidated the null hypothesis and in so doing confirmed our prediction that the semantic contrast between *ba* and *jiang* will be mirrored by distributional asymmetries across broad discourse contexts or genres. This finding also shows that the simple dichotomy of speech and writing is not adequate in explaining the data. Overall the results support our hypothesis of the dynamic system of disposal within the framework of prototype semantics: While *ba* and *jiang* share the basic meaning of disposal, they do contrast significantly in the dimension of subjectivity and emotionality.

In what follows, we shall briefly turn our attention to the diachronic development of *ba* and *jiang* in order to gain a glimpse of how their history might have influenced their synchronic behavior as modeled by the dynamic system of disposal.

6. The bifurcation of *ba* and *jiang*—a diachronic sketch

While a detailed diachronic treatment is beyond the range of this paper and will have to be undertaken elsewhere, it is generally agreed among grammarians that the disposal (*ba*/*jiang*) construction originated from the serial verb construction. Its development is considered one of grammaticalization by way of syntactic reanalysis whereby the first verb *ba* 'hold' /*jiang* 'take' came to be interpreted as the object marker (Zhu 1957, Liu et al. 1992). The earliest examples involve a postverbal locative phrase and are attested in documents traced back to as early as the 1st and 2nd centuries (He 2002). Jing-Schmidt (2005) suggests that the simple disposal (*ba*/*jiang*) construction was modeled on the locative *ba*/*jiang*-construction and was used for the purpose of conveying expressiveness in discourse (cf. Shen 2002). Later on, with the development of the urban narrative, the *ba*-construction became used to enhance the dramatic effect of discourse (Jing-Schmidt 2005:280-288).

What receives less attention in the literature, though, is the fact that the disposal constructions involving *ba* and *jiang* have charted different pathways in their subsequent development. Specifically, as a result of the entrenchment of the *ba*-construction, the two constructions underwent a kind of functional bifurcation whereby the *jiang*-construction became restricted to denoting non-dramatic events, a function that became increasingly associated with objectivity and precision through *jiang*'s increased association with this

specialized function. It is through the entrenchment of each item that their respective prototypical meanings with regard to subjectivity versus objectivity have come to be established (see Geeraerts et al. 1994:134-145, 169-176 on entrenchment and variation). This kind of entrenchment can be seen in the language of *Hong Lou Meng*. Frequency counts conducted by Cui (1996) on *ba* and *jiang* in the first 80 chapters of *Hong Lou Meng* show that *ba* occurs nearly eight times more in constructed conversations than *jiang* while *jiang* occurs three times more often than *ba* in narration. Jing-Schmidt (2005) argues that *ba* predominates in conversational discourse because it creates theatricality by expressing subjectivity and emotion.

As a result of the bifurcation of *ba*/*jiang*, *jiang* has, over time and through language use, come to take on a formal and antiquated stylistic flavor. This would happen when speakers choose to select *jiang* over *ba* on the strength of its relative objectivity in certain contexts where dramaticity would be inappropriate. Such contexts would in turn give rise to the inference that *jiang* conveys messages of precision, authority, antiquity, or something along similar objective lines. In this way, the mutual invitation and selection between meaning and context would ultimately determine the semantic niche of *jiang* relative to that of *ba*. The central mechanism of this process may be called "invited inferencing", which has been proposed by Traugott & Dasher (2005) to be the driving force of semantic change. According to Traugott & Dasher, particular contextualized uses and meanings that are erstwhile external to an item may, through language use and by inference, become more conventionalized and therefore more frequently associated with an item. The acquisition of the formal and antiquated flavor in *jiang* typifies this trajectory. Essentially, the conveyance of antiquity and formalness which was at one time not available to *jiang* is less a product of the semantics of *jiang* taken in isolation than one of the dynamic interaction between the two closely related linguistic signs whose selection in discourse reflects language users' communicative strategies. To the extent that antiquity and formalness can be considered traits of objectivity, the dynamic evolution of the Chinese disposal system can be deemed to have resulted in an increased degree of objectivity, in the case of *jiang*, interacting directly with the increased degree of subjectivity in the meaning of the *ba*-construction.

7. Theoretical implications

The conception of the dynamic system of disposal within the prototype semantic framework has a number of theoretical consequences. Generally, such an approach to *ba* and *jiang* captures both their commonality and contrast at the semantic-pragmatic level. Critically, the prototype semantic treatment of their contrast in subjectivity and emotionality rejects a binary semantic division between two linguistic signs (probably

better referred to as linguistic twins!) whose meanings and uses are both synchronically and diachronically intertwined.

At the synchronic level, our analysis offers a conceptually plausible explanation of the complex distributional patterns observed in two relatively large corpora involving a variety of genres. This is made possible by treating both meaning and context (genre) as prototypically organized categories that reflect the basic principles of human conceptualization.[8] At the diachronic level, we show that *ba* and *jiang* developed their respective layers of meaning, not along separate parallel paths, but by way of intimate mutual influences within a dynamic sign system which is constantly reshaped by speakers' strategic choices and hearers' invited inferencing in language use. In the sense that the development of *ba* and *jiang* has shaped the synchronic behavior of the two items, it is important to view diachrony and synchrony as an ever evolving continuum.

We would like to turn now to the issue of speech and writing, a dichotomy that has often been invoked impressionistically by previous researchers in explaining the differences between the two disposal constructions. Not only do our findings provide a deeper grounding for that intuition, but, more importantly, the results forcefully argue for the theoretical strength of cognitive semantics in providing an account for it. Clearly, for the postulation of the speech/writing dichotomy to be of any analytical use, fine-grained explorations of both the semantic profiles of the signs and the pragmatic profiles of the (sub)genres and the interaction between them are necessary. We thus suggest that this rather crude dichotomy is best replaced with an emphasis on the notions of prototype semantics and discourse profiling of subjectivity and emotionality; it is these notions, as reflections of some of the most important cognitive and discourse principles in human verbal interaction, that subsume the surface manifestations of media and mode of communication, not the other way round.

Finally, from the point of view of grammaticalization, our data present a significant case which demonstrates the possibility that language use and user inference can induce, not only an increased degree of subjectification in terms of Traugott (1989, 1995), as widely reported in the literature, but also objectification. We believe that the dynamics between subjectivity and objectivity in a sign system should receive wider recognition than it currently does in theories of grammaticalization.

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[8] While we have been focusing on the interaction between semantic prototypes and genre, we are aware that a quantitative confirmation of the prototype effect within each of the two semantic categories constituted by the meanings of *ba* and *jiang* would be desirable. This may be accomplished by means of frequency counts of different collocation patterns in texts, in a similar fashion as in Jing-Schmidt (2005). Such a task will be pursued in future research.

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Zhuo Jing-Schmidt
Department of Linguistics
1290 University of Oregon
Eugene, OR 97403
USA
zjingsch@uoregon.edu

Hongyin Tao
Department of Asian Languages and Cultures
University of California, Los Angeles
290 Royce Hall
Los Angeles, CA 90095-1540
USA
tao@humnet.ucla.edu

Zhuo Jing-Schmidt & Hongyin Tao

漢語處置句法系統的功能語言學探討

井　茁 [1,2]　　陶紅印 [3]

奧勒岡大學 [1]

科隆大學 [2]

加州大學洛杉磯分校 [3]

　　長期以來，人們一般是把由"把"和"將"字構成的兩類處置句式看作是意思相近的句法格式，認爲其主要的不同在於所用語體的範圍（比如說將字句偏向於書面語等）。本文利用口語和書面語語料庫的實際材料說明，兩者的不同不能簡單地歸結於語體的差異，而是有更深刻的語用學動因。我們以功能語言學上的原型理論爲基礎，具體提出兩者的對立主要體現在對主觀性/感情化與客觀性/權威性的表現的對立上，即把字句以表達前者爲主，將字句以表達後者爲主，兩者結合在一起構成一個完整的處置系統。而且兩者的對立不是偶然的，實際上體現了主觀化與客觀化所存在的一種共生關係及系統性。這種說法既解釋了語體說的不足，又理清了共時與歷時的對立及其與篇章類型的關係。這類現象也提醒我們既要注意語言中的主觀化趨勢也要注意某些條件下的客觀化的趨勢。

關鍵詞：處置式，把字句，將字句，主觀化，客觀化