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A Corpus-based Study of Interpersonal Grammatical Metaphor in Spoken Chinese

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Abstract:

As a phenomenon arising from the interaction of semantics and lexico-grammar, Grammatical Metaphor (GM) occurs in the expression of both ideational and interpersonal meanings. Ideational GM is mainly deployed in written texts, while interpersonal GM is frequently observed in spoken discourses. Previous studies on the phenomenon focus their discussion on ideational GM and the use of GM in English. This study is the first attempt to explore the use of interpersonal GM in spoken Chinese. The study develops a framework for the identification and categorization of interpersonal GM in the language. On the basis of the framework, a large corpus of spontaneous conversation is analyzed to reveal how different types of interpersonal GM are distributed. The analysis shows that spoken Chinese has a preference for certain types of metaphorical expression. This study also investigates the relationship between interpersonal GM in spoken Chinese and its immediate context of situation, demonstrating how the deployment of interpersonal GM is affected by the topic of conversation and the social status between speaker and hearer.

Keywords:

Grammatical Metaphor; spoken Chinese; corpus of spontaneous conversation; register

1. Introduction

Grammatical Metaphor (GM) is a phenomenon automatically arising from the interaction between meaning and wording in a language. In the development of human languages, the realization of meaning by wording evolves first as the patterns in which a semantic meaning is congruently mapped onto a grammatical expression. For example, the semantic meaning of command is congruently realized by an imperative clause. The congruent pattern is not the only form of realization because a language has the inherent power of realigning the mapping between semantic meanings and grammatical realizations. For instance, the meaning of command can be realized by an interrogative clause or even a declarative clause. In other words, there is the possibility of metaphorical realization of a particular meaning in a language. Therefore, GM is "the phenomenon whereby a set of agnate forms is present in the language having different mappings between the semantic and the grammatical categories" (Halliday and Matthiessen, 1999, p7). There are two types of GM occurring respectively in the expressions of ideational meaning and interpersonal meaning. Ideational GM is mainly deployed in prototypical written texts – like scientific, administrative and legal texts, while interpersonal GM is frequently observed in spoken discourses – like casual conversations and service encounters.

This article addresses how and why interpersonal GM is used in spoken Chinese. It first presents a framework for the identification and categorization of interpersonal GM in Chinese. Based on the framework, the article ascertains how different types of interpersonal GM are distributed in spoken Chinese, revealing the deployment of grammatical resources in the interaction between meaning and wording. The distribution is obtained by analyzing a spoken Chinese corpus composed of various types of dialogues. The realization of semantic meaning in a language must be

investigated by considering its social context. This article thus explores the relationship between interpersonal GM in spoken Chinese and its immediate context of situation (register), demonstrating how the GM deployment in spoken Chinese is affected by the topic of conversation and the social status between speaker and addressee.

Within the field of Systemic Functional Linguistics (SFL), many studies of GM have been carried out in the past three decades (e.g. Halliday, 1994; Halliday and Matthiessen, 1999; Ravelli, 1985; Yang, 2008; Yang, 2011). While these studies provide a wealth of information about different aspects of GM, they have been limited in two aspects. Firstly, these studies investigate the features of GM with the focus on the most thoroughly investigated language of English. There has been relatively less research describing in depth the phenomenon of GM in other languages. Secondly, these studies have not sought to explore systemically the use of interpersonal GM. In other words, previous GM research is confined to the analysis of GM in written texts. Despite its greater potential of remapping meaning and wording, spoken discourses have not received as much attention from previous GM studies as written texts. This article fills these gaps by undertaking a comprehensive study of interpersonal GM in spoken Chinese.

The exploration of interpersonal GM in spoken Chinese faces two major difficulties. Firstly, there has been very little research on interpersonal GM both theoretically and empirically. This gives rise to the difficulty of discussing the phenomenon on the basis of a less rigid theoretical framework. This study thus develops a framework for the identification and categorization of interpersonal GM in spoken Chinese by examining the semantic and lexicogrammatical systems in the language. Secondly, a research on interpersonal GM must be carried out by analyzing

a corpus of spoken language, which is difficult to collect, transcribe and code. A reliable and manageable corpus of spoken Chinese is thus needed to enable the detailed analysis. This study investigates the profile of GM deployment with a large corpus of spoken Chinese developed in mainland China. The corpus is used not only as the language material for analysis but as the major source of examples to illustrate different subtypes of interpersonal GM in Chinese. The authentic examples of GM from the corpus are indicated with the word 'authentic' in square brackets. A smaller corpus formed by discourses extracted from the large one is manually analysed to show the GM features not exposed through the automatic search of the large corpus.

As pointed out by DeFrancis (1984), the term "spoken Chinese" suffers from a lack of precision in view of the wide varieties of speech that are usually subsumed under this name. The Chinese spoken in various parts of China is quite different in pronunciation, although they write in the same way as in standard Chinese (Mandarin). For example, "九" sounds like "gau" when pronounced in Cantonese, but the same Chinese character is pronounced as "jiu" in standard Chinese. In addition to pronunciation, Chinese dialects are different in vocabulary and grammar to a certain extent. This study focuses its analysis on the use of GM in Mandarin Chinese which is the most widely used Chinese variety in China. With this in mind, the Chinese corpus selected is a corpus of spoken Mandarin. The spoken Chinese hereinafter refers to spoken Mandarin if not specially noted. In addition, the following abbreviations are used in this article to represent some frequently used grammatical classes in Chinese:

Asp.: Aspect markers (*le, zhe, guo*)

Partic.: Particles (e.g. *a/ya, ne, ma, ba*)

Clas.: Classifier (e.g. *ge, zhong*)

Sub.: Subordinating particle *de*

In the next section, the framework for the identification and categorization of interpersonal GM in Chinese is presented. Section 3 explains how the Chinese corpus is selected and analyzed. Section 4 discusses the distribution of two types of interpersonal GM, namely metaphor of mood and metaphor of modality, in spoken Chinese. The relationship between GM deployment and register variables is examined in Section 5.

2. Identification and Categorization of Interpersonal GM in Chinese

2.1. Identification of Interpersonal GM in Chinese

The conceptualization and understanding of GM vary in different phases of GM studies, which in turn result in various working definitions of GM. In addition, the differences between ideational GM and interpersonal GM increase the difficulty of identifying GM. The development of GM studies is thus briefly reviewed here to clarify the motifs of GM identification in spoken Chinese.

GM is interpreted in the first phase of GM studies as the counterpart of lexical metaphor (Halliday, 1985; 1994). It is claimed that the phenomenon is a kind of metaphor which is grammatical rather than lexical. Halliday (1985) thus makes an attempt to extend the boundary of metaphor, which is usually understood as a lexical phenomenon, to the grammatical field. As pointed out by Romero and Soria (2005), this interpretation of GM gives rise to some difficulties in the understanding of the nature of GM mainly because “metaphor” is used as a metaphorical extension of the term. It is suggested that the concept should be renamed as “marked morphosyntactic variation” (Romero and Soria, 2005: 156).

In the second phase of GM studies, the phenomenon is described in terms of the interaction between the semantics and lexicogrammar in a language (Halliday, 1998;

Halliday and Matthiessen, 1999). According to Halliday and Matthiessen (1999), the emergence of GM is related to the natural development of the content plane in a language. Initially, the content plane is formed by semantic and lexicogrammatical strata coupling in congruent patterns. The content plane of a language evolves by extending the congruent patterns between semantic and lexicogrammatical strata. The disruption of the congruent patterns between the two levels of content plane opens up the possibility of metaphorical expression. The remapping of the semantics on to the lexicogrammar thus becomes the motif of GM identification in this phase of GM studies.

The third phase of GM exploration follows previous GM studies by taking stratal remapping as the criteria for identifying metaphorical expressions. However, Halliday and Matthiessen (2004) propose that GM systematically expands the meaning potential by creating new patterns of structural realization. In other words, metaphorical modes of meaning are motivated by the need to expand meaning potential. This clarification of the inherent motivation of GM enhances the understanding of the nature of GM.

The discussion above shows that the realignment between semantics and lexicogrammar and the expansion of meaning potential should be treated as the two motifs of GM identification in Chinese. More importantly, the two motifs of GM identification are the common foundations of ideational GM and interpersonal GM. Ideational GM and interpersonal GM are distinctive with respect to the direction of grammatical movement. The general tendency for ideational GM is to ‘downgrade’ the grammatical category realizing a particular semantic unit (Halliday and Matthiessen, 2004). In contrast, interpersonal GM is characterized by its tendency to upgrade the categories of grammatical realization.

Despite their differences in grammatical movement, both ideational GM and interpersonal GM arise from the remapping between semantics and lexicogrammar. Furthermore, both of them are deployed for the purpose of expanding the meaning potential of a language (Halliday and Matthiessen, 2004). To be more specific, the metaphorical realizations of semantic units in ideational dimension increase the meaning potential of construing our experience of the world. The metaphorical realizations of mood system provide new meaning potential for negotiation between speakers of a language. The metaphorical realizations of modality systems expand the methods of making interpersonal assessment (Halliday and Matthiessen, 2004).

In order to develop the framework for identifying interpersonal GM, this study needs a detailed description of how semantic and lexicogrammatical categories are remapped in spoken Chinese. The congruent and metaphorical realizations of interpersonal meanings in spoken Chinese are differentiated for this purpose. Interpersonal GM is accommodated into grammatical system in the expression of mood and modality (Halliday, 1994). The differentiation is thus conducted along the two lines: metaphor of mood and metaphor of modality.

Metaphor of mood is concerned with the expression of speech functions in a language. It is easy to define that the speech functions of statement, command, and question are congruently realized by the moods of declarative, imperative and interrogative in Chinese. However, the congruent realization of offer is less determinate because both declarative and interrogative clauses in Chinese are the unmarked expressions of the speech function. As claimed by Halliday (1994: 95), "for offers there is no distinct mood category at all". In this case, the congruent realizations in the mood system for the options in the speech function network are summarized in Figure 1.

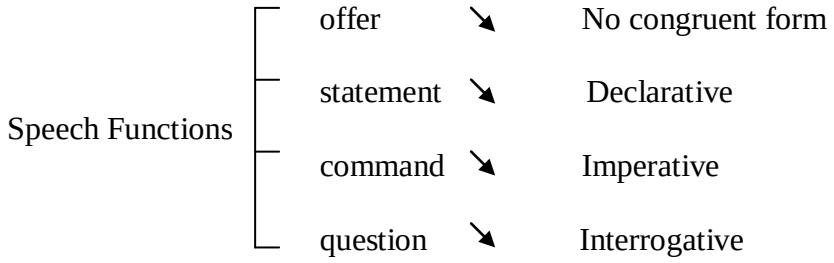

Figure 1 Congruent realization of speech functions in Chinese

In addition to their congruent realizations, the speech functions in Chinese are frequently construed by their metaphorically expressions. The transfers from congruent to metaphorical realizations are shown with their examples in Table 1.

Table 1 Grammatical transfers involved in metaphor of mood in Chinese

Speech functions to be construed	Grammatical transfer	Examples
Offer	No transfer	
Command	1) Imperative (congruent) ↓ Interrogative (metaphorical) 2) Imperative (congruent) ↓ Declarative (metaphorical)	*He yi bei shui.* drink one Meas. water "Drink a cup of water." *Yao he bei shui ma*? want drink Meas. water Ma "Would you like a cup of water?" *He yi bei shui.* drink one Meas. water "Drink a cup of water." *Zhe you yi bei shui.* here exist one Meas. water "There is a cup of water."
Statement	3) Declarative (congruent) ↓ Interrogative (metaphorical)	*You daoli.* exist reason "It is reasonable" *Nandao meiyou daoli*? do you think not exist reason "Don't you think it's reasonable?"
Question	4) Interrogative (congruent) ↓ Declarative (metaphorical)	*Hangban shenme shijian daoda*? flight what time arrive "When will the flight arrive?" *Wo xiang zhidao hangban de daoda shijian.* I want know flight Sub. arrival time "I want to know the arrival time of this flight."

There are four categories of modality in a language, namely probability, usuality, inclination and obligation (Hallday, 1994). Halliday and Matthiessen (2004) claim that modality is congruently realized by the grammatical elements within a clause. Based on previous research on the modality system in Chinese (Wang, 1959; Chao, 1968; Lü, 1982; Zhu, 1996; Yang, 2007), the congruent realizations of modality system in Chinese are presented in Figure 2.

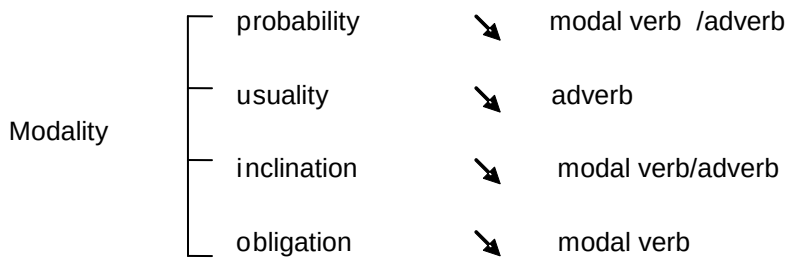

Figure 2 Congruent realizations of modality system in Chinese

According to Halliday (1994), the metaphorical realization of modality is coded as a projecting clause in a hypotactic clause complex. Projecting clauses cannot be used for expressing every kind of modality in Chinese. It is observed that the meanings of usuality and inclination are not construed in the form of projecting clauses in Chinese. According to previous studies of modality (Palmer, 2001; Tsang, 1981), usuality and inclination are distinguished from probability and obligation in that these meanings typically relate to the subject of a clause instead of to the speaker. On the other hand, probability and obligation in most cases relate directly to the speaker of a clause. In sum, usuality and inclination are "semantic domains where the speaker cannot readily pose as an authority" (Halliday, 1994: 358). In this case, the projecting process concerned with the attitude of the speaker is not applicable to the expressions of usuality and inclination.

In addition to projecting clause, two special structures are used for the metaphorical realization of modality in Chinese, i.e., structures of *shi…de* and *you* …. The two structures could be translated into English as 'it is …' and 'there is …'. However, they are not projecting clauses because they cannot instate another clause as a locution or an idea. The two structures, especially *shi…de*, are widely deployed for the expression of every category of modality in Chinese. With the consideration of all these points, the grammatical transfers involved in metaphorical realization of modality in Chinese are presented in Table 2.

Table 2 Grammatical transfers involved in metaphor of modality in Chinese

Modalities to be construed	Grammatical transfer			
	Congruent realization →		Metaphorical realization	
	Modal verb	Adverb	Projecting clause	'*shi…de*' '*you…*'
Probability	*keneng* (can) *hui* (can) *gai* (should)	*yiding/* *kending/* *biding/* *zhun* (must)	*wo xiangxin* (I believe) *wo guji* (I estimate) *wo xiang* (I think) *wo renwei* (I reckon)	*shi kending de* (is must Sub.) *you keneng* (have possibility)
Usuality		*yizhi* (always) *jingchang* (usually) *youshi* (sometimes)		*shi changyou de* (is often Sub.)
Inclination	*yao* (will) *xiang* (wish) *yuanyi* (will) *ken* (will)	*yiding/ pian/* *fei* (must)		*shi ziyuan de* (is willing Sub.)
Obligation	*bixu* (must) *gai* (should) *keyi* (may) *yinggai* (should)		*wo yaoqiu* (I require) *wo rang* (I let) *wo yunxu* (I permit)	*shi bixu de* (is necessary Sub.) *you biyao* (have necessity)

2.2. Framework for Interpersonal GM Categorization

This study develops a framework for categorizing interpersonal GM in Chinese by focusing on the realization forms of different types of interpersonal meaning. In particular, the metaphor of mood is categorized by specifying the mood choices involved in the metaphorical expression of speech functions. The metaphor of modality, on the other hand, is categorized by differentiating the grammatical methods which realize four types of modality metaphorically. An overall picture of the framework is presented in Table 3.

Table 3 Framework for interpersonal GM categorization in Chinese

Interpersonal GM	Categories
Metaphor of mood	1. Expressing command with interrogative mood
	2. Expressing command with declarative mood
	3. Expressing statement with interrogative mood
	4. Expressing question with declarative mood
Metaphor of modality	1. Metaphorical realizations of probability
	2. Metaphorical realization of usuality
	3. Metaphorical realizations of obligation
	4. Metaphorical realizations of inclination

In order to facilitate the identification of individual GM instances, the GM categories in Table 3 are subdivided in terms of the grammatical methods involved in relevant metaphorical expressions.

2.2.1. Metaphor of mood

Category 1: Expressing Command with Interrogative Mood

According to Li and Thompson (1981), there are three types of interrogative clauses in Chinese, i.e., question-word, A-not-A or Mood particle interrogatives. The meaning of command can be metaphorically expressed by each type of interrogative in Chinese, as demonstrated by Examples (1) to (4):

(1) *Zhunbei ni de baogao*. (Imperative)
prepare you Sub. report
"Prepare your report."

(2) *Ni de baogao zhunbei hao le ma?* (Interrogative: Mood particle)
you Sub. report prepare good Asp. Mood particle
"Are you ready with your report?"

(3) *Ni de baogao zhunbei mei zhunbei hao?* (Interrogative: A-not-A)
you Sub. report prepare not prepare good
"Are you ready with your report or not?"

(4) *Ni de baogao shenme shihou zhunbei hao?* (Interrogative: question-word)
you Sub. report what time prepare good
"When will you be ready with your report?"

Some specific patterns of expression are also deployed in Chinese to realize certain speech functions, which are referred to as speech-functional formulae by Halliday (1994). The most frequently used speech-functional formulae for the expressions of command are as follows:

A. *Hai bu…*(yet not)

The formula of *hai bu* ... (yet not) is the most salient one in the interrogative expressions with command meaning and could be translated into the English expression of 'why not …', as in Example (5).

(5) *Xiexie na ge jingcha*. (Congruent: Imperative)
thank that Clas. policeman
"Say thank you to the policeman."

<u>*Hai bu*</u> *xiexie na ge jingcha* ? (Metaphorical: Interrogative)
yet not thank that Clas. policeman
"Why not say thank you to the policeman?"

B. *Nan dao…* (difficult say)

The formula *nan dao* is used in negative expressions indicated by *bu* (not) and frequently followed by the Mood particle *ma*. See Example (6):

(6) *Na xie yinliao*. (Congruent: Imperative)
take some drink
"Take a drink."

Nan dao ni bu ke ma? (Metaphorical: Interrogative)
difficult say you not thirsty Mood particle
"Why don't you feel thirsty?"

C. ...*hao/xing/keyi ma* (good + Mood particle)

With the Mood particle *ma*, the formula …*hao/xing/keyi* introduces interrogative clauses with the meaning of request. The Chinese clause with this formula could be expressed in English as "Would you mind doing something." as shown in Example (7):

(7) *Dao wo jia lai*. (Congruent: Imperative)
reach I home come
"Come to my home."

Dao wo jia lai hao ma? (Metaphorical: interrogative)
reach I home come good Mood particle
"Would you mind coming to my home?"

Category 2: Expressing Command with Declarative Mood

Compared with interrogative clauses, the utterances in a declarative form do not imply the meaning of command so obviously. In many cases, the speech function of command is realized by a declarative clause with reference to a particular context. The declarative clauses involved in the expression of command can be further divided into two types according to whether the structure of *shi…de* is deployed or not, as shown in Examples (8) and (9).

A. Normal form

(8) *Shoushi ni de fangjian*. (Congruent: Imperative)
clean up you Sub. room
"Clean up your room."

Ni de fangjian tai luan. (Metaphorical: Declarative) [authentic]
you Sub. room very in a mess
"Your room is in a mess."

B. *shi…de* structure

(9) *Bu zhun zai zhe li xiyan*. (Congruent: Imperative)
not permit in here inside smoke
"Do not smoke here."

Zhe li shi jinzhi xiyan de. (Metaphorical: Declarative)[authentic]
here inside is prohibit smoke Sub.
"Smoking is prohibited here."

Category 3: Expressing Statement with Interrogative Mood

Rhetorical interrogatives are used to express the meaning of statement in Chinese. This type of interrogative is distinguished from the normal interrogative in that they are ordinarily concerned with some speech-functional formulae in Chinese. The most frequently used formulae are as follows:

A. *bu shi…ma?* (not is … Mood particle)

(10) *Gen ni shuo guo le*. (Congruent: Declarative)
to you talk already Asp.
"I've already talked to you."

Bu shi gen ni shuo guo le ma? (Metaphorical: Interrogative)
not is to you talk already Asp. Mood particle [authentic]
"Haven't I talked to you?"

B. *nan dao …* (difficult say)

The formula '*nan dao…*' has been discussed in the analysis of commands realized by interrogative mood. In some contexts, it also functions to realize the speech function of statement.

(11) *Bu yiding qu tushuguan*. (Congruent: Declarative)
not must go library
"We do not necessarily go to the library."

Nan dao yiding qu tushuguan? (Metaphorical: Interrogative)
difficult say must go library [authentic]
"Is that necessary to go to the library?"

C. *you shenme* … (have what)

This type of formula ordinarily appears in a relational clause consisting of Carrier and Attribute. It realizes the speech function of statement by negating the Attribute in the clause. In Example (12), the meaning of *budui* (wrong) is negated.

(12) *Ta de kanfa shi dui de*. (Congruent: Declarative)
he Sub. opinion is correct Sub.
"His opinion is correct."

Ta de kanfa you shenme budui? (Metaphorical: Interrogative)
he Sub. opinion have what wrong [authentic]
"What's wrong with his opinion?"

D. *nali* … (where)

(13) *Zhe ge fangchengshi mei cuo*. (Congruent: Declarative)
this Clas. equation not wrong
"This equation is not wrong."

Zhe ge fangchengshi nali cuo le? (Metaphorical: Interrogative)
this Meas. equation where wrong Asp.
"Where does the equation go wrong?"

Category 4: Expressing Question with Declarative Mood

The declarative clauses involved in the metaphorical expression of questions is characterized by the structure of '*Wo xiang zhidao/liaojie* …'(I want to know/enquire…). The declaratives concerned have the intention of obtaining information from the person addressed, which is shown in Example (14).

(14) *Ni shenme shijian neng wancheng lunwen*? (Interrogative)
you what time can finish thesis
"When can you finish your thesis?"

Wo xiang zhidao ni wancheng lunwen de shijian. (Declarative)
I want know you finish thesis Sub. time
"I want to know the ending time of your thesis writing."

It is worth pointing out that any metaphorical realization of speech function is construed in a certain context. It is possible that the same clause expresses various types of speech function in different linguistic environments. For the convenience of

discussion, this study exemplifies the metaphorical forms of speech function without stating the context of these expressions. In the practical analysis of interpersonal GM in Chinese, the context in which metaphorical expressions occur must be taken into consideration. A smaller corpus is thus extracted from the large one for the purpose of manual analysis. This point is explained in more detail in Section 3. According to the discussion above, the detailed categorization of metaphor of mood in Chinese is summarized in Table 4.

Table 4 Categories and subcategories of metaphor of mood in Chinese

Categories of metaphor of mood	Subcategories	
1. Expressing command with interrogative mood	(i) Normal form	Question-word A-not-A structure Mood particle
	(ii) Special formula	'*hai bu…*' (yet not); '*nan dao…*' (difficult say); '*…hao ma*'(good + Mood particle)
2. Expressing command with declarative mood	(i) Normal form	
	(ii) Special formula	'*shi …de*' (is … Sub.)
3. Expressing statement with interrogative mood	(i) Normal form	Rhetorical interrogative
	(ii) Special formula	'*bu shi…ma?*' (not is … Mood particle); '*nan dao …*' (difficult say); '*you shenme*' (have what); '*nali …*' (where)
4. Expressing question with declarative mood	Special formula	'*Wo xiang zhidao/liaojie …*' (I want to know/enquire…)

2.2.2. Metaphor of Modality

Metaphor of modality in Chinese is subdivided by considering the grammatical methods involved in the metaphorical realization of each type of modality. As revealed in Section 2.1, the grammatical methods concerned are projecting clause, *shi … de* structure, and *you…* structure.

Category 1: Metaphorical Realizations of Probability

Probability can be metaphorically expressed by projecting clause, *shi…de* structure, and *you…* structure.

(i) Expressing probability with projecting clause

When probability is construed as a projecting clause in Chinese, the metaphorical realization generally involves a mental process with a first person participant. The verbs *xiang* (think), *renwei* (reckon), *guji* (estimate) are used most frequently to construct the mental process involved. The probability meaning in Chinese is congruently realized by modal verbs and adverbs, which are functionally referred to as Finite and Adjunct in SFL. The grammatical movements from Finite and Adjunct to mental clause are illustrated by Examples (15) and (16).

(15) *Ta* *keneng* *qu* *jisuanji* *zhongxin*.
he might go to computer center
"He might go to the computer center."
Subject Finite Predicator Complement

Subject Predicator // Subject Predicator Complement
Wo *xiang* *ta* *qu* *jisuanji* *zhongxin*. [authentic]
I think he go to computer center
"I think he goes to the computer center."

(16) *Ta* *yiding* *zai* *8* *dian* *qian* *huilai*
He definitely in 8 o'clock before come back
"He definitely comes back before 8 o'clock."
Subject Adjunct Adjunct Predicator

Subject Predicator// Subject Adjunct Predicator
Wo *xiangxing* *ta* *8* *dian* *qian* *huilai*
I believe he 8 o'clock before come back
"I believe he comes back before 8 o'clock."

(ii) Expressing probability with *shi…de* structure

The structure of *shi…de* in Chinese is generally used to emphasize the information inserted between *shi* and *de*. When the information to be inserted involves comments addressed by a speaker, the structure expresses a modal meaning. Although the

structure is generally translated as ‘It is …’ in English, it is deployed with a broader semantic scope in Chinese. Any type of modality can be metaphorically realized in the form of ‘*shi…de*’, while the ‘It is …’ structure in English is not involved in the expression of inclination. As far as the probability is concerned, almost every modal verb and adverb involved can be inserted into the *shi…de* structure to form a metaphorical realization. The realizations involving adverb and modal verb are shown respectively in Examples (17) and (18).

(17) *Xiangmu keneng zai san tian nei wancheng.*
Project can in three day inside complete
“The project can be completed in three days.”
Subject Finite Adjunct Predicator

Adjunct Predicator Complement // Pred. Complement
Zai san tian nei wancheng xiangmu shi keneng de.
In three day inside complete project is can Sub.
“It is possible to complete the project in three days.”

(18) *A dui yiding huosheng.*
A team certainly win
“Team A will certainly win.”
Subject Adjunct Predicator

Subject Predicator // Pred. Complement
A dui huosheng shi yiding de. [authentic]
A team win is certainly Sub.
“It is certain that team A will win.”

(iii) Expressing probability with *you…* structure

There is also the possibility to express probability through *you…* structure in Chinese. To be more specific, the meaning of probability is construed as an isolated clause. See Example (19):

(19) *Ta keneng hui jia le.*
he probably go back home Asp.
“He probably went back home.”
Subject Finite Predicator Complement

Pred. Complement//Subject Predicator Complement
You keneng ta hui jia le. [authentic]
have possibility he go back home Asp.

"There is the possibility that he went back home."

Category 2: Metaphorical Realizations of Usuality

The structure of *shi…de* is the only method for the metaphorical realization of usuality in Chinese. Adverbs, on the other hand, are the sole resource for the congruent construal of usuality in the language. Therefore, the metaphorical expression of usuality with *shi…de* involves the grammatical movement from Adjunct to isolating process, which is represented by Example (20).

(20) *Tuixiaoyuan jingchang jiaban.*
salesman usually work overtime
"A salesman usually works overtime."
Subject Adjunct Predicator

Subject Predicator //Pred. Complement
Tuixiaoyuan jiaban shi jingchang de. [authentic]
salesman work overtime is usual Sub.
"It is usual for salesman to work overtime."

Category 3: Metaphorical Realizations of Obligation

With respect to the meaning of obligation, three kinds of metaphorical realization are involved: projecting clause, *shi…de* structure and *you …* structure. In addition, the obligation in Chinese is construed congruently through modal verbs. The metaphorical realizations of obligation are therefore concerned with the grammatical movement from Finite to projecting clause, *shi…de* and *you…* structures.

(i) Expressing obligation with projecting clause

The projecting clause involved in the expression of obligation consists of a mental process with a first-person participant. For example:

(21) *Xueshengmen bixu zai 23 hao qian jiao zuoye.*
students must in 23 day before submit assignment
"Students must submit their assignments before 23."
Subject Finite Adjunct Pred. Complement

Subject Pred.// Subject Adjunct Pred. Complement
Wo yaoqiu xueshegmen zai 23 hao qiang jiao zuoye.
I require students in 23 day before submit assignment

"I require my students to submit their assignments before 23."

(ii) Expressing obligation with *shi…de* structure

The *shi…de* structure involved in the expression of obligation is similar to the one used to construe probability meanings. The information inserted in the structure is also encoded in the form of modal verbs.

(22) *Banche* *yinggai* *anshi* *daoda*.
shuttle bus should on time arrive
"The shuttle bus should arrive on time."
Subject Finite Adjunct Predicator

Subject Adjunct Pred.// Pred. Complement
Banche *anshi* *daoda* *shi* *yinggai* *de.* [authentic]
shuttle bus on time arrive is should Sub.
"It is sure that the shuttle bus arrives on time."

(iii) Expressing obligation with *you…*structure

Like those expressing probability, the *you…*structure in the metaphorical realization of obligation is an isolated process. This is illustrated by Example (20).

(23) *Women* *bixu* *zhichi* *zhengfu*
We must support government
"We must support our government."
Subject Finite Predicator Complement

Pred. Complement// Pred. Complement
You *biyao* *zhichi* *zhengfu* [authentic]
have necessity support government.
"There is a necessity to support our government."

Category 4: Metaphorical Realizations of Inclination

The only approach to realizing inclination metaphorically in Chinese is *shi…de* structure. As the meaning of inclination is congruently realized by modal verbs and adverbs, this category of modality metaphor involves the grammatical movement from Finite or Adjunct to *shi…de* structure. See Examples (24) and (25).

(24) *Ta* *ken* *bangzhu* *bieren*
he will help others
"He is willing to help others."
Subject Finite Predicator Complement

Subject Predicator Comp.// Pred. Complement
Ta *bangzhu* *biren* *shi* *ziyuan* *de.* [authentic]
He help others is willing Sub.
"He is willing to help others."

(25) *Wo* *yiding* *anshi* *wancheng.*
I definitely on time complete
"I will definitely complete on time."
Subject Adjunct Adjunct Predicator

(Sub.) Adjunct Predicator// Pred. Complement
(*Wo*) *anshi* *wancheng* *shi* *queding* *de.*
(I) on time complete is certain Sub.
"It is certain that I will complete on time."

Depending on the description of metaphorical realizations of various types of modality, the categories of metaphor of modality and their subcategories in Chinese are displayed in Table 5.

Table 5 Categories and subcategories of metaphor of modality in Chinese

Categories of Metaphor of modality	Subcategories
1. Metaphorical realizations of probability	(i) projecting clause; (ii) *shi…de* structure; iii) *you …* structure;
2. Metaphorical realizations of usuality	*shi…de* structure
3. Metaphorical realizations of obligation	(i) projecting clause; (ii) *shi…de* structure; (iii) you ... structure
4. Metaphorical realizations of inclination	*shi…de* structure

3. Corpus Selection and Corpus Analysis

This section describes the corpus on which the analysis of interpersonal GM deployment in Chinese is based, clarifying the size of the corpus and the process of corpus selection and analysis. The corpus used for the present research is a very large

corpus of spontaneous spoken Chinese, which is composed by recordings of television programs broadcasted in mainland China.

3.1 Methodological Issues

Two methodological issues must be considered before the selection of corpus: 1) the frequency of GM instances in spoken Chinese and 2) the feasibility of identifying GM instances with specific words or structures in the language. Prior to this study, there is no research on interpersonal GM in Chinese. The lack of information about the real frequency of GM instances in Chinese gives rise to the difficulty of corpus selection. In order to determine the size of spoken Chinese corpus to be used, a pilot study should be conducted to test the occurrence of GM instances in spoke Chinese.

A spoken Chinese corpus of 60,000 characters is collected for this purpose. Although the corpus is numerically small by current standards of corpus linguistics, it is adequate for the pilot study of interpersonal GM. The size of the corpus is not all-important. It follows design principles that make its material represents major varieties of naturalistic spoken Chinese. The corpus is assembled by recording spontaneous formal and informal conversations in the Chinese department of a Singapore university. It is collected between January 2010 and January 2011 as part of a research project on the grammatical characteristics of spoken Chinese. The speakers involved in the corpus are male and female native speakers of Mandarin Chinese aged between 20 and 50 year-old. The corpus contains text types of daily conversation, class session, study group and staff meeting, each of which is represented by two discourses.

This small corpus is analyzed with the framework developed for interpersonal GM identification and categorization in Section 2. It is found that interpersonal GM instances tend to occur much less frequently than expected. Most categories of

interpersonal GM occur fewer than 5 times per discourse, and some types of GM are observed only once (or not at all) in a discourse. In addition, the distribution of GM instances in the corpus is not uniform across discourses. The occurrence of GM instances may be accidentally high in a particular discourse, leading to the incorrect conclusions about the frequency of GM deployment. For example, a discourse of class session in the corpus happens to have 27 metaphorical expressions because the teacher uses interrogative clauses as examples of his teaching. Because of the low frequency and unbalanced distribution of GM instances, this study requires a very large corpus to examine the use of interpersonal GM in spoken Chinese. It is worth noting that this pilot study merely provides an indication of the scope of interpersonal GM in spoken Chinese. Sections 4 and 5 reveal the distribution of GM in more detailed ways, ranging from the topic of discussion and the relation between speaker and addressee.

The feasibility of identifying GM instances with specific words and structures is also investigated in the pilot study. Section 2 discusses three critical lexico-grammatical phenomena for the identification of interpersonal GM in Chinese, namely Mood particle, '*shi…de*' and '*you…*' structures. The pilot study shows that they have distinctive impacts on the GM instance recognition in the corpus. Mood particles increase the difficulty of identifying GM instances, while '*shi…de*' and '*you…*' structures make the identification easier.

Previous research on Mood particles in Chinese reveals that these particles are often associated with metaphorical realizations of speech functions (Li and Thompson, 1981; Zhu, 1996). Some of these particles like *ne* and *a/ya* are capable of expressing different types of mood without changing the main structure of the clause. This characteristic of Mood particles determines that they cannot be used as the keywords for an automatic search of GM instances in a corpus. In other words, the metaphorical

expressions engendered by the use of Mood particles have to be manually identified. This is practically impossible for the analysis of a very large corpus required by the present research. In order to solve this problem, this study assembles a relatively small corpus from the large one to conduct a manual analysis. This point will be explained in Section 3.3 with more details.

Section 2 shows that grammatical structures of '*shi…de*' and '*you…*' are involved in the expression of each type of modality in Chinese. The modality meanings construed by '*shi…de'* and '*you…'* structures are expressed explicitly with specific words. This feature determines that GM instances with these structures are appropriate for an automatic search in a large corpus. In this sense, the special structures of '*shi…de*' and '*you…*' actually increase the feasibility of identifying GM instances in Chinese.

3.2 Selection of Spoken Chinese Corpus

The focus of this study is to reveal the overall profile of interpersonal GM use in spoken Chinese and the distribution of GM across registers. For this purpose, a corpus formed by different registers of spoken discourses is required for the detailed analysis. The corpus must be large enough to contain sufficient GM instances due to the fact that interpersonal GM are not observed very frequently in spoken Chinese. In addition, it should compose of authentic examples of contemporary spoken Chinese and naturalistic conversations.

Authentic spoken language samples are always difficult to obtain although they are valuable for the linguistic studies. In the past five decades, great efforts have been made to build spoken language corpora. The most important and notable corpora developed since the 1960s include Oral Vocabulary of the Australian Worker Corpus

(Schonell et al., 1956), London-Lund Corpus (Svartvik, 1990), COBUILD Bank of English (Moon, 1997) and British National Corpus (Crowdy, 1993; Rundell 1995). However, these spoken corpora are assembled for the study of English or other western languages. There have been few spoken Chinese corpora because of the complexity of the language and the delayed development of relevant research. Since the 1990s, some corpora have been developed in mainland China, Taiwan and the UK to collect spoken data for the study of Chinese Language.

Mandarin Conversational Dialogue Corpus (MCDC) and Mandarin Topic-oriented Conversation Corpus (MTCC) are the representatives of spoken Chinese corpora developed in Taiwan. They are developed by Taiwan's Academia Sincia respectively in 1997 and 2001. Each corpus contains conversations produced by three groups of randomly selected speakers in their twenties, thirties and forties. The conversations were transcribed so that it is possible to work out syntactic structures and discourse devices used by speakers in different ages. The size of the two corpora is relatively small (120,000 characters for MCDC and 200,000 characters for MTCC).

The Lancaster Los Angeles Spoken Chinese Corpus (LLSCC) is a corpus of spoken Mandarin Chinese developed in the UK. The corpus is composed of 1,002,151 words of dialogues and monologues, both spontaneous and scripted, in 73,976 sentences and 49,670 utterance units (paragraphs). The corpus has seven sub-corpora, i.e., conversations, telephone calls, play & movie transcripts, TV talk show transcripts, debate transcripts, oral narratives and edited oral narratives.

The corpora for spoken Chinese complied in mainland China are normally large in size. The most ambitious spoken Chinese corpus under construction is Modern Spoken Chinese Corpus (MSCC), which contains about one billion Chinese characters. Broadcast Media Spoken Chinese Corpus (BMSCC) is a 100 million-character corpus

developed by Media University. It is the largest spoken Chinese corpus readily available until now.

This concise review of major spoken Chinese corpora demonstrates that the resource of spoken Chinese corpus is very limited compared to that of English. Given the low occurrence of interpersonal GM in spoken Chinese, the analysis in this study needs a corpus large in size. Those small corpora, such as MCDC and MTCC, are obviously not suitable for the present research. The wide range of text types in LLSCC is very appropriate for the exploration of GM distribution across registers, although the corpus is still relatively small. The major limitation to LLSCC is that it has not been released to the public because of copyright restrictions. There are some other spoken Chinese corpora not mentioned above. However, these corpora are ordinarily small in size and not open to external users. Taking all these factors into consideration, BMSCC is the only corpus eligible for the analysis in this study.

BMSCC is a corpus of spoken Mandarin Chinese consisting of monologues and dialogues recorded from selected television programs broadcasted in mainland China from 2008 to 2010. The corpus comprises about 100 million Chinese characters in 15871 program episodes. The discourses in the corpus can be divided into smaller corpora according to their media form, source channels, communicative mode, discussion topic and even program host. The content of the corpus covers both read speech and spontaneous dialogues and multipart discussions. The discussion topics involved in the corpus includes news, arts, economy and society. In summary, the sub-corpora of BMSCC cover the major varieties of modern spoken Chinese. Such a design of corpus building allows insights to be developed concerning distinctions between different registers of spoken Chinese with regards to the use of interpersonal GM.

It is relatively easy to build a large corpus by recording television and radio output. However, the corpus developed in this way has its own limitation in that part of the corpus is not representative of typical conversation. For instance, some speakers in a program may prepare what they are going to say before the program is broadcasted. This research is very careful in the selection of sub-corpora in BMSCC to minimize the effect of this limitation. The spoken discourses used for the analysis in this study are drawn from spontaneous programs broadcasted in television. Moreover, only spontaneous dialogues in the corpus are selected for the analysis of GM, while read speech and multipart discussions are not included. After these selections, a corpus including 4182 spoken Chinese discourses is utilized for the detailed analysis.

As discussed in Section 3.1, certain types of metaphorical expressions are not appropriate for automatic corpus search. This chapter thus needs a corpus which is smaller and more manageable for a manual analysis which takes the context of relevant expressions into consideration. There are two methods to realize this aim: 1) using the small corpus developed for pilot study and 2) selecting discourses from the large corpus. This research adopts the second method in order to integrate the results of analyzing small and large corpora. According to the register theory of Halliday (1978), there are two considerations that should be borne in mind for the assembly of small corpus from the large one: the topic of dialogue and the relationship between speaker and addressee. This research first uses the relationship between speaker and addressee as a parameter to sample speeches from BMSCC. It is found that in some episodes speakers are equal and in other units they are unequal in social relations. Both discourses with equal and unequal social relations are selected from the large corpus. In addition, the small corpus covers the full range of discussion topics found

in BMSCC, i.e., news, arts, economy and society. The detailed composition of the small corpus is shown in Table 6.

Table 6 Composition of the small corpus

Topic / Relationship	News	Arts	Economy	Society
Equal relation	5	5	5	5
Unequal relation	5	5	5	5

Table 6 shows that the small corpus consists of 40 discourses, 20 involving equal relationship between participants and 20 unequal. On the other hand, 10 discourses are collected from each area of discussion. To sum up, the exploration of interpersonal GM deployment in spoken Chinese is based on the analysis of a large corpus (hereinafter Corpus A) with 4182 discourses and a small one (hereafter Corpus B) containing 40 transcripts of speech.

3.3 Corpus Analysis

The analysis of corpus is carried out in two steps: 1) identification of GM instances and 2) the quantification of GM instances. The identification of GM instances is mainly implemented with the search engine on the website of BMSCC. Manual annotation of Corpus B is sometimes required to compensate the deficiency of Corpus A for the analysis of certain types of GM. The quantification of GM instances is realized by adding up the amount of each types of GM instance in the corpora. In order to conduct an automatic search of GM instances, this research needs a search engine with the following three functions:

1) to search for particular categories of GM instances;
2) to show distributions of GM instances across different text types;
3) to visualize the source text in which GM instance are located.

BMSCC has the functions of automatic keyword searching and keyword search statistic on its website. The user of the corpus may search the corpus for single Chinese character, word or phrase. The corpus allows users to search a pair of keywords at the same time. It provides different search options, enabling the user to select the area in which he wants to search for the required information. For example, a user can search the use of particular words or phrases in different television programs or time periods. In addition, the corpus permits its users to read the source text in which the words or phrases are included. Moreover, a user has the option to select the linguistic unit in which his search results are displayed, i.e., in clause, paragraph or text. Finally, the results of search can be downloaded into a new file for further analysis. The search engine of BMSCC thus fulfills the requirements of the present study.

The identification of interpersonal GM instances in the corpus begins with the choosing of words and structures to be used for automatic search. Following this, BMSCC is automatically processed with the search engine on its websites. The task of quantifying interpersonal GM instances depends on the identification of metaphorical expressions in the data. The GM instances found in the corpus are first counted according to their subcategories in individual sub-corpora. The GM instances in different sub-corpora are then added up in terms of category to measure the numbers of each category of interpersonal GM in the corpus. In the light of the quantifying work, this study defines the distribution of each elemental GM category in spoken Chinese.

4. Overall Distribution of Interpersonal GM Categories

This section examines how the two types of interpersonal GM, namely, metaphor of mood and metaphor of modality are distributed in spoken Chinese. The metaphorical expressions of speech functions and modality are further divided into subcategories as shown in Tables 4 and 5 (see Section 2.2 for further details). This section explores the distribution of each subcategory of GM in Tables 4 and 5 through a quantitative analysis of GM instances in the corpora selected.

4.1 Metaphor of Mood

Section 2 shows that the metaphor of mood in Chinese has four subcategories in terms of the mood choices involved in the metaphorical expression of speech functions: 1) expressing command with interrogative mood, 2) expressing command with declarative mood, 3) expressing statement with interrogative mood, and 4) expressing question with declarative mood. In addition, metaphor of mood in Chinese may be classified according to the two major forms of realization: 1) normal form of mood expression and 2) speech-functional formulae. The combination of the two ways of categorization thus results in a realization system of metaphor of mood in Chinese as shown in Figure 3.

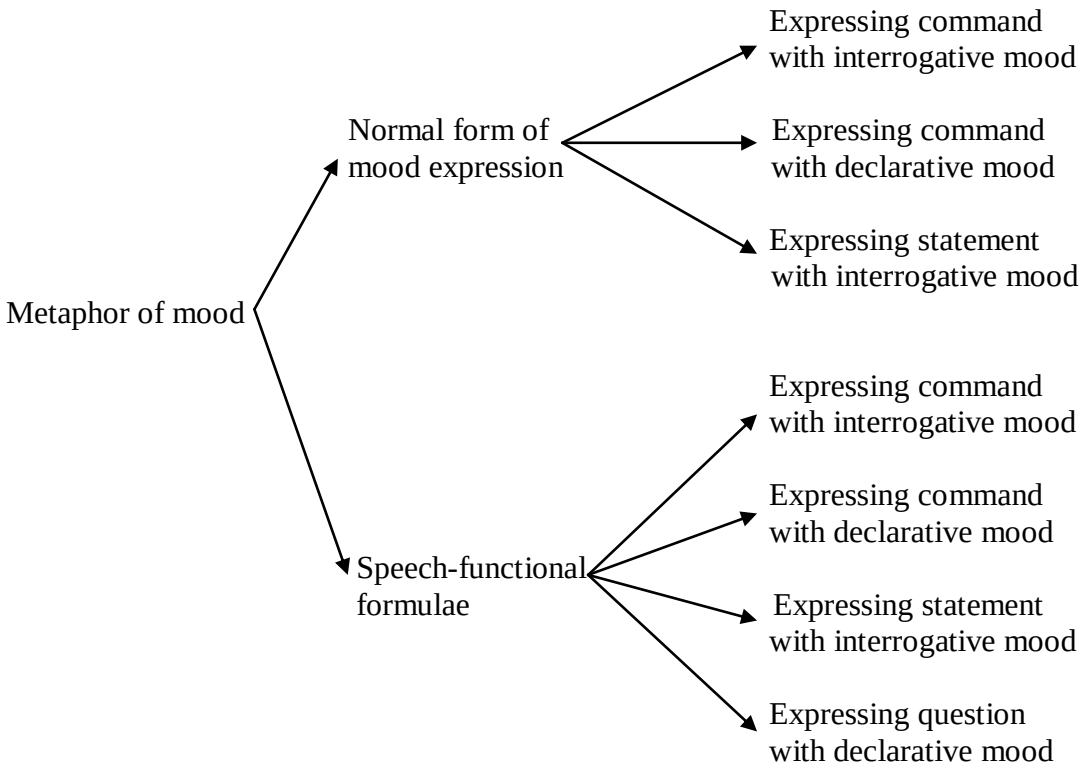

Figure 3 Realization system of metaphor of mood in Chinese

The analysis of the distribution of metaphor of mood in spoken Chinese is conducted with reference to this realization system. The GM instances in the selected corpora are first identified according to their forms of realization, namely normal form and speech-functional formulae. The metaphorical expressions involved thus fall in two groups: 1) normal form group and 2) speech-functional formulae group. These two groups of GM instances are then differentiated and quantified with respect to mood choices in expressing speech functions. As shown in Figure 3, the normal form group includes three types of speech function expressions. The speech-functional formulae are involved in all the four types of speech function expressions discussed in Section 2.

Metaphor of mood in Group 2 is appropriate for the automatic search of Corpus A because speech-functional formulae are words or structures easy to define. The metaphorical expressions in Group 1, on the other hand, must be recognized by manually analyzing a small corpus because they are usually realized with Mood

particles involved in the expression of different types of mood. In other words, it is practically impossible to conduct an automatic search of Corpus A for metaphorical expressions in Group 1. This section thus manually analyzes Corpus B composed of 40 discourses to estimate the distribution of metaphor of mood with normal form of expression. Following this, the number of GM instances identified in Corpus B is multiplied by 10 to acquire the approximate quantity of GM instances in Corpus A. The estimated number of the three subtypes of metaphor of mood in Group 1 is shown in Table 7.

Table 7 Estimated number of metaphor of mood realized in normal form

Metaphor of Mood realized in normal form (Group 1)	Expressing Command with Interrogative Mood	Expressing Command with Declarative Mood	Expressing Statement with Interrogative Mood
Estimated number	290 (29 x 10)	530 (53 x 10)	1470 (147 x 10)
Estimated Percentage (%)	12.7	23.1	64.2

Table 7 shows that the metaphorical expressions of statement occur much more frequently than those construed for the purpose of expressing command. Moreover, the speech function of command is expressed more commonly with declarative mood. The results in Table 7 should be considered preliminary because they are estimated on the basis of an analysis of a corpus small in size. However, they are useful for describing the major trends of how metaphor of mood realized in normal form are deployed in spoken Chinese.

The identification of metaphor of mood realized in speech-functional formulae is more straightforward because relevant expressions are concerned with words and structures easy to search in the corpus. Table 8 illustrates the breakdown of GM instance numbers in Corpus A across different subtypes of metaphor of mood in Group 2.

Table 8 Number of metaphor of mood realized in speech-functional formulae

Metaphor of mood realized in speech-functional formulae (Group 2)	Expressing Command with Interrogative Mood	Expressing Command with Declarative Mood	Expressing Statement with Interrogative Mood	Expressing Question with declarative Mood
Number	544	671	2928	352
Percentage (%)	12.1	14.9	65.1	7.9

Table 8 shows that distribution of GM instances realized in speech-functional formulae is very similar to that of metaphor of mood in normal form. The metaphorical expressions of Statement are by far the most common GM instances observed in the corpus. Declarative mood is used more frequently for expressing command than interrogative mood. In order to show the overall profile of metaphor of mood in spoken Chinese, the results in Tables 7 and 8 are combined in Figure 4.

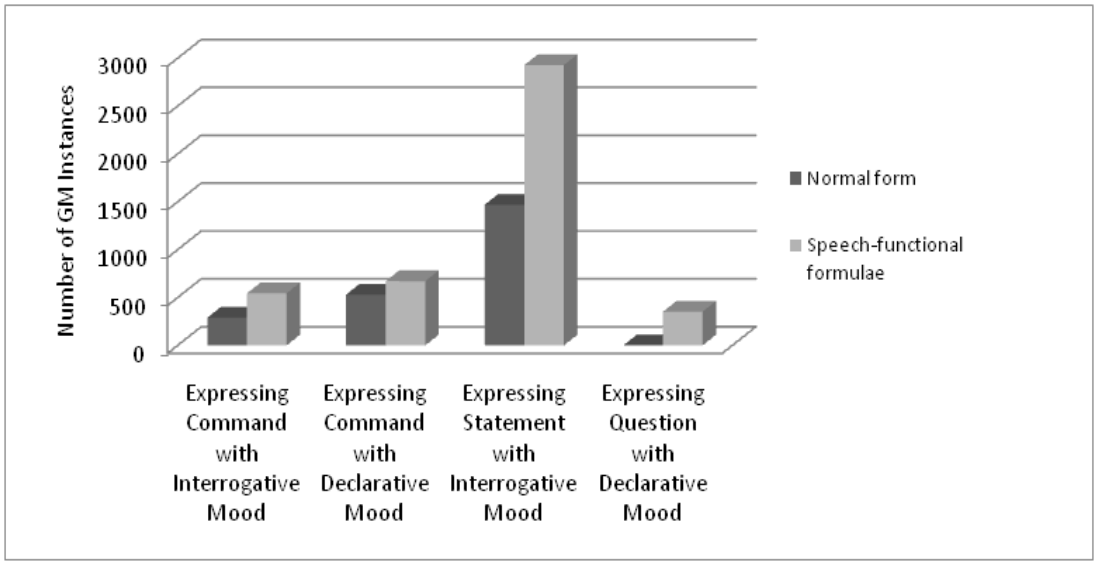

Figure 4 The distribution of metaphor of mood in spoken Chinese

As shown in Figure 4, there are three major characteristics in the distribution of metaphor of mood in Chinese:

1) The metaphor of mood in Chinese is mainly expressed by speech functional formulae including '*haibu…*' (yet not), '*bushi…ma?*' (not is … Mood particle),

'*Wo xiang zhidao/liaojie …*'(I want to know/enquire…), etc. To be more specific, GM instances realized in speech-functional formulae are almost three times as many as those realized in normal form.

2) Interrogative mood is especially prevalent in the metaphorical realization of speech functions, accounting for half of the instances of metaphor of mood in Chinese. More specifically, interrogative mood is used in relation to the expression of statement in the majority instances of metaphor of mood.
3) The metaphorical expression of command is also common in Chinese although its frequency is not as high as that of statement.

It seems that the last two characteristics of metaphor of mood in Chinese are associated with the politeness strategies described by Brown and Levinson (1987). A speaker uses an interrogative to express a statement because he or she intends to minimize face-threatening acts (FTAs). Similarly, the command metaphorically expressed by an interrogative or a declarative has the effect of maintaining face of speaker or hearer involved. This point is not discussed in detail here as it is not the main focus of this research.

4.2 Metaphor of Modality

As revealed in Section 2, the metaphorical realizations of modality in Chinese can be classified from two perspectives: 1) the types of modality, and 2) the grammatical methods involved in metaphorical realization. To be more specific, there are four types of modality in Chinese, i.e., probability, usuality, obligation and inclination. The grammatical methods involved in the metaphorical realization of modality meaning are projecting clause and special structures of *shi … de* and *you…* . Modality type and

grammatical method are combined in this section to establish a realization system of metaphor of modality in spoken Chinese, as shown in Figure 5.

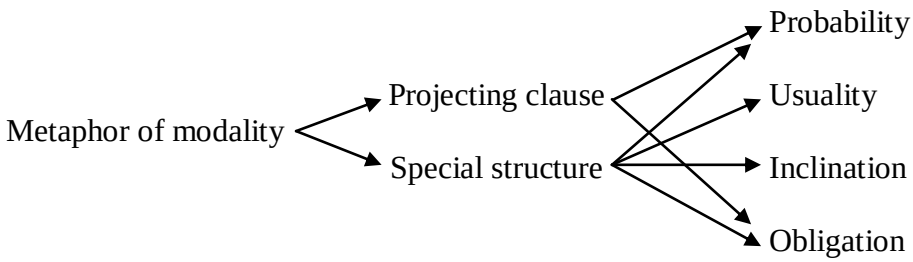

Figure 5 Realization system of metaphor of modality in Chinese

This section first explores the distribution of metaphor of modality realized by projecting clauses. Figure 5 shows that only probability and obligation meanings are involved in this form of realization. All the projecting clauses listed out in Table 2 are searched one by one in Corpus A. Their frequencies in the corpus are displayed in Table 9.

Table 9 Number of metaphor of modality realized by projecting clauses

Modality	Projecting clause	Number of GM instances	Percentage (%)	Total
Probability	*wo xiangxin* (I believe)	1278	13.8	9263
	wo guji (I estimate)	608	6.6	
	wo xiang (I think)	4937	53.3	
	wo renwei (I reckon)	2440	26.3	
Obligation	*wo yaoqiu* (I require)	47	21.8	216
	wo rang (I let)	158	73.1	
	wo yunxu (I permit)	11	5.1	
Total				9479

Table 9 shows that projecting clauses realizing probability meaning are used much more frequently than those with the obligation meaning in Corpus A. To be more specific, metaphorical expression of probability is almost 50 times more frequent than that of obligation in the corpus. This distribution of GM instances demonstrates that

the primary purpose of using projecting clause in spoken Chinese is to construe the meaning of probability.

The special structures, including *'shi ... de'* and *'you…'*, are found in the realizations of all types of modality in Chinese. Their occurrences in Corpus A are displayed in Table 10.

Table 10 Number of metaphor of modality realized in special structures

Modality	Special structure	Number of GM instances	Total	Percentage (%)
Probability	*shi kending de* (is must Sub.)	42	416	39.5
	you keneng (have possibility)	374		
Obligation	*shi bixu de* (is necessary Sub.)	70	571	54.2
	you biyao (have necessity)	501		
Usuality	*shi changyou de* (is often Sub.)	39	39	3.7
Inclination	*shi ziyuan de* (is willing Sub.)	28	28	2.6
Total			1054	100

Table 10 shows that metaphorical expressions realized by special structures are distributed in different ways across four types of modality. In general, the expressions with probability and obligation meanings are much more common in the corpus. Those expressing usuality and inclination meanings are obviously rare, reaching just over 7 percent of relevant GM instances. Unlike the unequal distribution of GM instances with the meaning of probability and obligation in Table 9, the deployment of these two types of GM in Table 10 is more balanced.

The comparison of Tables 9 and 10 reveals that GM instances realized by projecting clauses are used nine times more frequently than those expressed in the form of special structure. This distribution of grammatical methods realizing modality

meaning in Corpus A shows that projecting clause is the dominant method used for the expression of metaphor of modality in Chinese. In order to demonstrate the general patterns of how metaphor of modality is distributed in Chinese, the findings in Tables 9 and 10 are integrated in Figure 6.

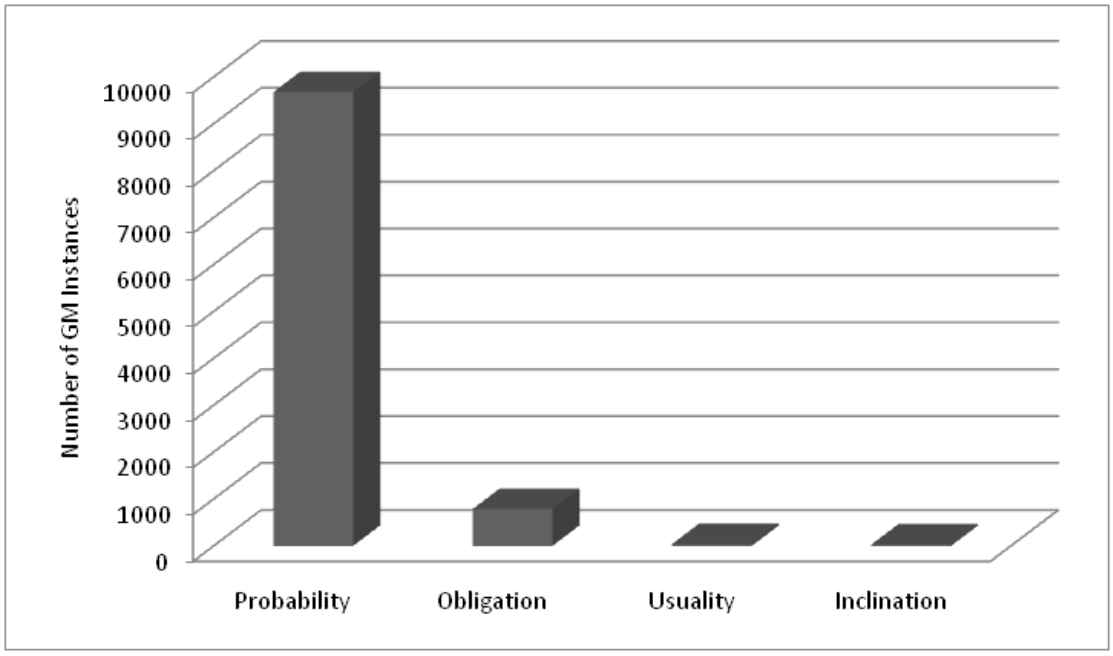

Figure 6 General distribution of metaphor of modality in spoken Chinese

Figure 6 shows that two general patterns of GM deployment in Chinese emerge from the corpus analysis: 1) the distribution of interpersonal GM instances is very uneven across the four types of metaphor of modality; and 2) the metaphorical expressions of probability are used much more commonly in spoken Chinese than those of any other types of modality.

This section also attempts to describe the distribution of metaphor of modality observed with reference to the value of modality. According to Halliday and Matthiessen (2004: 620), one of the major variables of modality is "the value that attached to the modal judgement: high, median or low". The projecting clauses and special structures involved in the realization of metaphor of modality are differentiated

in terms of their value of modality, as shown in Table 11. In addition, the numbers of each type of expression observed in Corpus A are included in Table 11 to show the distribution of GM in terms of modality value.

Table 11 Distribution of GM in terms of modality value

	Probability	Usuality	Obligation	inclination	Total
High	Certain: *wo xiangxin* (1278) *shi …de/you* (416)	Always: *shi…de* (39)	Required: *wo yunxu* (11) *shi…de/you* (571)	Determined: *shi…de* (28)	2343 (22.3%)
Median	Probable: *wo renwei* (2440)	Usually	Supposed: *wo yaoqiu* (48)	Keen:	2488 (23.6%)
Low	Possible: *wo guji* (608) *wo xiang* (4937)	Sometimes	Allowed: *wo rang* (158)	Willing:	5703 (54.1%)

Table 11 shows that the metaphorical expressions with a low value of modality are highly preferred in Chinese conversations. More than half of the GM instances in the domain of modality are used to express the meanings of 'possible' and 'allowed'. Given that the proportion of the GM instances with the meaning of 'allowed' is small, the primary purpose of using metaphor of modality by Chinese speakers is to show that they are not certain about their conclusions. On the contrary, the metaphorical expressions with high and median values of modality are employed less commonly by Chinese speakers.

5. Distribution of Interpersonal GM across Registers

This section compares how the two types of interpersonal GM, i.e., metaphor of mood and metaphor of modality are distributed across different registers. In order to describe the situation in which language is used, Halliday (1978) develops register theory and recognizes three dimensions of situation:

1) Field of discourse: what language is being used to talk about

2) Tenor of discourse: the role relationships between the participants

3) Mode of discourse: the role language is playing in the interaction

According to Eggins (1994), the variable of Field includes the topic and the interactants of discourse. The topic of discourse can be specialized or everyday, while the interactants may have specialized or common knowledge of the field. The variable of Tenor varies according to the change of status, affective involvement and contact between the participants. The variable of Mode is mainly concerned with the difference between written and spoken languages. For example, a conversation is spontaneous while a composition is planned. Given that Mode of discourses in the corpus selected has been clearly defined as spontaneous conversation, the analysis of GM deployment across registers focuses on the effects of Field and Tenor. The contextual factors involved in the description of Field and Tenor are summarized in Table 12.

Table 12 Contextual factors in Field and Tenor of discourse

Field	Topic	Specialized
		Everyday
	Interactant	Specialized knowledge
		Common knowledge
Tenor	Status	Equal
		Unequal
	Affective involvement	High (family/friends)
		Low (business clients)
	Contact	Frequent
		Occasional

The corpus used in the present research is composed of conversations broadcasted on television programs. The affective involvement in these programs is normally low, while the contact between speakers is occasional. The status between participants in relevant programs is thus the major consideration of Tenor analysis. This study thus selects two groups of program from Corpus A in which the status between participants

is respectively equal and unequal. With respect to Field of television conversations, the factors of topic and interactant are in fact interrelated. Experts with specialized knowledge are usually invited to participate in television programs with specialized topic. It is very rare to see ordinary people in a television program talking about a professional issue. This study concentrates the analysis of Field on the topic of discussion because BMSCC allows the automatic search of discourses according to their topics. Taken all these considerations together, the present research examines the use of interpersonal GM in different registers from two perspectives:

1) The connection between the deployment of interpersonal GM and the topic of discussion;
2) The correlation between the deployment of interpersonal GM and the status between speaker and hearer.

One critical methodology issue in the comparison of GM distribution across different registers is that relevant registers are not equally represented in the corpus selected. For example, the sub-corpus for register of society consists of 1030 texts, while the sub-corpus of arts includes only 318 discourses. This section thus changes all raw frequency counts to a rate of occurrence per text to compensate the unbalance between sub-corpora of different registers. For instance, the metaphorical expressions of Probability occur 201 times in register of arts and the total number of texts in the register is 318. Thus, the rate of occurrence for this type of interpersonal GM in arts register is:

201/318 = 0.63 times per text

The corpora selected for the analysis in this study falls into four registers in terms of topic: 1) news, 2) arts, 3) economy and 4) society. This study first inspects the frequency of two types of interpersonal GM across these registers. The rate of

occurrence for the four subtypes of metaphor of mood in different registers is illustrated in Table 13.

Table 13 Distribution of metaphor of mood across topics

Metaphor of mood / Topics	Expressing Command with Interrogative Mood	Expressing Command with Declarative Mood	Expressing Statement with Interrogative Mood	Expressing Question with declarative Mood
News	0.17	0.28	1.03	0.08
Arts	0.19	0.26	1.05	0.07
Economy	0.21	0.29	1.01	0.08
Society	0.17	0.30	1.04	0.06

Table 13 shows that the conversations with different topics are similar in using different types of metaphor of mood. In other words, the deployment of metaphor of mood in Chinese is not greatly affected by the change of conversation topic.

As discussed above, the distribution of GM instances is very uneven across different types of modality in Chinese. It is not necessary to discuss the occurrence of metaphorical expressions with the meanings of usuality and inclination since they are observed less than 40 times in the corpus. This study only calculates the rate of occurrence for GM instances with the meanings of probability and obligation, as illustrated in Table 14.

Table 14 Distribution of metaphor of modality across topics

Metaphor of Modality / Topics	Probability (9679 instances)	Obligation (787 instances)	Usuality (39 instances)	Inclination (28 instances)
News	3.11	0.18	Not calculated	Not calculated
Arts	0.63	0.19	Not calculated	Not calculated
Economy	1.74	0.15	Not calculated	Not calculated
Society	4.07	0.19	Not calculated	Not calculated

Table 14 shows that GM instances with obligation meaning are evenly distributed across registers with different topics. But the occurrence rate of metaphorical expressions with probability meaning differs dramatically in different registers. The

discourses in the fields of news and society have a much higher frequency of GM deployment than those in the other two areas. It means Chinese speakers use a much larger set of GM instances to express probability when they discuss news and society. Among the four types of discourse in the corpus, news and society belong to everyday topics requiring less professional knowledge. Arts and economy are relatively more specialized topics that only a few people are qualified to discuss in depth. Those who are invited to participate in a television program covering these two topics are frequently top specialists in relevant fields. In this case, the speakers involved are very confident about their own opinions. This may be the reason why the occurrence of GM instances expressing probability meaning is low in arts and economy registers.

The examination of how GM deployment is affected by the change of social status between speaker and hearer is more complicated because the metaphorical expressions must be searched program by program. This research selects 17 programs from Corpus A in which the status between participants can be clearly defined as equal or unequal, including 2132 spoken discourses. Considering that the number of discourses involved is smaller, only the most frequently observed GM categories are covered in this examination. The results of examination are displayed in Table 15.

Table 15 Distribution of GM instances in relation to status

GM / Status	Metaphor of Mood			Metaphor of Modality	
	Expressing Command with Interrogative Mood	Expressing Command with Declarative Mood	Expressing Statement with Interrogative Mood	Probability	Obligation
Equal (10 programs 1287 discourses)	0.10	0.24	0.83	2.01	0.15
Unequal (7 programs 845 discourses)	0.23	0.27	1.57	2.37	0.18

Table 15 shows that the most striking contrast between programs involving participants with equal and unequal status is their differential reliance on interrogative mood. The conversation participants unequal in status prefer to use more interrogatives to express the meanings of statement and command than those equal in status. In order to explore the reason for this preference on interrogative mood, this study conducts a thorough analysis of 50 spoken discourses in which the status between participants is unequal. The analysis demonstrates that interrogative mood is ordinarily used by speakers lower in social status, such as program host. In other words, the reliance on interrogative mood in programs with unequal participants is largely engendered by the need of speakers low in status to show their respect to hearers with higher status. More generally, the deployment of metaphor of mood in Chinese is related to the status relationship between speaker and hearer. Table 15 also demonstrates that the use of two major types of metaphor of modality, i.e., probability and obligation, is not greatly affected by the status between relevant speakers and hearers.

6. Conclusions

The discussion in this study has been focused on the use of interpersonal GM in spoken Chinese. A large corpus of natural spoken Chinese is analyzed to explore how interpersonal GM instances are distributed in the language and how the frequency of different types of interpersonal GM is affected by the change of dialogue topic and social relationship between speaker and addressee. Prior to the actual corpus analysis, this study develops a framework for identifying and categorizing interpersonal GM in Chinese by distinguishing congruent and metaphorical realizations of semantic meanings in interpersonal domain and differentiating grammatical methods involved

in metaphorical expressions. The framework is the first attempt to describe interpersonal GM systematically, providing a basis for further research in this area. Moreover, the framework reveals that certain lexical and grammatical phenomena, including Mood particles and structures of *shi … de* and *you …*, are critical for the recognition of interpersonal GM instances in Chinese.

In this study, the distribution of metaphor of mood and metaphor of modality are examined separately to simplify discussion. The overall picture of interpersonal GM distribution in spoken Chinese emerging from the corpus analysis is as follows:

1) Metaphor of modality is used much more frequently than metaphor of mood in spoken Chinese;
2) The majority cases of metaphor of mood in Chinese are realized in the form of speech-functional formulae;
3) Interrogative is the most commonly used mood in the metaphorical expression of speech functions in spoken Chinese;
4) Metaphor of modality is predominantly realized in the form of projecting clause in spoken Chinese;
5) Metaphor of modality has a very uneven distribution in spoken Chinese, with a particular high occurrence in the expression of probability;
6) Metaphorical expressions with a lower value of modality are used more frequently in spoken Chinese.

It is important to recognize from these characteristics that interpersonal GM in spoken Chinese has a greater reliance on certain types of metaphorical expressions. In general, metaphor of modality is the major part of interpersonal GM in spoken Chinese. To be more specific, GM instances realized by speech-functional formulae, projecting clauses and interrogatives are used more frequently in the language. The metaphorical

expressions with the meaning of probability and lower value of modality are highly preferred by Chinese speakers. The reason for these patterns of interpersonal GM deployment in Chinese is an interesting direction for further research although it is not explored in this study.

In order to reveal the relationship between social factors and the meaning creation in spoken Chinese, this study also investigates the use of interpersonal GM in different registers. The investigation focuses on the correlation between the deployment of GM instances and the register variables of Field and Tenor. It is found that the use of interpersonal GM in spoken Chinese is affected by the conversation topic and the social status between speaker and hearer. In particular, the use of metaphor of modality is sensitive to the change of conversation topics which require different degrees of professional knowledge. The deployment of metaphor of mood reflects the variation of social status between speaker and hearer. There are other contextual factors which may affect the use of interpersonal GM in Chinese. Restricted by the corpus selected, they are not discussed in this study.

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