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Terms of Address in the Chinese Business Enterprise

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Abstract

This study examines terms of address currently used by employees of Chinese business enterprises. The authors find that a speaker's address selections are related significantly to the gender of the speaker, the location of the enterprise in Eastern or Western China, and the ownership type of the enterprise; that is, whether the enterprise is state-owned or privately owned. The authors develop hypotheses to explain the social origins of these observations. It is also observed that the semantics of address in the enterprise persist across changes in underlying terminology and are resilient with respect to mandated speech. In examining this subject of persistence, the authors find that the term 'gē/jiě' (brother/sister) has replaced the term 'tóngzhì' (comrade) as the primary means of expressing solidarity within the business enterprise. The authors consider the question of whether address choices can be predicted based on externally observable situations or whether such choices require knowledge of the speaker's motivations, which are not externally observable. It is concluded that address is most predictable in situations where power is salient and less predictable in other situations.

Keywords: Chinese language, address terms, Chinese business enterprise

1. Terms of Address in the Chinese Business Enterprise

The choice of appropriate terms of address plays a key role in successful human interaction. Perhaps nowhere is this more apparent than in the workplace, where the quality of social relationships may be directly coupled to career advancement for the individual and profit for the enterprise. Thus, the ability of an employee to understand, and apply, rules of address is of great importance. When the rules are applied improperly, the speaker may offend the addressee by, for example, implying that the addressee's position in the enterprise is inferior to that which the addressee believes it to be. This article describes a study examining the self-reported use of terms of address in a variety of situations in the Chinese business enterprise.

1.1 A Review of Prior Research

We provide a brief review of prior research relevant to the current study. The reader is referred to the first chapter of The Sociolinguistics of Language by Ralph W. Fasold (1990) for a comprehensive review of early research in this area.

Who says 'tu' to whom? (1958) and The Pronouns of Power and Solidarity (1960), both by Roger Brown and Albert Gilman are often cited as seminal works in the study of address. These articles examine the use of 'familiar' and 'polite' pronoun forms in English, French, German, Italian, and Spanish. It is suggested that the pronoun chosen for use by a speaker is determined by semantics of 'power' and 'solidarity'. Brown and Gilman define power as the degree to which one person "is able to control the behavior of the other". The power semantic is applicable to the case in which the power holder uses the familiar form to address the non power holder and the non power holder uses the polite form to address the power holder. Solidarity describes the degree to which commonalities exist between people. "Attended the same school", "have the same parents", and "practice the same profession" are cited as examples. The solidarity semantic is applicable to the case in which two people mutually exchange the familiar form or the polite form. It is observed that mutual use of the familiar form becomes more likely as the degree of solidarity increases. Thus, rules can be proposed to predict the term a speaker is likely to use when addressing another individual based on the dimensions of power and solidarity. Such rules exhibit points of ambiguity. For example, a diner at a restaurant may be thought of as having a position of power with respect to the waiter. However, if both attended the same grade school, there would be some question as to which semantic takes precedence.

Roger Brown and Marguerite Ford (1961), in their article *Address in American English*, examine the use of 'first name' (FN) and 'last name prefixed by title' (TLN) among employees of business enterprises located in the United States. The article suggests that individuals having roughly equal power may address each other using mutual FN or mutual TLN.

The choice between the two is governed by the degree of acquaintance of the individuals. That is, as speakers become more acquainted, a transition occurs from mutual TLN to mutual FN. The authors point out that in the United States people may become sufficiently acquainted in a few minutes to allow this transition. Where there is a power differential between two individuals, the power holder uses FN when addressing the non power holder and the non power holder uses TLN to address the power holder. In this case of a power differential, address is governed by two dimensions: occupational status and age, with occupational status taking precedence over age. Thus, a speaker with higher occupational status will say FN to the speaker with lower status and the speaker with lower status will say TLN to the speaker with higher status. Where there is not a significant status differential, the older speaker will say FN to the younger speaker and the younger speaker will say TLN to the older speaker. It is observed that there may be a conflict between the semantic of occupational status and the semantic of age, in particular when an older speaker addresses a superior. Brown and Ford observe that, in such cases, occupational status takes precedence over age.

The notion of a rules-based description of address was further pursued by Susan Ervin-Tripp in *Sociolinguistic Rules of Address* (1969). Ervin-Tripp provides a flow chart describing the algorithm by which a speaker of American English determines the appropriate term to use when addressing another individual. It should be noted that the studies of Brown and Gilman, Brown and Ford, and Ervin-Tripp were conducted in Western (occidental) countries. It cannot be assumed that such rules-based explanations are equally applicable to Eastern language and culture.

In parallel with these studies of address in Western countries, considerable research has been conducted on the topic of address in China. Perhaps the most comprehensive description of Chinese address forms can be found in *Chinese Terms of Address* (1956) by Yuenren Chao. Chao describes in considerable detail, address forms used in China prior to the 1949 Revolution which marked the founding of the People's Republic of China. For a Westerner, even a cursory reading of this article provides evidence that address in China is significantly more complex than address in Western countries. Where Western languages utilize such general terms as 'aunt' and 'uncle', a Chinese speaker addresses nearly every branch of the family tree using a distinct term.

In Tongzhi in China: Language Change and its Conversational Consequences (1983) Carol Myers-Scotton and Wanjin Zhu examine the use of the term tóngzhì (comrade) in the period following the Cultural Revolution when use of the term was in decline. Scotton and Zhu have a specific motive for studying tóngzhì during this period. Their objective is to test hypotheses related to a theory of 'marked' and 'unmarked' use of terms. The theory suggests that terms representing ongoing change in a language serve as 'markers'. Tóngzhì is identified as such a marker because it had once been applied universally, but at the time of the study it was only used to address "(1) strangers, (2) those whose occupations are unknown, and (3) those whose occupations carry no title and with whom the speaker is not familiar". When the term is applied to people associated with one of the three groups above, it is said to be used in the 'unmarked sense'; that is, it carries no special meaning. In all other cases, the term is said to be 'marked'. When marked, Scotton and Zhu suggest that the usage represents an attempt to increase or decrease the social distance between conversation participants.

Scotton and Zhu identify semantics of 'familiarity', 'solidarity' and 'power'. Each of the semantics is associated with a strategy that can be employed by the speaker in a talk exchange. The definitions of the semantics proposed by Scotton and Zhu are adopted for use in the present study. They are reproduced here as follows (S indicates 'speaker' and A indicates 'addressee'):

- (1) Power is salient in an exchange when an inequality between S and A is invoked as the basis for the exchange. Persons have power over one another to the degree that they are entitled to make decisions about matters concerning others or to control the actions of others.
- (2) Solidarity may exist between persons when they possess a common feature that cannot be denied, such as kinship, nationality, or party membership.
- (3) Familiarity may be salient between persons who have a common store of voluntary encounters. (It is the voluntary nature of these encounters which distinguishes familiarity from solidarity; however familiarity generally presupposes solidarity)

Looking broadly at the history of research in this area, it is observed that some researchers have focused on the identification of rules that determine address selection in a given situation, while others have focused on address choice as a matter of strategy in talk exchange. In the latter case, prediction of address choice may require knowledge of the motives of the speaker.

1.2 Hypothesis: Factors Influencing Address Choice

The authors test the hypothesis that address selection in a given situation is related to the gender of the speaker, the location of the business enterprise, and the ownership type of the business enterprise. Anecdotal evidence previously collected by author Huang suggests the existence of influences on address that are not easily explained and which may have interesting social implications. In particular, it was observed that the choice of address terms used in the Chinese business enterprise appears to depend to some degree on the gender of the speaker, the location of the enterprise in Eastern China or Western China, and the ownership type of the enterprise; that is, whether the enterprise is state-owned or privately owned. For purposes of this study, locations in Eastern China are the provincial-level administrative regions of Beijing, Shanghai, Zhejiang, Fujian, Shandong, and Guangdong; locations in Western China are the provincial-level administrative regions of Sichuan and Yunnan. The anecdotal observations are tested by quantifying the relationships between (1) gender, location, and ownership and (2) terms of address selected by study respondents. In doing so, the relationships are evaluated in the context of other variables, such as the degree of acquaintance between

speaker and addressee, the role of the addressee as a peer or a superior, and whether the address transaction takes place in the work setting or the social setting. Thus, one objective of this study is to assess the validity of anecdotal observations regarding factors influencing address choice in the Chinese business enterprise and to attempt to explain the social origins of the identified influences.

1.3 Hypothesis: Persistence and Resilience of Address Semantics

The term 'tóngzhi', expressing solidarity, was ubiquitous in China during the period from the 1949 Revolution to the end of the Cultural Revolution in 1968. During this time it was the canonical form used to address peers and superiors alike. The authors test the hypothesis that, in the Chinese business enterprise, use of the term 'tóngzhi' has been replaced by the term 'gē/jiě' as the primary means of expressing solidarity. Should this hypothesis prove valid, it suggests that expression of the solidarity semantic is persistent; that is, if the primary term expressing solidarity falls into disuse, it can be predicted that another such term or terms expressing solidarity will replace it. The authors further test the hypothesis that expression of the power semantic is resilient. That is, if expression of the power semantic is suppressed by social forces, as occurred during the period of ubiquitous 'tóngzhi' use, expression of the semantic will resume when such forces subside. From a theoretical perspective, the validity of these hypotheses would support the notion that the semantics of address in the Chinese business enterprise, and perhaps the semantic of address generally, are robust with respect to surviving social change.

1.4 Hypothesis: The Predictability of Address Selection

As noted in our review of prior investigations, researchers have differed on the question of whether address decisions may be predicted by rules based on externally observable conditions or instead require knowledge of a speaker's motivations that are not externally observable. The authors hypothesize that address choice in the Chinese business enterprise is not easily predicted by rules depending on situation and setting. We consider this hypothesis valid if it is shown that, in any situation considered by the study, multiple responses are frequently selected by respondents. It is possible that a finer granularity of situation and setting might allow rules-based prediction, but in that case, we would not consider the selection to be 'easily' predicted. The validity of this hypothesis suggests that a speaker may generally use address selection as a means of applying strategy in a talk exchange.

2. Methodology

This section describes the procedures used in conducting the investigation.

2.1 The Study Questionnaire

Study data was gathered by means of a questionnaire distributed to study participants between 20 May 2013 and 6 June 2013. The questionnaire comprised eleven questions designed to elicit the influence of the following variables on the selection of terms of address:

- (a) gender of the speaker;
- (b) business enterprise location (Eastern or Western China);
- (c) business enterprise ownership type (state-owned vs. private);
- (d) role of addressee (peer vs. superior);
- (e) setting (work vs. social)
- (f) familiarity (close peer vs. casual peer);

The study questionnaire is available upon request from the authors.

2.2 The Respondents

The study questionnaire was distributed to 150 employees of Chinese enterprises. Participants were recruited by author Huang and by acquaintances of author Huang employed by Chinese enterprises. The recruiters were aged between 20 and 33 years and had between one and three years of work experience in the enterprise. The questionnaire was returned by 131 respondents for an effective recovery ratio of 87.3%. The respondents were distributed as indicated by figure 1.

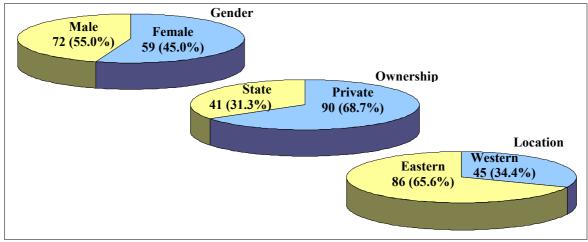


Figure 1. Distribution of Respondents

The self-reported average age of respondents was 24.9 and the average number of years of employment was 1.8. Although not an explicit selection criterion, all of the chosen participants were first-line employees; that is, none were supervisors of other employees. Some bias may exist as the described selection method is not fully randomized. The degree of bias is reduced if the results are explicitly stated to apply to the population of non-supervisory staff aged between 20 and 33 years, having between one and three years of work experience. The method of selection was chosen due to the difficulty in enlisting the cooperation of a sufficient number of Chinese business enterprises willing to provide access to their full employee population for purposes of randomization.

2.3 Independent Variables

Table 1 describes the independent variables examined in this study. The variables 'gender', 'location', and 'ownership' were described a previous section of this article.

Table 1. Description of Independent Variables

Variable	Description	Value	
		A	В
gender	of respondent	male	female
location	of respondent enterprise	Eastern China	Western China
ownership	of respondent enterprise	private	state-owned
role	of addressee with respect to respondent	peer	superior
familiarity	of respondent with peer	close	casual
setting	of interaction	work	social

The 'role' describes the relationship between a respondent (speaker) and the person addressed (addressee). Respondents always address a peer (colleague at the same level in the enterprise) or a superior. The study did not gather data related to superiors addressing subordinates as superiors are generally reluctant to respond to questions regarding subordinates.

'Familiarity' describes the respondent's perception of the degree of closeness between the respondent and a peer. Familiarity is defined only in the case of a peer role.

'Setting' indicates whether an interaction takes place in a work environment or a social environment. Any transaction that takes place outside the work environment is considered to occur in a social environment.

2.4 Situation

A 'situation' is a set, or subset, of the independent variables described by table 1. For example, a situation might correspond to 'a female employee addressing a close peer in a social setting'. In this case, the employee might work for a state-owned or public enterprise and the enterprise might be in Eastern China or Western China. Alternatively, a situation might be 'an employee of a state-owned enterprise addressing a close peer in a social setting'. In this case, the employee might be male or female and the enterprise might be in Eastern China or Western China.

2.5 Terms of Address

A 'term of address' is a word or phrase used by a speaker to reference the person to whom he or she is speaking. Table 2 defines the terms that could be selected by respondents in the questionnaire distributed to study participants. Terms are categorized according to their association with one of the three semantics of familiarity, solidarity, and power.

Table 2. Description of Address Terms

term of address	description	examples	
Terms Associated with the Familiarity Semantic			
first name	The 'given name' of an individual (the portion of a full Chinese name	Jiānróng, Xiǎoyàn,	
	that follows the surname).	Ruì	
surname	The 'family name' or 'last name' of an individual (the first character of	Chén, Huáng, Wáng	
	a full Chinese name).		
full name	The complete name of an individual comprising the surname followed	Chén Jiānróng, Wáng Ruì,	
	by the first name.	Huáng Xiăoyàn,	
characterization	An informal name describing a perceived characteristic or	<i>Xiǎomāo</i> (like a cat)	
	characteristics of the individual.	<i>Hŭzi</i> (personality of a tiger)	
nickname	An informal name often used by an individual's family and close	Huáng huan, Yànyan, Wáng	
	friends. The first name or surname can be doubled to form the	wang, Ruìrui	
	nickname although nicknames are not limited to this form.		
$q\bar{\imath}n$	A first name or two-syllable full name or first name followed by $q\bar{\imath}n$; or	Xiǎoyàn qīn,	
	$q\bar{i}n$ used alone; $q\bar{i}n$ is short for ' $q\bar{i}n$ 'àide (sweetheart)', roughly	Wángruìqīn, qīn	
	equivalent to the English appellation 'dear'.		
	Terms Associated with the Solidarity Semantic		
gē/jiě	The first name, surname, or two-syllable full name of a male individual	Jiànróng jiĕ, Chén jiĕ,	
	followed by $g\bar{e}$ (brother) or the first name, surname, or two-syllable full	Wáng Ruìjiě, Jiànfēi gē,	
	name of a female individual followed by $ji\check{e}$ (sister). $G\bar{e}/ji\check{e}$ is not used	Hú gē, Huáng yìgē	

with the full name of a person whose first name contains two syllables.

That is, one would not say "Huang xiaoyan jiě".

Terms Associated with the Solidarity Semantic

boss This term is used to describe a low level manager or the manager to Tóuér, Lǎodà

whom a worker directly reports.

leader These terms are used to describe higher level managers or managers *Lǐngdǎo*

with greater authority.

title The last name of a superior followed by 'manager' (jīnglǐ), 'boss' Chén jīnglǐ, Hú fùjīnglǐ.

(lǎobǎn), 'vice-manager' (fùjīnglǐ), etc. The use of the title reflects a Wáng lǎobǎn,

high degree of formality.

Terms of address such as 'full name', 'first name', 'last name', 'nickname', and 'characterization' have traditionally allowed Chinese speakers to express varying degrees of familiarity. Use of the term ' $q\bar{\imath}n$ ' is relatively recent. Similar to the English term 'dear', it is an expression of familiarity but it does not imply that the speaker and addressee are particularly close. The 'title' form, and the terms 'leader', and 'boss' provide the means for employees to express the power semantic in a talk exchange. The ' $g\bar{e}/ji\bar{e}$ ' (brother/sister) form clearly expresses solidarity when it is used in the context of the family. Membership in the family is cited explicitly as an example of solidarity in the definitions of the semantics provided by Scotton and Zhu. The observation that ' $g\bar{e}/ji\bar{e}$ ' expresses solidarity in the family context' provides a basis for asserting that the selection of ' $g\bar{e}/ji\bar{e}$ ' in the business enterprise represents an expression of solidarity.

2.6 Statistical Analysis

The numerical results of this study are either (1) frequencies of self-reported use of address terms or (2) differences between such frequencies. Accompanying each result is the confidence interval (CI) computed for the 95% confidence level. Results and associated confidence intervals are expressed as percentages rounded to the nearest tenth of a percent.

As previously noted, the questionnaire allows a respondent to select multiple terms of address that the respondent might use in a given situation. When a question is framed in this manner, each selection can be viewed as an independent binary choice. That is, the listed term is either 'not selected' (0) or 'selected' (1) by the respondent. The frequency of selection is the mean of the binary values, expressed as a percent and rounded to the nearest tenth of a percent. For example, the data indicates that 22 respondents select the term 'full name' in the situation of 'an employee of a state-owned enterprise addressing a casual peer in the work setting'. The total number of respondents in this situation is 45. It can be reported that the frequency of respondents selecting 'full name' in the situation of 'an employee of a state-owned enterprise addressing a casual peer in the work setting' is 48.9% [47.8%, 50.0%], where the numbers in brackets represent the confidence interval associated with a 95% confidence level. As the data comprises discrete variables having binary values, computations of confidence intervals make use of standard statistical methods associated with a Bernoulli distribution.

Computations were performed by organizing the data in spreadsheet format (Microsoft Excel 2007), such that each row of the spreadsheet represents a situation and each column of the spreadsheet represents a term. A cell contains the selection frequency of a term specified by the column in which the cell resides and the situation specified by the row in which the cell resides. Frequency differences and confidence intervals associated with frequencies and frequency differences are located within the spreadsheet in a similar manner. As a 'rule of thumb', the authors consider a selection frequency of 20% or more to represent a 'frequent' selection and a frequency difference of 10% or greater to be significant. Both of these threshold values are arbitrary and are simply used as a convenience in discussion.

When interpreting the results of this study, it is important to note there may not be an exact correspondence between reported use and actual use. In particular, some respondents may report how they believe they 'should address others' or how they 'believe they do address others', in contrast to how they 'actually do address others'. Results corresponding to actual use of address terms require observational studies.

3. Results

This section describes the results of the investigation. For ease of interpretation, results are presented in chart format. Complete data in spreadsheet format with confidence intervals, as well as charts not shown in the article, are available on request from the authors. No value of margin of error for frequency results exceeds 2.4% and no value of margin of error for frequency difference results exceeds 0.4%.

3.1 Selection Frequency of Address Terms

Selection frequency of address terms is reported for the situations of (1) an employee addressing a close peer, (2) an employee addressing a casual peer, and (3) an employee addressing a superior. In each situation results are reported separately for (1) the work setting and (2) the social setting. Thus six distinct cases are considered.

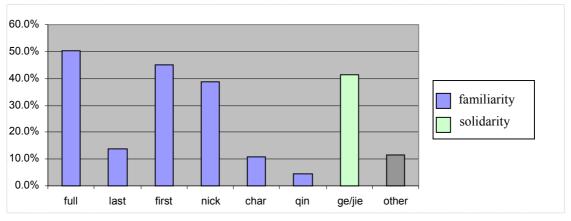


Figure 2. Addressing casual peers in the work setting

Frequently selected terms of address in the situation of 'a respondent addressing a peer' are 'gē/jiě', 'first name', and 'nickname'. Thus semantics of familiarity and solidarity are salient. This is illustrated by figure 2 for the case of 'a respondent addressing a close peer in the work setting'. Additionally, 'full name' is frequently selected when addressing casual peers, and 'characterization' is frequently selected in the social setting. No term is selected with a frequency of more than 65%. Thus, it is observed that when addressing peers, selection is not categorical.

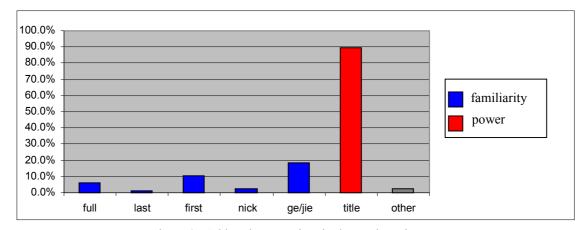


Figure 3. Addressing superiors in the work setting

As illustrated in figure 3, selection of 'title' is nearly categorical in the situation of 'a respondent addressing a superior in the work setting'. Although other address terms are selected, none are selected often enough to be classified as frequent. Further, the selection frequency of 'title' is nearly 90%. Thus, while selection of 'title' is not categorical, it can be characterized as nearly categorical.

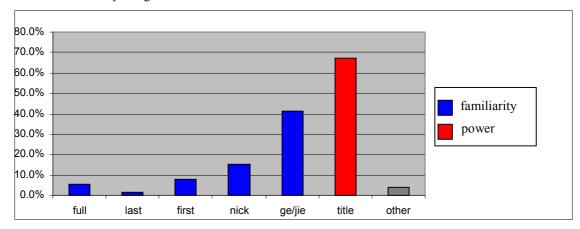


Figure 4. Addressing superiors in the social setting

A different result is observed in the situation of 'a respondent addressing a superior in the social setting', as shown in figure 4. In this case, the selection frequency of 'title' is lower than reported in the work setting and selection of ' $g\bar{e}/ji\check{e}$ ' is frequent. Thus, when addressing a superior in the social setting, expressions of both solidarity and power semantics are salient. Expressions of familiarity are infrequent.

It is possible to provide a concise summary of the selection frequency results. In the case of addressing peers, selection of 'gē/jiě', 'first name', and 'nickname' is frequent, suggesting that both the familiarity and solidarity semantics are

salient. Additionally, in the case of addressing a casual peer, selection of 'first name' is frequent and in the case of the social setting, selection of 'characterization' is frequent. In the case of addressing superiors in the work setting, selection of 'title' is nearly categorical, suggesting that the power semantic is salient, while in the social setting, 'title' and ' $g\bar{e}/ji\bar{e}$ ' are both frequently selected, suggesting that the solidarity and power semantics are both salient.

3.2 Differences in Selection Frequency

A 'value pair' is defined as the two values associated with a particular binary variable. For example, 'male' and 'female' comprise the value pair associated with the variable 'gender'. The figures below allow comparison of the selection frequency of a term with respect to the two elements of a value pair. For example, in figure 4, the selection frequencies of the term ' $g\bar{e}/jie$ ' in the cases of male and female speakers can be compared by reference to the rightmost pair of bars, shaded light and dark green.

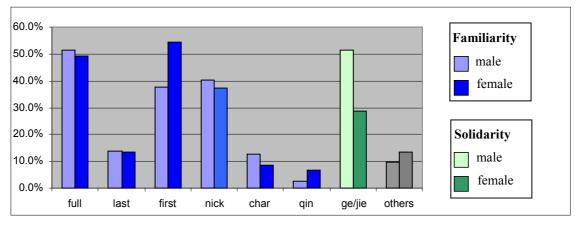


Figure 5. Addressing a casual peer by gender in the work setting

In the situation of 'a respondent addressing a peer' it is observed that men more frequently than women, select 'gē/jiě', an expression of solidarity, while women, more frequently than men, select 'first name', an expression of familiarity. This is illustrated in figure 5 for the case of 'a respondent addressing a casual peer in the work setting'. The difference is more pronounced in the work setting as compared to the social setting and when addressing close peers as compared to casual peers.

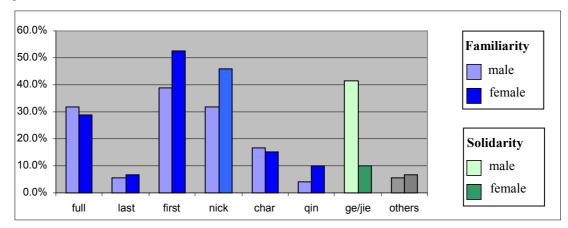


Figure 6. Addressing a close peer by gender in the work setting

As can be seen in figure 6, the difference between men and women selecting the term ' $g\bar{e}/ji\check{e}$ ' is quite large in the case of 'a respondent addressing a close peer in the work setting'. Also, in this situation, women more frequently than men select 'nickname'. In the case of 'a respondent addressing a close peer in the social setting, men more frequently than women select 'characterization' and women more frequently than men select ' $q\bar{\imath}n$ '. While there are differences in the selections of men and women regarding terms expressing familiarity, there is not sufficient evidence to conclude that there is a significant difference between the genders in the tendency to express familiarity. However, the results provide substantial evidence that when addressing peers, men significantly more than women select the solidarity semantic.

As was shown in figure 2, the selection of 'title' is nearly canonical when addressing a superior in the work setting. Both men and women select a term expressing the power semantic when addressing a superior in the work setting.

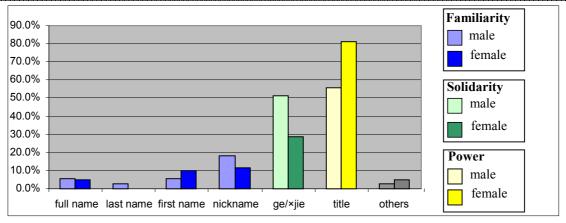


Figure 7. Addressing a superior by gender in the social setting

However, as illustrated in figure 7, when addressing a superior in a social setting, women, more often than men, select 'title', a term reflecting the power semantic, while men more often than women select 'gē/jiè', a term reflecting solidarity.

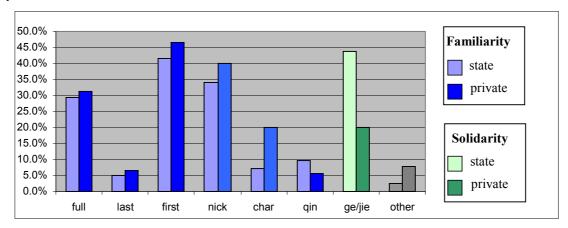


Figure 8. Addressing close peers by ownership type in the work setting

With a single exception, employees of state-owned enterprises are significantly more likely than employees of private enterprises to select ' $g\bar{e}/ji\bar{e}$ ' to address a peer, while employees of private enterprises are somewhat more likely than employees of state-owned enterprises to select variety of terms expressing familiarity. This is illustrated by figure 8 which describes the case of 'a respondent addressing a close peer in the work setting'.

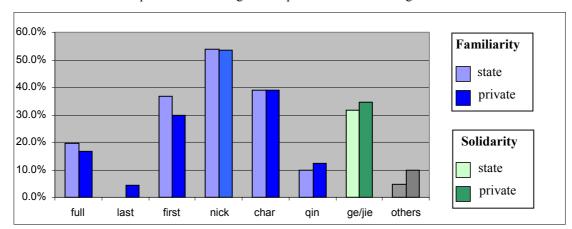


Figure 9. Addressing close peers by ownership type in the work setting

The exception is the case of 'a respondent addressing a close peer in the social setting', as illustrated by figure 9. In this case, there appears to be little difference in selection frequency of terms between employees of state owned and privately owned enterprises.

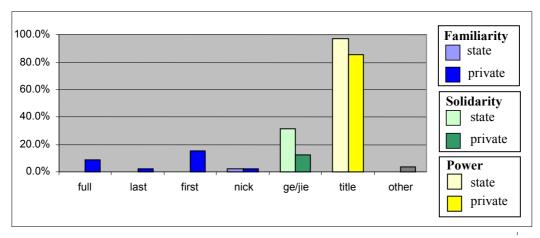


Figure 10. Addressing superiors by ownership type in the work setting

As illustrated by figure 10, employees of state-owned enterprises are somewhat more likely than employees of private enterprises to select ' $g\bar{e}/ji\tilde{e}$ ' or 'title' to address a superior, while employees of private enterprises are somewhat more likely than employees of state-owned enterprises to select a variety of terms expressing familiarity. Thus, it appears that the employees of private enterprises who do not select expressions of solidarity and power, choose instead to express familiarity.

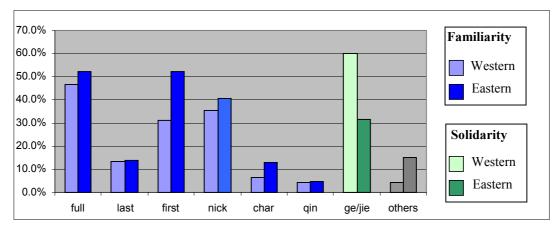


Figure 11. Addressing casual peers by enterprise location in the work setting

With a single exception, employees of Western Chinese enterprises are significantly more likely than employees of Eastern Chinese enterprises to select ' $g\bar{e}/ji\dot{e}$ ' to address a peer, while employees of Eastern Chinese enterprises are more likely than employees of Western Chinese enterprises to select variety of terms expressing familiarity. This is illustrated by figure 11, describing the case of 'a respondent addressing a casual peer in the work setting'.

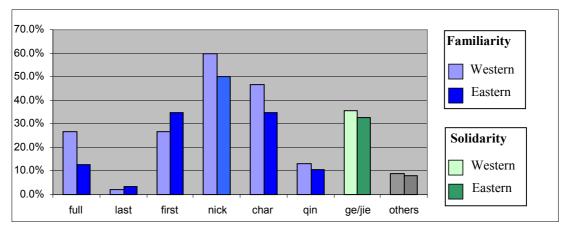


Figure 12. Addressing close peers by enterprise location in the social setting

The exception is the case of 'a respondent addressing a close peer in the social setting', as illustrated by figure 12. In this case the difference in selection frequency between employees of Eastern and Western Chinese enterprises for the term ' $g\bar{e}/ji\bar{e}$ ' is small. Additionally, all terms expressing familiarity, except 'last name' and 'first name', are selected more frequently by employees of Western Chinese enterprises than by employees of Eastern Chinese enterprises. It should be noted that such a result can occur because respondents were allowed to choose multiple terms in response to a question.

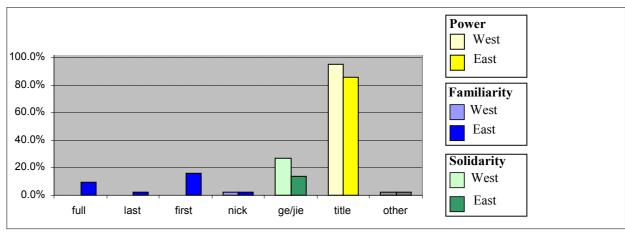


Figure 13: Addressing superiors by enterprise location in the work setting

Employees of Western Chinese enterprises more frequently than employees of Eastern Chinese enterprises select 'title' to address a superior, while employees of Eastern Chinese enterprises are more likely than employees of Western Chinese enterprises to select 'nickname' and 'first name'. The results differ somewhat depending on whether the address occurs in the work setting or the social setting.

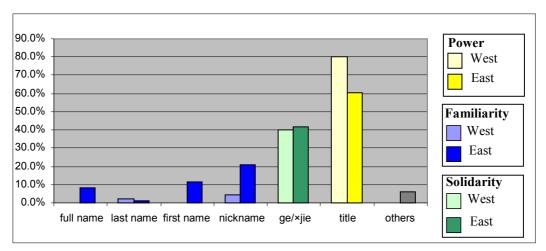


Figure 14: Addressing superiors by enterprise location in the social setting

As illustrated by figure 13, in the situation of 'an employee addressing a superior in the work setting', employees of Western Chinese enterprises somewhat more frequently than employees of Eastern Chinese enterprises select 'gē/jiě' when addressing a superior. This can be contrasted to with the social setting, illustrated by figure 14, where the selection of 'gē/jiě' varies little with the enterprise location. It is also observed that in the social setting, 'nickname' is selected more frequently by employees of Western Chinese enterprises than by employees of Eastern Chinese enterprises. Further, the tendency is more pronounced in the social setting than in the work setting for employees of Western Chinese enterprises to more frequently select 'title' than employees of Eastern Chinese enterprises.

In general, for the case of enterprise location, it can be concluded that employees of Western Chinese enterprises are more likely than employees of Eastern Chinese enterprises to select a term expressing the power semantic while employees of Eastern Chinese enterprises are more likely than employees of Western Chinese enterprises to select a term expressing familiarity.

Having examined how selection frequency varies with gender, ownership, and location, the authors note an interesting commonality regarding the way in which employees address their peers. It is observed that males, employees of state-owned enterprises, and employees of Western Chinese enterprises more often select 'gē/jiě', a term expressing solidarity, than females, employees of private enterprises, and employees of Eastern Chinese enterprises. It is noteworthy that even the exceptions to this observation are consistent; specifically, that the exceptions all occur when employees address close peers in the social setting.

4. Discussion

In the sections that follow we discuss the results with respect to the specific hypotheses tested.

4.1 Factors Influencing Address Choice

The authors conclude that the frequency difference results support the hypothesis that address selection in a given situation is related to the gender of the speaker, the location of the enterprise, and the ownership type of the enterprise. The authors propose explanations for these dependencies or, in some cases, propose further investigation that may provide explanations.

From a socio-linguistic perspective, perhaps the most interesting observation of this study is that women have a greater tendency than men to select terms expressing familiarity when addressing peers in the work setting and are more likely than men to select terms expressing the power semantic when speaking with superiors in a social setting. In both of these situations, men are more likely than women to express solidarity. This is a significant gender-based difference in behavior that invites further investigation. It would be particularly interesting to determine whether such a behavior difference can be identified in the school environment or in the home environment, prior to entering the work environment. It is possible that these observations reflect gender bias in the work environment but this is not necessarily the case. Gender bias implies that one gender is disadvantaged in some way with respect to the other gender. Further study would be needed to establish whether or not such a disadvantage exists. It might be the case, for example, that the optimal strategy for a male to achieve objectives in a talk exchange is different from that of a female. Interviews and observation of conversations may provide additional information needed to better understand this interesting result.

The results indicate that employees of state-owned enterprises are significantly more likely than employees of private enterprises to select 'gē/jiě' to address a peer, while employees of private enterprises are somewhat more likely than employees of state-owned enterprises to select variety of terms expressing familiarity. The use of a term expressing solidarity in the state-owned enterprise may reflect the roots of state-owned enterprises in the collective enterprises prevalent during the period prior to the economic reforms of the late 1990s in China. The use of terms expressing familiarity when addressing peers in the private enterprise may represent a reversion to the tradition of familiar address that existed prior to the 1949 Revolution. The private enterprise would not be expected to retain ties to the traditions of the collective enterprise.

The results indicate that employees of state-owned enterprises are somewhat more likely than employees of private enterprises to select 'gē/jiě' or 'title' to address a superior, while employees of private enterprises are somewhat more likely than employees of state-owned enterprises to select a variety of terms expressing familiarity. It was noted previously that the selection frequency of the power semantic is high in all cases of addressing a superior. It appears that in the case of the state-owned enterprise, some ties to the address of the collective enterprise are preserved. However, we cannot explain the use of terms expressing familiarity in the private enterprise as a reversion to an earlier tradition. There is not a tradition prior to the 1949 Revolution of addressing superiors with terms of familiarity. Instead, it is suggested that the use of terms expressing familiarity to address superiors represents an influence from the West (occident) where the use of familiar terms to address superiors is common. The authors note the exceptional case of 'a respondent addressing a close peer in the social setting'. In this case, employees of private and state-owned enterprises do not differ significantly in their address choices. Here, we speculate that a speaker may feel less constrained in his or her speech when talking to a close peer in a social setting as compared to other situations. Thus, the influence of the enterprise ownership type may be reduced when selecting address terms.

The results indicate that employees of Western Chinese enterprises are significantly more likely than employees of Eastern Chinese enterprises to select ' $g\bar{e}/ji\bar{e}$ ' to address a peer, while employees of Eastern Chinese enterprises are more likely than employees of Western Chinese enterprises to select variety of terms expressing familiarity. China's centers of shipping and trade tend to be located in the East. It is reasonable to expect that companies located in Eastern China would have greater contact with Western enterprises as compared to companies in Western China, and would be more likely to adopt Western corporate models of familiarity when addressing superiors. In contrast, enterprises located in Western China are more isolated from Western influences and might be expected to preserve the use of terms expressing solidarity as was common throughout China following the 1949 Revolution. The authors note the exceptional case of 'a respondent addressing a close peer in the social setting'. In this case, employees of private and state-owned enterprises differ only slightly in their address choices. Again, we speculate that a speaker may feel less constrained in his or her speech when talking to a close peer in a social setting as compared to other situations. Thus, the influence of the enterprise location may be reduced when selecting address terms.

The results indicate that employees of Western Chinese enterprises more frequently than employees of Eastern Chinese enterprises select 'title' to address a superior, while employees of Eastern Chinese enterprises more frequently than employees of Western Chinese enterprises select 'nickname' and 'first name'. Again, we cannot explain the use of terms expressing familiarity to address superiors in the private enterprise as a reversion to an earlier tradition, as this was not the tradition prior to the 1949 Revolution. As in the earlier case of the private Chinese enterprise, it is suggested that the use of terms expressing familiarity to address superiors represents an influence from the West where the use of terms expressing familiarity is common. Western Chinese enterprises, more isolated from Western influences are more likely to preserve the use of 'title' which was traditional prior to the 1949 Revolution, rather than adopt the more familiar address style common in the West.

The suggestion that address in both Eastern Chinese enterprises and private Chinese enterprises has been influenced by the West is supported anecdotally by an observation of author Sultan who was employed for six years as an engineer at Huawei Technologies, Inc., a private Chinese enterprise, having approximately 140,000 employees in the year 2012, headquartered in the city of Shenzhen in Eastern China. Author Sultan observed that the enterprise hired consultants to instruct employees in the corporate culture of the International Business Machines (IBM) Corporation. Huawei actively promoted the adoption of IBM's business methods and models among its employees.

4.2 Persistence and Resilience of Address Semantics

The authors conclude that the selection frequency results support the two hypotheses related to the persistence and

resilience of address semantics. Firstly, it does appear that the term 'tóngzhì' has been replaced by the term 'gē/jiě' as the primary means of expressing solidarity in the Chinese business enterprise. This suggests the persistence of the solidarity semantic; that is, if the primary term expressing solidarity falls into disuse, it can be predicted that another such term or terms expressing solidarity will replace it. Secondly, it appears that expression of the power semantic is resilient. That is, it is observed that when expression of the power semantic was suppressed during the period of ubiquitous 'tóngzhì' use, expression of the semantic resumed when the period of suppression was ended. The persistence and resilience exhibited by the solidarity and power semantics, respectively, may be a general property of the semantics of address. Further investigation in other environments would be required to validate this theory.

While the authors suggest the resilience of the power semantic, there may be another factor which influenced the change from solidarity semantic to power semantic when addressing superiors. It is possible that employees felt constrained to select the solidarity semantic when addressing superiors during the period of ubiquitous 'tóngzhi' use. When the social pressure to select the solidarity semantic was reduced, employees rejected use of this semantic. Given the remaining choices of the familiarity semantic and the power semantic, employees chose the power semantic, consistent with the tradition prior to the 1949 Revolution.

4.3 The Predictability of Address Selection

The selection frequency results confirm that, in most situations and settings considered in the study, respondents specify multiple frequent address choices. Thus, it is concluded that the hypothesis regarding the predictability of address selection is valid in most cases, but is not categorically valid. Specifically, address choice in the Chinese business enterprise is not, in most cases but not all cases, easily predicted by rules depending on situation and setting. The authors suggest that address choice most likely depends upon some combination of the motivation of the speaker, the speaker's catalog of strategies, and the situation and setting of the talk exchange. We note, however, that in some situations, the frequency difference between the most frequent selection and the next most frequent selection is large. This is observed in, for example, the case of 'addressing a superior in the work setting'. The choice of 'gē/jiě' rather than 'title' is not so infrequent as to render it an infeasible selection, but the choice may be sufficiently out of the ordinary to reduce its effectiveness in applying strategy. Thus, the authors suggest it is likely that the magnitude of frequency difference between the most frequently selected term and other terms may influence the effectiveness of strategy. The large selection frequency difference between 'title' and 'gē/jiě' when addressing superiors could be advantageous for the business enterprise, as it makes managers less vulnerable to strategic challenge from employees.

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