

Situational Characteristics and Register Variation: A Case Study of the Particle *Suo* in Mandarin Chinese*

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This article explores register variation by investigating the linguistic function of the particle *suo* in Mandarin Chinese in different registers. The data for analysis included corpora collected from editorials, magazines, fiction and speeches as well as oral corpora constructed by Tseng (2004). The results of our research show that *suo* serves ideational, (non-)contextual, personal and esthetic functions in the communicative situation. It is claimed that a dichotomy between written and spoken registers cannot fully account for the distribution of *suo* across registers. Rather, it is the situational characteristics of a register, written or spoken, that determine the appropriateness of *suo*'s occurrence in a register. The findings support the view that textual relations are defined by the situational characteristics shared among written and spoken registers.

Key words: register variation, particle *suo*, linguistic function, situational characteristic

1. Introduction

It has long been noticed that written language and spoken language exhibit distinct linguistic features. For example, to capture the linguistic differences between the two modes, Chafe (1982, 1985, Chafe & Danielewicz 1987) proposes four functional notions, namely, integration vs. fragmentation, and detachment vs. involvement. Under this approach, written language tends to show integrative devices such as nominalization,

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whereas spoken language tends to exhibit fragmentation such as sentence-initial conjunctions. Similarly, written language is characterized by devices such as passive voice for distancing the writer from the audience, whereas spoken language is characterized by devices showing the speaker's involvement with the audience such as first person references. As a result, as summarized by Biber (1988:47), "in general, writing is claimed to be more structurally complex and elaborate than speech, ... more explicit than speech, in that it has complete idea units with all assumptions and logical relations encoded in the text... more decontextualized or autonomous, than speech... less personally involved than speech and more detached and abstract than speech...".

These seemingly categorical statements about written and spoken language, however, apply to extremes on a continuum (Chafe 1982:49). If we take spontaneous conversational language and formal academic prose as two extremes, there are other styles of speaking which are more like writing, and other styles of writing which are more like speech. Furthermore, in addition to the differences that exist due to differences in the speaking and writing processes themselves, there are other differences that have arisen because of the varied contexts, purposes, and subject matters of both spoken and written language (Chafe & Danielewicz 1987:87). Therefore, when we identify functions of a particular linguistic feature, it is inadequate to characterize its distribution across communicative situations by mere reference to a single dimension (such as casual/formal; written/spoken; or attention paid to speech) (Biber & Finegan 1994:326). In this paper, we will support this view on register variation by investigating the use of *suo* in modern Chinese, a particle often claimed to be a remnant from Classical Chinese (e.g. by Chu 1987, Chiu 1995). The results of this study show that as it serves ideational, (non-)contextual, personal and aesthetic functions, *suo* cannot be characterized as being associated with written or formal registers, but rather that it is the situational characteristics of a register, written or spoken, that determine the appropriateness of *suo*'s occurrence in the register. A written/spoken dichotomy thus cannot adequately capture textual relations. We conclude that textual relations are defined by the situational characteristics shared among written and spoken registers (see Biber 1986, 1988 and subsequent works).

This paper is organized as follows: Section 2 presents basic facts of *suo* in modern and Classical Chinese and reviews previous proposals of the function of *suo* in modern Chinese. Section 3 describes the methodology of conducting this research, including description of the database and procedures. Results of this study are provided in §4. Based on these results, in §5, functions of *suo* are proposed and their implications for textual relations are discussed. Section 6 concludes this article by restating the thesis and pointing out issues for further studies.

2. Basic facts and previous analyses of the function of *suo*

The particle *suo* in modern Chinese most often occurs in relative clauses, as in (1a-b) and occasionally in passives, as in (1c).

- (1) a. 李四所愛的人
Lisi suo ai de ren
Lisi SUO love DE person
'the person that Lisi loves'
- b. 小偷所沒有偷走的那些首飾
xiaotou suo meiyou tou zou de naxie shoushi
thief SUO not-have steal away DE those jewel
'the jewelry that the thief didn't steal'
- c. 兩千三百萬人卻總覺得自己的命運在被一個人所決定。(Editorial)
liang qian san bai wan ren que zong
two thousand three hundred ten:thousand person conversely always
juede ziji de mingyun zai bei yige ren suo jueding
feel self DE fate at BEI one person SUO decide
'Twenty three million people, on the contrary, always feel that their fates are being decided by one person.'

Such uses of *suo* are often said to be a remnant from Classical Chinese (e.g. Chu 1987, Chiu 1995) possibly because of the original and also most common occurrence of this particle in the relative-clause-like construction in Classical Chinese as indicated by the underlined sequences in (2) and its later occurrence in the passive construction in Classical Chinese in (3) (see Ting 2005, 2008 for discussion).

- (2) a. 仲子所居之室 (《孟子·滕文公下》)
Zhongzi suo ju zhi shi (Mengzi: Tengwengongxia)
Zhongzi SUO live ZHI room
'the room that Zhongzi lives'
- b. 而語及所匿之事 (《韓非子·說難》)
er yu ji suo ni zhi shi (Hanfeizi: Shuonan)
ER speak reach SUO hide ZHI thing
'But we might mention what was hidden (by him).'
- c. 民所食之粟 (adapted from 《孟子·滕文公》)
min suo shi zhi su (adapted from Menzi: Tengwengong)
people SUO eat ZHI barley
'the barley that people eat'

- (3) 常被元帝所使。(《顏氏家訓·雜藝》)
 chang bei Yuan di suo shi (Yanshi Jiaxun: Zayi)
 often BEI Yuan emperor SUO order
 ‘He was often ordered around by Emperor Yuan.’

Recently, studies of the *suo* construction in modern Chinese have achieved good results in the implications for the phrase structure, Case assignment, chain relations in Chinese syntax (e.g. Chiu 1995, Ting 2003). To illustrate, Ting (2003) argues that *suo* behaves on a par with pronominal clitics in Romance in many respects (cf. Chiu 1995) and proposes to analyze the licensing of *suo* along the line of Kayne’s (1989, 1991) theory. Crucially, contra the claim of Chiu (1995), the licensing of *suo* is argued not to involve any functional projection associated with accusative Case licensing. Empirical arguments come from instances where *suo* is licensed by elements not receiving accusative Case (4) and where *suo* may occur in either the embedded or matrix clause (5). We will assume with Ting (2003, 2005, 2006) that a pronominal clitic analysis of *suo* in Mandarin Chinese is on the right track.

- (4) a. [李四所服務/工作]的機構/地方
 [Lisi suo fuwu/gongzuo] de jigou/difang
 Lisi SUO serve/work DE organization/place
 ‘the organization/place that Lisi serves/works in’
 b. [那條小溪中所飄過]的枯葉
 [natioo xiaoxi zhong suo piaoguo] de kuye
 that small-stream middle SUO float:past DE withered-leaf
 ‘the withered leaves that floated in the river’
- (5) a. [我逼迫張三所購買]的書
 [wo rang/bipo Zhangsan suo goumai] de shu
 I make/force Zhangsan SUO buy DE book
 ‘the book that I forced Zhangsan to buy’
 b. ?[我所逼迫張三購買]的書
 ?[wo suo rang/bipo Zhangsan goumai] de shu
 I SUO make/force Zhangsan buy DE book

In contrast to these results obtained from the study of syntactic properties of the particle *suo* in modern Chinese, there has not been much investigation of its function, namely, why *suo* is used. To the best of our knowledge, the scarce studies of the function of *suo* in the literature fall to four types of claim. First, *suo* is claimed not to have any effect on the clause and is thus optional (Zhang 1981). This conclusion is reached

probably because most relatives containing *suo* appear to have their non-*suo* counterparts. This observation cannot be used to argue against the role played by *suo* in the clause. A similar case can be found with the optionality of the complementizer *that* in English. As pointed out by Biber (1988), the deletion of this complementizer occurs rarely in edited writing, which may be due to “the concern for elaborated and explicit expression in typical edited writing” (p.244). In other words, the use of the complementizer *that* is associated with the written register and gives formal flavor to the clause. Under this reasoning, then apparent optionality of a lexical item cannot be taken as the sole evidence for its lack of any function in the communicative situation. On the other hand, several studies have suggested a function served by *suo*. To begin with, Chao (1968) regards *suo* as an adverb added for emphasis; thus, (6) can mean ‘the words he actually said’ or ‘all the words he said.’¹

- (6) 他所說的話
 ta suo shuo de hua
 he SUO say DE word
 ‘words that he said’

Another claim that has been made in the literature is that *suo* is limited to the formal or written register (e.g. Chu 1987, Lu 1999, cf. Chiu 1995). Chu (1987:53), for example, points out “the presence of *suo* renders the whole utterance more formal... depending on the style of speech”. Lu (1999:256) also observes that *suo* is mainly used in writing and rarely in speech. Assuming that typical written language is more formal than typical spoken language (Tannen 1982, Chafe 1982) if formality is defined as attention paid to language (cf. Labov 1972, Trudgill 1974), Lu’s and Chu’s claim can be subsumed under the same approach.

Lastly, *suo* has been observed to fulfill syllabicity requirement in the clause (Lu 1999, cf. Ting 2003). According to Lu (1999), the monosyllabic words that follow *suo* in (7) cannot stand alone; their disyllabic counterparts *dedao* ‘gain’ 得到, *fuyu* ‘bestow’ 賦予 and *zaoshou* ‘undergo’ 遭受 have to be used instead.

¹ Wang (1958) points out that *suo* may emphasize not only the agent but also what comes before *suo*. For example, in (i), *suo* does not ‘specify’ the agent *wo* ‘I’ but the temporal adverb *zuotian* ‘yesterday’.

- (i) 我昨天所買的書
 wo zuotian suo mai de shu
 I yesterday SUO buy de book
 ‘the book I bought yesterday’

- (7) a. 我個人在這個月中*(所)得的只是一點點微小的收穫了。
wo geren zai zhege yue zhong *(suo) de de
I individual at this month middle SUO gain DE
zhi shi yidiandian weixiaode shouhuo le.
only be a:bit meager harvest LE
'What I got during this month was just some meager results.'
- b. 他的慈悲性情是上天*(所)賦的。
tade cibeixingqing shi shangtian *(suo) fu de
his mercy disposition be heaven SUO bestow DE
'His kind disposition is bestowed by God.'
- c. 但是雖都叫著“提案”，因內容的不同，*(所)遭的命運也有著很大的差異。
danshi sui dou jiao-zhe “ti'an”, yin neirong de butong,
but although all call ZHE proposal because content DE difference
*(suo) zao de mingyun ye you-zhe hen da de chayi
SUO undergo DE fate also have-ZHE very big DE difference
'Although all were called a proposal, due to differences in the content, they underwent big differences in their fates.'

Lu thus concludes that *suo* is used for the purpose of syllabicity in modern Chinese. In order to investigate whether the use of *suo* shows any variation across registers, we examine the distribution of *suo* in written and spoken corpora. Meanwhile, this examination is also intended to verify the validity of the various claims of the function of *suo*.

3. Methodology

3.1 Database

Corpora of both written and spoken language are included in this study. The database for written language includes the corpora of the register of editorials, magazine articles and fiction. A text corpus for each register was compiled. The corpus of editorials comprises 34 editorial samples containing the particle *suo* we collected from the major newspapers in Taiwan, including China Times, United Daily, Freedom Times and Commercial Times, etc. The corpus of magazines comprises 25 text samples containing the particle *suo* we collected from the major magazines in Taiwan, including Business Weekly, China Times Weekly, China Times Weekly, Marie Claire, etc. The corpus of fiction comprises 10 text samples containing the particle *suo* we collected from novels or novel excerpts written by Jin Ba (巴金), Ailing Zhang (張愛玲), Long Gu (古龍), Yutang Lin (林語堂), Kuang Ni (倪匡), Yao Qiong (瓊瑤), Guangzhong Yu (余光中),

etc. From each of the ten novels approximately 2,000 words were excerpted.

The texts were then segmented by the automatic segmentation system of Academia Sinica. The results of segmentation show that the total corpus for editorials contains approximately 26,229 words of running text; the total corpus for magazines contains approximately 22,900 words; and the total corpus for fiction contains approximately 21,063 words.

Table 1: Information of the written corpora

	Editorials	Magazines	Fiction
Text	34	25	10
Sources	China Times, United Daily, Freedom Times, Commercial Times, etc.	Business Weekly, China Times Weekly, TVBS Weekly, Marie Claire, etc.	novels or novel excerpts by Jin Ba (巴金), Ailing Zhang (張愛玲), Long Gu (古龍), Yutang Lin (林語堂), Kuang Ni (倪匡), Yao Qiong (瓊瑤), Guangzhong Yu (余光中), etc.
Words	26,229	22,900	21,063

The database for spoken language comprises 3 corpora of dialogues collected by Tseng (2004)² and one corpus of transcripts of speeches we collected on line. Description of the three dialogue corpora, Mandarin Conversational Dialogue Corpus (MCDC), Mandarin Map Task Corpus (MMTC) and Mandarin Topic-Oriented Conversation Corpus (MTCC), is summarized in Table 2.

Table 2: Information of the spontaneous spoken corpora

	MCDC	MMTC	MTCC
# of dialogues	8	26	29
# of hours transcribed	6.5 hrs	5 hrs	11 hrs
Topic	Free	Map task	News event
# of words	84,165	30,390	91,408

MCDC consists of 8 transcribed dialogues on free topics between two strangers, totaling 6.5 hours. The transcription comprises 84,165 words after segmentation. MMTC consists of 26 task-oriented dialogues produced by two participants who know each other well, totaling 5 hours. These dialogues are task-oriented because one participant with a detailed map needs to explain to the other with a simplified map how to get to a

² The databases are downloadable on the website <http://mmc.sinica.edu.tw/>.

particular destination. The transcription comprises 30,390 words after segmentation. MTCC consists of 29 topic-oriented dialogues between two participants who were familiar with each other, 11 hours recording in total. These dialogues are topic-oriented because each pair was asked to choose one topic related to an event having taken place in 2001 and to talk about it. The transcription comprises 91,408 words after segmentation by the segmentation system at Academia Sinica.

In addition to the data on informal spoken language, it is also important to consider an oral register which is more in the direction of writing. For this purpose, we collected five transcriptions of speeches on the Internet. Judging from these transcriptions, they are prepared speeches, planned but without orally reading a written text. From each of the transcriptions approximately 3,000 words were excerpted and then segmented by the segmentation system of Academia Sinica.

Table 3: Information of the corpora of speeches

	Speeches
Text	5
Sources	Talks by Han-Ding Hong, Ming-Hui Wang, Yong-Bao Hu, Ao Li and Xiang-Fa Yang
Words	14,904

3.2 Procedures

Under our analysis, clauses containing *suo* are divided into four types. In type I data,³ omission of *suo* apparently does not yield ungrammaticality. *Suo* of type II, in contrast, is required in the clause; in other words, omission of it would render the sequences unacceptable. Type III data involve occurrence of *suo* in fixed expressions. By fixed expressions, we mean that the *suo* sequence is used as an idiomatic expression and may not have an internal structure for the speaker. E.g. *qian suo wei you de* ‘unprecedented’ 前所未有的 and *zhong suo zhou zhi* ‘well-known’ 眾所周知 may simply be stored as idioms in the speaker’s mental lexicon, equivalent to *unprecedented* and *as well-known* in English. Finally, *suo* of type IV is licensed by passivization.⁴ Examples illustrating the four types are given in (8) to (11) respectively.⁵

³ With thanks to Miao-Ling Hsieh for pointing out such labels to us.

⁴ In most cases, *suo* of this type is droppable without yielding any ungrammaticality. In comparison with *suo* licensed by relativization, *suo* licensed by passivization is relatively rare.

⁵ Due to limitation on space, the readers are referred to Ting (2006b) for more examples illustrating various points made in this paper.

(8) Type I

- a. 「湯」所扮演的角色看似微不足道。(Magazine)
 ‘tang’ suo banyan de jiaose kan si wei bu zu dao
 soup SUO play DE role look like insignificant not deserve say
 ‘The role played by “soup” looks very insignificant.’
- b. 我想這是一般人所無法擁有的高檔待遇。(Magazine)
 wo xiang zhe shi yiban ren suo wu fa yongyou de
 I think this be ordinary person SUO no way have DE
 gaodang daiyu
 high:class treatment
 ‘I think this is the luxurious treatment that ordinary people cannot have.’

(9) Type II

- a. 也高於國務院總理溫家寶在十屆全國人大會議中所宣稱。(Editorial)
 ye gaoyu guowuyuan zongli Wenjiabao zai shijie quanguo
 also higher State:Council Premier Wen:Jia-bao at tenth national
 renda huiyi zhong suo xuancheng
 People’s:Congress meeting middle SUO claim
 ‘(It is) also higher than what the Premier Wen, Jia-bao claimed at the
 tenth National People’s Congress.’
- b. 打破海上由美日安保所形成封鎖之勢 (Magazine)
 dapuo hai shang you Mei Ri an bao suo xingcheng
 break sea on by USA Japan security protection SUO form
 fengsuo zhi shi
 blockade ZHI situation
 ‘[It] broke the blockade situation that was formed by mutual cooperation
 and security between the United States and Japan’
- c. 從未有人能像李安這般成為奧斯卡揭曉前後佳評所集的中心。(Editorial)
 cong wei you ren neng xiang Li An zhe ban chengwei Aosika
 ever not have person can like Li An this way become Oscar
 jiexiao qian hou jia ping suo ji de zhongxin
 announce before after good comment SUO accumulate DE center
 ‘There has been no one who becomes the center of good comments around
 the time the results of Oscar awards are announced.’

(10) Type III

- a. 品牌與產品背後的藝術家、設計師及創意人員，都受到前所未有的重視。(Magazine)

pinpai yu chanpin bei hou de yishujia, shejishi ji
brand and product back behind DE artist designer and
chuangyi ren yuan, dou shoudao qian suo wei you de zhongshi
creativity staff all receive before SUO not have DE attention
'Artists, designer and creativity staff behind the brands and products all receive unprecedented attention.'

- b. 眾所周知，奧斯卡是由美國影藝學院的五千名成員及受邀影人共同投票。(Editorial)

zhong suo zhou zhi, Aosika shi you Meiguo ying yi
people SUO around know Oscar be by USA movie art
xueyuan de wuqianming chengyuan ji shou yao
academy DE five:thousand member and receive invite
ying ren gongtong tou piao
movie people together cast vote
'As well-known, Oscar Awards are voted by the five thousand members of AMPAS together with the invited workers in the movie industry.'

(11) Type IV

- 香奈兒的創意再度為主流所崇拜。(Magazine)

Xiangnaier de chuangyi zaidu wei zhuliu suo chongbai
Chanel DE creativity again WEI mainstream SUO worship
'Creativity of Chanel is once again worshiped by the mainstream.'

There are some expressions containing *suo* which are not considered in this study including: *suo* occurring in the conjunction item *suoyi* 'consequently' 所以, *suo* used as part of a nominal such as *yanjiu suo* 'graduate school' 研究所, *paichusuo* 'precinct police station' 派出所, *cesuo* 'toilet' 廁所, *suode* 'income' 所得, and *suoyouquan* 'right of possession' 所有權, and also *suo* occurring in the expression *suowei(de)* 'so-called' 所謂(的) and *suoyou(de)* 'all' 所有(的).

Both quantitative and qualitative study was then conducted. Quantitatively, the total frequency of *suo* in each register was counted. Furthermore, tokens of *suo* of each type (I, II, III or IV) were counted and percentage of the types in each corpus was calculated for both the written and spoken database. Furthermore, the frequency counts of *suo*'s occurrence were normalized to a text length of 1000 words. Such normalization, according to Biber (1988), is necessary for conducting a cross-register comparison.

Qualitatively, we examined the patterns of Type II *suo*'s occurrence and also

investigated whether *suo* co-occurs with emphasis expressions. Since other types of *suo* may involve some other factors such as syllabicity, only Type I *suo* is considered regarding its co-occurrence with emphasis expressions. Emphasis expressions were classified into two types: lexical expressions such as emphatics and amplifiers and syntactic devices such as pseudo-clefts. According to Biber (1988:241), emphatics “simply mark the presence (versus absence) of certainty while amplifiers indicate the degree of certainty towards a proposition;” amplifiers, on the other hand, have the effect of boosting the force of the verb. Examples of these expressions in English are given in (12).

- (12) a. Emphatics: for sure, a lot, such a, really, so, just, most, more.
 b. Amplifiers: absolutely, altogether, completely, enormously, entirely, extremely, fully, greatly, highly, intensely, perfectly, strongly, thoroughly, totally, utterly, very.

An important syntactic device of expressing emphasis is the pseudo-cleft construction. In English the class of this construction is argued by Collins (1991) to comprise three subclasses: *wh*-clefts, *th*-clefts headed by lexically empty ‘pro-nouns’ such as *thing*, *one*, *place*, *kind*, etc, and *all*-clefts illustrated in (13a, b, c) respectively.

- (13) a. What the car needs is a new battery.
 b. The thing the car needs is a new battery.
 c. All the car needs is a new battery.

Similarly, Chinese also has pseudo-clefts as discussed by Tang (1980) and Huang (1988). The examples in (14) are taken from Tang (1980:252).

- (14) a. 湯先生十五年前在美國學的是語言學。
 Tang xiansheng shiwu nian qian zai Meiguo xue de shi
 Tang Mr. fifteen year before at USA learn DE be
 yuyanxue
 linguistics
 ‘What Mr. Tang studied in the USA 15 years ago was linguistics.’
 b. 十五年前在美國學語言學的是湯先生。
 shiwu nian qian zai Meiguo xue yuyanxue de shi
 fifteen year before at USA learn linguistics DE be
 Tang xiansheng
 Tang Mr.
 ‘The one who studied linguistics in the USA fifteen years ago was Mr. Tang.’

4. Results

The overall distribution of *suo* in the three written corpora and in the four spoken corpora are shown in Table 4 and Table 5 respectively.

Table 4: Distribution of *suo* in the written corpora

	Editorial	Magazine	Fiction
Type I	38 (52.7%)	39 (65%)	5 (38.4%)
Type II	25 (34.7%)	8 (13.3%)	1 (7.6%)
Type III	6 (8.3%)	9 (15%)	6 (46.1%)
Type IV	3 (4.1%)	4 (6.6%)	1 (7.6%)
Total	72 tokens (100%)	60 tokens (100%)	13 tokens (100%)
Mean frequency	2.74/1000 words	2.62/1000 words	0.61/1000 words

Table 5: Distributon of *suo* in the spoken corpora

	MCDC	MMTC	MTCC	Speech
Type I	18 (54.5%)	0	22 (62.9%)	10 (33.3%)
Type II	6 (18.1%)	0	6 (17.1%)	12 (40.0%)
Type III	8 (24.2%)	0	7 (20.0%)	3 (10.0%)
Type IV	1 (3.0%)	0	0 (0%)	5 (16.6%)
Total	33 (100%)	0	35 (100%)	30 (100%)
Mean frequency	0.39/1000 words	0/1000	0.37/1000 words	2.01/1000words

The statistics result showing significant differences among the seven registers is given in Table 6.⁶

Table 6: Significant differences among the seven registers

	Editorial 2.74/1000 72/26229	Magazines 2.62/1000 60/22900	Speech 2.01/1000 30/14904	Fiction 0.61/1000 13/21063	MCDC 0.39/1000 33/84165	MTCC 0.37/1000 35/94108	MMTC 0/30390
Editorial		0.27	1.44	5.43**	10.79**	11.40**	9.14**
Magazines			1.18	5.15**	10.15**	10.71**	8.93**
Speech				7.62**	7.23**	7.62**	7.82**
Fiction					1.40	1.58	4.33**
MCDC						0.22	3.45**
MTCC							3.36**
MMTC							

Note. ** $p < .01$

⁶ With thanks to Prof. Rong-kui He from the Graduate Institute of Information and Computer Education at NTNU for helping us with statistics involving significant differences.

4.1 Mean frequency and significantly different distribution of *suo* across the registers

We shall first consider the mean frequency of *suo* in the written corpora. As shown in Table 4, the frequency of *suo* in editorials is slightly higher than in magazine articles (2.74/1000 in editorials vs. 2.62/1000 in magazines) but both are much higher than the mean frequency in fiction (i.e. 0.61/1000). Statistics indicate that in terms of *suo*'s frequency, editorials and magazines show no significant difference but either of them shows significant differences with fiction. This indicates that the register of editorials and of magazines have similar characteristics in licensing the occurrence of *suo* while fiction, though a written register, should be distinguished from both of them.

When we examine the result of oral corpora shown in Table 5, the two corpora MCDC and MTCC exhibit almost the same mean frequency of *suo*. Statistics also show that these two oral corpora do not have a significant difference in terms of *suo*'s frequency, indicating that they share similar characteristics in the licensing of *suo*'s occurrence. Another corpus MMTC, however, presents a striking contrast in not including any token of *suo* out of a total of 30,390 words. This absence of *suo* in MMTC has a statistically significant difference with the other two spontaneous dialogue corpora that contain some tokens of *suo*. If we compare the two spontaneous dialogue corpora with another oral register, speeches, we find a statistically significant difference with respect to their frequency of *suo*. In other words, the oral corpora, in terms of the frequency of *suo*, now fall into three groups: Speeches have the highest frequency of *suo*, MCDC/MTCC have rare occurrences of *suo*, and MMTC none. This finding indicates inadequacy of simply characterizing *suo* as rarely occurring in spoken registers since the distribution contrast of *suo* among the three groups of oral corpora requires an explanation, to which we shall return in §5.

When we do comparison across the written and oral corpora, there are some interesting results that emerge. Notice that as shown in Table 6, in terms of the frequency of *suo*, the oral corpus speech is statistically non-distinct from the two written register editorial and magazine whereas the written corpus fiction is statistically non-distinct from the two spontaneous dialogue corpora. Given these findings, all the corpora now fall into three groups in terms of frequency of *suo* as shown in (15).

- (15) editorial/magazine/speech > fiction/MCDC/MTCC > MMTC

That is, editorials/magazines/speeches have the highest frequency of *suo*, fiction/MCDC/MTCC has low frequency of *suo*, and MMTC has none. All the three groups show statistically significant differences among one another. Once again, a dichotomy between written and spoken registers is shown to be inadequate in characterizing use of the particle *suo*.

4.2 Distribution of types

We shall now consider the distribution of types across and within each register. Comparing the percentage of types across the registers, we found that there is a higher percentage of Type III *suo* than Type I and Type II *suo* in the group of registers consisting of MCDC, MTCC and fiction than in the group consisting of editorials, magazines and speeches (Fiction: 46.1%, MCDC: 24.2%, MTCC: 20.0%, vs. Editorial: 8.3%, Magazine 15%, Speech 10.0%). We speculate that this may have to do with the former group using relatively less Type I and II *suo* than the latter group, a fact that may be due to the ideational and (non-)contextual function of *suo* (to be discussed in §5), thus making the former group exhibit a relatively higher percentage of Type III *suo* than the latter group. Comparing the percentage of types within the registers, as shown in Table 4 and Table 5, Type IV *suo*, namely *suo* associated with the passives, has the lowest frequency counts in comparison with other types in each corpus containing *suo*. Similarly, *suo* of Type III, namely those associated with fixed expressions, also has relatively low frequency counts in comparison with other types in each of the corpora containing *suo*. These facts suggest that in modern Chinese use of *suo* is mainly associated with relative clauses.

Furthermore, within each corpus containing *suo*, percentage of *suo* of Type I is much higher than that of *suo* of Type II, showing that the use of *suo* must have some functional purpose because *suo*'s occurrence is apparently not required in many cases. In addition, the two highest percentages of Type II *suo* in comparison with other types in each of the corpora containing *suo* are revealed in the register of speeches and of editorials. This may have to do with the attitude or stance generally encoded in these registers and with the characteristics of Type II *suo*. Before the discussion of the reason of the frequent use of Type II *suo* in speeches and editorials is presented in §5, we shall turn to the characteristic of Type II *suo* in the next sub-section.

4.3 *Suo* of Type II

It is found that occurrences of Type II *suo* fall into two types: those involving imitation of Classical Chinese style as shown in (9a, b) and (16) and others involving prosodic requirement in modern Chinese as shown in (9c) and (17).

- (16) 我 (unrecognizable_speech_sound) 我所知道最大的業務 (MCDC)
 wo (unrecognizable_speech_sound) wo suo zhidao zui da de yewu
 I I SUO know most big DE transaction
 ‘the biggest transaction that I know of’

- (17) a. 是在告訴我們說 E 人生所屬的四大象限 (inhale) 就是說…(MTCC)
 shi zai gaosu women shuo E rensheng suo shu de
 be at tell we say E life SUO belong DE
 si da xiangxian (inhale) jiushi shuo
 four big quadrant just say
 ‘(It) tells us that the four quadrants that life belongs to, in other words…’
- b. 所以可以花時間鑿出所要的精鋼筆尖。(Magazine)
 suoyi keyi hua shijian zao chu suo yao de
 so can spend time chisel out SUO want DE
 jing gang bi jian
 refined steel pen tip
 ‘So one can spend time chiseling a refined steel tip of a pen that one wants.’

Some properties of *suo* in Classical Chinese are in order; first, it is not allowed to be optional as shown in (18a). The *suo* construction, furthermore, does not have to include an overt head noun as shown in (18b) (see Ting 2005 and references cited there). In addition, a linker *zhi* between the relative clause containing *suo* and the head noun is not required as shown in (18c) (see Ting 2008 for the syntactic differences between *zhi* and its modern Chinese counterpart *de*).

- (18) a. 民所食者
 min suo shi zhe
 people SUO eat ZHE
 ‘what people eat’
- b. 行法志堅，好修正其所聞，以矯飾其情性。(《荀子·儒效》)
 xing fa zhi jian, hao xiuzheng qi suo wen,
 behavior legitimate will determined like correct he SUO hear
 yi jiaoshi qi qingxing (Xunzi: Ruxiao)
 YI modify his nature
 ‘His behavior is reasonable and his will is determined; he likes to correct what he hears in order to modify his nature.’
- c. 和氏璧，天下所共傳寶也。(《史記·廉頗藺相如列傳》)
 He shi bi, tianxia suo gong chuan
 HE surname jade world SUO together recognize
 bao ye (Shiji: Lianpo Linxiangru Liezhuan)
 treasure YE
 ‘The jade Heshi *(is) the treasure that is unanimously recognized by the world.’

Now we see that the examples (9a/b) and (16) with obligatory occurrence of *suo* exactly reflect these characteristics of the *suo* construction in Classical Chinese. In (9a), there is no head noun in the relative clause; in (9b), a linker *zhi* used in Classical Chinese between the relative clause and the head noun is present; in (16), there is no such linker *zhi*. It is therefore not surprising that *suo* is obligatory in these modern Chinese examples as in Classical Chinese.

The other environment for the obligatory occurrence of *suo* is when some prosodic constraint of modern Chinese is at work. The other subtype of Type II *suo* involves a monosyllabic verbal bound morpheme such as *ji* and *shu* in (9c) and (17). Such morphemes may have been free morphemes in earlier stages of Chinese but in modern Chinese they cannot stand alone and therefore must form a phonological word with *suo* in these examples. On the other hand, the other subtype, though rare in number, reveals a different prosodic constraint in modern Chinese. Though monosyllabic, *yao* in (17b) is not a verbal bound morpheme in modern Chinese but its occurrence without *suo* in the clause would yield unacceptability.

4.4 Co-occurrence with emphatic expressions

It is also observed that *suo* quite often co-occurs with emphatic adverbs and amplifiers. Illustrated by the italicized parts in (19) are emphatic adverbs meaning *best*, *most* and *more* and illustrated by the italicized parts in (20) and (21) are amplifiers meaning *perfect*, *enormous*, *fully*, *specialy*.

- (19) a. 《亞元》雜誌所評選的年度該國最佳經營管理公司，Infosys 連續七年奪冠。(Magazine)
 <Yayuan> zazhi suo pingxuan de niandu
 Yayuan magazine SUO appraise:select DE annual
 gai guo *zui jia* jingying guanli gongsi,
 above-mentioned country most good operate manage company
 Infosys lianxu qi nian duo guan
 Infosys consecutively seven year take champion
 ‘In terms of the annual best company of operation and management, Infosys won this honor in consecutively seven years.’
- b. 它所被要求的是能夠伴隨著用筆者一生，書寫生命中最重要時刻，書寫給生命最重要的人。(Magazine)
 ta suo bei yaoqiu de shi nenggou bansui-zhe yongbizhe
 ta SUO BEI require DE be can accompany-ZHE pen-user

yisheng, shuxie shengming zhong *zui* zhongyao de shike,
 one:life write life middle most important DE moment
 shuxie gei shengming zhong *zui* zhongyao de ren
 write give life middle most important DE person
 ‘What is required on it is to accompany the pen-user all his/her life, for
 him/her to write about the most important moment in life and to write to
 the most important people in life.’

- c. 我們早期所學的東西都比較(short_break)(inhale) 窄。(MCDC)
 women zaoqi suo xue de dongxi
 we early:stage SUO learn DE thing
 dou *bijiao* (short_break)(inhale) zhai
 all more narrow
 ‘What we learned in the early stage was rather narrow.’
- (20) a. 六角星完美的四十三個切割面所散發出的亮度，讓人驚豔。(Magazine)
 liujiaoxing *wanmeide* sishisange qiegemian suo sanfa chu de
 Star:of:David perfect forty-three facet SUO emit out DE
 liangdu, rang ren jingyan
 brightness make person impressed
 ‘The brightness that the perfect 43 facets emitted impressed people.’
- b. 從進入飯店開始，即能看見鄉野風格的裝潢，融入各種巨大的
 機芯圖所傳達的機械結構之美。(Magazine)
 cong jinru fandan kaishi, ji neng kanjian xiangye
 from enter hotel begin immediately can see county
 fengge de zhuanghuang, rongru gezhong *judade* jirui tu
 style DE décor blend various giant movements picture
suo chuanda de jixie jiegou zhi mei
 SUO convey DE machinery structure ZHI beauty
 ‘Ever since entering the hotel, one can immediately see the décor of
 county style blended with the beauty of machinery structure conveyed
 by various gigantic pictures of movements.’
- (21) a. 2樓是專為時裝秀以及特別的時尚活動所做的空間設計。(Magazine)
 erlou shi *zhuan* wei shizhuang xiu yiji tebie de
 second:floor be specially for fashion show and special
 shishang huodong suo zuo de kongjian sheji
 fashion activity SUO do DE space design
 ‘The second floor is a spatial design specially made for fashion shows
 and special fashion activities.’

- b. 因此湯汁不必加糖也,滿是海鮮肉質所散發出來的鮮甜。(Magazine)
yinci tangzhi bu bi jia tang ye man shi haixian
consequently soup not need add sugar also fully be seafood
rouzhi suo sanfa chulai de xiantian
meat:texture SUO emit out DE freshness
'Consequently, the soup is full of freshness emitted by the texture of
seafood without adding sugar.'

Other lexical emphasis expressions that are observed to co-occur with *suo* are expressions with intensifying force, for example, the universal quantifier *jie* in (22) and *meiyige* in (23). Note that the latter also illustrates an environment of a contrastive focus with the syntactic pattern *bushi... ershi* 'not ... but ...'.

- (22) 至於湯頭所使用的複方花茶原料,皆採自法國及德國山區。(Magazine)
zhiyu tangtou suo shiyong de fufang huacha yuanliao,
regarding soup SUO use DE compound herb:tea raw:material
jie cai zi Faguo ji Deguo shanqu
all pick from France and Germany mountain:area
'Regarding the raw materials of the compound herb tea which were used in
the soup, they were all picked in the mountain areas of France and Germany.'
- (23) 品牌區隔不單指在產品廣告,而是員工所做的每一件事。(Magazine)
pinpai quge bu dan zhi zai chanpin guanggao, er shi
brand segmentation not simply refer at product advertisement but be
yuan Gong suo zuo de meiyijian shi
employee SUO do DE every thing
'Brand segmentation refers to not only product advertisements, but also
everything that the employees do.'

In addition to co-occurrence with these emphasis-associated lexical expressions, *suo* is also found to appear in the pattern of pseudo-clefts, as indicated by the italicized parts in (24) taken from the written corpora (24) and in (25) taken from the oral corpora.

- (24) Written corpora
a. 「潮流」這件事一向都不是他所在意的。(Magazine)
"chaoliu" zhejian shi yixiang dou bu shi ta suo zaiyi de
trend this thing consistently all not be he SUO mind DE
'The issue "trend" has always not been what he minds.'

- b. 這意味著兩岸將重新陷入新一波的「不確定」，這豈是美國所樂見的。(Editorial)
 zhe yiwei-zhe liang an jiang chongxin xian ru xin yi po
 this mean-ZHE two coast future again fall into new one wave
 de “bu queding”, zhe qi shi Meiguo suo le jian de
 DE not certain this QI be USA SUO happy see DE
 ‘This means that two sides across the strait will fall into another wave of
 “uncertainty”; is this what the USA is happy to see?’

(25) Spoken corpora

- a. 像 (inhale) 很多東西是你以前所沒有學到的。(MCDC)
 xiang (inhale) henduo dongxi shi ni yiqian suo meiyou xuedao de
 like many thing be you before SUO not learn DE
 ‘[It is] like many things you didn’t learn before.’
- b. 成果到最後 (pause) 不是他[6iaN2] 所想像的。(MTCC)
 chengguo dao zuihou (pause) bu shi ta [6iaN2] suo xiangxiang de
 result arrive final not be he SUO imagine DE
 ‘The ultimate result is not what he can imagine.’
- c. 我所要與各位同學分享的是從空間性角度分析原住民族運動。(Speech)
 wo suo yao yu gewei tongxue fenxiang de shi cong
 I SUO want with every classmate share DE be from
 kongjianxing jiaodu fenxi yuanzhumin yundong
 spatial angle analyze aboriginal movement
 ‘What I’d like to share with you is analyzing aboriginal movements
 from a spatial perspective.’

Since Type I *suo* has the most frequency counts in almost all of the corpora containing *suo*, we counted the occurrences of such *suo*, whose environments include some emphasis/focus expressions or patterns and obtained the results as summarized in Table 7.

Table 7: Frequency counts of optional occurrences of *suo* involving emphasis

	Editorial	Magazine	Fiction	Speech	MCDC	MTCC
Type I <i>suo</i> involving emphasis	20	22	5	10	10	13
Total occurrences of Type I <i>suo</i>	38	39	3	6	18	22
Percentage	52.63%	56.41%	60%	60%	55.55%	59.09%

These results indicate that an important function of *suo* is to give intensifying force in the clause. In other words, by examining the expressions that co-occur with *suo*, we have confirmed Chao's claim that *suo* may be added for emphasis.⁷

Summarizing, in this section we have presented the results obtained from investigating the mean frequency of *suo* across the registers, distribution of types of *suo* within and across each corpus containing *suo*, characteristics of Type II *suo* and the relatively high co-occurrence with emphatic expressions of *suo* (of Type I).

5. Discussion

In this section, we discuss how these characteristics of *suo*'s distribution may be analyzed. Under a multi-dimensional approach, we claim that *suo* serves ideational, (non-)contextual, personal and aesthetic functions and propose that these functions of *suo* may be closely associated with its explicit form.

The multi-dimensional approach to register variation is advocated by Biber (1988), Biber and Finegan (1994, 2001), among others. According to them (Biber & Finegan 1994:320), there are two competing forces in communication: the 'be quick and easy' mandate and the 'be clear' mandate and they can be identified by the use of economy and elaboration features respectively. "Many variables and optional expressions can be regarded as more or less elaborated (alternatively, more or less compressed or economical)." (ibid.) Illustrating examples include omission/retention of the marker *that* from a complement clause and absence/presence of a prepositional phrase for a noun/verb phrase. "Because of their differing communicative demands, different registers have a functional preference for the clarity mandate or for the ease mandate." (Biber & Finegan 1994:321) The clarity mandate is favored by stereotypically literate varieties such as academic prose while the ease mandate is favored by stereotypically oral varieties such as conversation. Regarding other registers, frequencies of particular features fall between the two extreme mandates and reflect the situational characteristics of the registers. An important claim in this approach is thus that "the distribution of linguistic features across communicative situations cannot be adequately characterized by reference to a single dimension (such as casual/formal; written/spoken; or attention paid to speech); rather, a multidimensional framework is needed (see Hymes 1974, Biber 1988)." (Biber & Finegan 1994:326)

Given this characterization of register variation, the fact that *suo* tends to appear in stereotypically literate registers naturally follows. In contrast to Classical Chinese, "*suo* V" and "V" may alternate with each other in most cases of modern Chinese as shown in

⁷ But this is certainly not the only function of *suo*. See more discussion in §5.

Table 4. Thus, as an apparently optional expression, *suo* can be viewed as an elaboration feature. Elaboration features have an ideational function, presenting informational rather than interactive communicative purposes. Elaboration and explicitness of expressions are necessary in stereotypically literate registers that arise in circumstances characterized by careful production, informational purposes and relatively little shared context between interlocutors. If *suo* is an elaboration feature, then its tendency to occur in literate registers but not oral registers is not a surprise. This is supported by the quantitative results of the frequency counts of *suo* in the registers we have seen. In editorials and magazines, which are stereotypically literate varieties, the frequency counts of *suo* are the highest and those in the two spontaneous dialogue corpora, which are stereotypically oral varieties, are the lowest.

Worth noting is the distribution of *suo* in speech and fiction, the two registers falling between the stereotypically literate and oral extreme. Despite being an oral register, speeches show a mean frequency statistically non-distinct from those of the two written registers, editorials and magazines; fiction, though a written register, shows a mean frequency statistically non-distinct from those of the two spontaneous dialogue corpora MCDC and MTCC.⁸ These findings indicate that the distribution of *suo* cannot be adequately characterized as relating to a single parameter such as written/spoken as in Lu (1999:256). The written/spoken dichotomy between registers fails to account for why speeches as a spoken register are grouped as editorials and magazines and why fiction as a written register is grouped as the two spontaneous dialogue corpora in terms of licensing *suo*'s occurrence. On the other hand, the distribution of *suo* also cannot be captured by a single parameter such as formal/informal as in Chu (1987:53). Recall that in the task-oriented corpus MMTC, there is not a single token of *suo* found, which presents a statistically significant difference with the distribution of *suo* in the other two dialogue corpora. Given the difficulty of characterizing the register variation between MMTC and the other two dialogue corpora in terms of formality, absence of *suo* in corpora like MMTC shows that some other factor than formality determines *suo*'s

⁸ Some may attribute the low frequency of *suo* shared by fiction and the two spontaneous corpora to the assumption that fiction includes lots of dialogues. This line of reasoning, however, may not hold. As argued later in the text, fiction is a register intermediate between a stereotypically literate and a stereotypically oral one. Then it is expected that the frequency of *suo* in fiction should be intermediate between the stereotypically written and oral extreme, contrary to fact. Furthermore, although fiction is characterized as having features of stereotypically written and oral registers, i.e. both informational and involved (Biber 1988), it is a written register and most often does not contain as many dialogues as spontaneous dialogues do, which is the case for the novels excerpted in this study.

distribution.⁹ The results that we obtained thus do not support a single dimension approach to register variation but rather a multi-dimension one as proposed by Biber (1988) and Biber and Finegan (1994, 2001), among others.

The fact that speeches show a mean frequency of *suo* as high as that of editorials and of magazines is not surprising if *suo* is analyzed as an elaboration feature because speeches, according to Biber (1988:154), are highly informational. However, the elaboration feature account of *suo* cannot fully explain its relatively low distribution in the fiction as in the two spontaneous dialogue corpora. According to Biber (1988:167), fiction is a register characterized by both informational and involved production. If *suo* exclusively serves as an elaboration feature, its distribution in fiction is expected to be intermediate between the stereotypically written and oral extreme, contrary to fact. Because its distribution in the fiction is grouped as those in the two spontaneous dialogue corpora, we propose that in addition to being an elaboration feature with an ideational function, *suo* also serves a (non-)contextual function, conveying highly explicit, context-independent, endophoric references. Registers such as editorials and magazine writing require highly explicit, text-internal reference, while registers such as conversation permit extensive reference to the physical and temporal situation of discourse, showing a high dependence on the context and thus conveying exophoric references. Like conversations, fiction also makes exophoric reference in the sense that “there is a fictional situation that is referred to directly in the text ... the context of discourse production is not the same as the context of events” and that “the reader understands this reference in terms of the internal physical and temporal situation developed in the text rather than any actually existing external context” (Biber 1988:148). The similar distribution of *suo* in fiction and in the two spontaneous dialogue corpora receives a reasonable explanation if *suo* not only serves as an elaboration feature but also conveys endophoric references.

This interpretation of the function of *suo* as conveying endophoric references is further supported by the absence of *suo* in the corpus MMTC. As described in §3, this corpus consists of 26 task-oriented dialogues, each of which was produced by two participants who knew each other well. In contrast to the other two spontaneous dialogue corpora MCDC and MTCC, which contain dialogues more resembling regular conversations, the dialogues in MMTC are task-oriented because one participant with a detailed map had to explain to the other with a simplified map how to get to a particular destination. In such a task, extensive reference to the spatial situation described in the map makes the dialogue even more exophoric than a regular conversation. If a function of *suo* is to convey highly explicit, context-independent, endophoric references, then it is not surprising that there is not a single token of *suo* found in MMTC, a fact that

⁹ With thanks to Shengli Feng for sharing with me the opinion that *suo*'s occurrence is licensed by formality.

presents a sharp contrast with the distribution of *suo* in the other two spontaneous dialogue corpora.

Still another function of *suo*, we claim, is a personal one. According to Biber (1988: 34), “personal functions include markers of group membership, personal style and attitudes towards the communicative event or towards the content of the message.” This explains the occasional occurrence of *suo* in the two spontaneous dialogue corpora. Spontaneous dialogues are stereotypically oral registers, which according to Biber and Finegan (1994, 2001) are subject to the ‘ease’ and not the ‘clarity’ mandate. If *suo* is only used for the purpose of elaboration or conveying endophoric references, it would be expected to be absent in those two corpora, contrary to fact. Then in these registers conforming to the ‘ease’ mandate, why do the interlocutors bother to use *suo*? Given the high co-occurrence of *suo* with emphasis expressions we have seen, we suggest that the use of *suo* in the two spontaneous dialogue corpora mainly conveys emphasis, showing the speaker’s feelings, judgments or attitudinal ‘stance’ towards the content.

Lastly, we shall point out the aesthetic function of *suo*. According to Biber (1988: 36), “aesthetic functions are those relating to personal or cultural attitudes about the preferred forms of language”. For example, although contraction is usually attributed to be a consequence of fast and easy production, Biber (1988:243), based on the findings of Biber (1986) and Chafe & Danielewicz (1987), suggests that “the use of contractions seems to be tied to appropriateness considerations as much as to the differing production circumstances of speech and writing”. *Suo*, a widespread particle in Classical Chinese, is used by Li & Thompson (1982) as one of the examples illustrating the significant role played by Classical Chinese in accounting for the gulf between spoken and written Chinese. They show that the phrase *shao you suo wu* “gain a little bit awareness” occurring in contemporary Chinese writing is in fact in the mold of Classical Chinese. According to them (*ibid.*: 87), most of the educated Chinese “share the feeling that the succinctness of the classical style carries with it an elegance and pithiness not found in the colloquial style, and inevitably slip into the classical tradition in their writing”. We suggest that it is such “elegance” associated with *suo* that gives it an aesthetic function. We shall illustrate by comparing the use of *suo* and its alternative forms. Consider the sequence *suo shu* ‘SUO belong’ in (17b). In the first place the speaker does not have to select the monosyllabic verb *shu* ‘belong’, which requires the accompanying use of *suo* because instead of *suo shu* ‘SUO belong’, a disyllabic *shuyu* ‘belong’ could be used. But a clear difference between these two forms is that *suo shu* ‘SUO belong’ carries a Classical Chinese flavor, which gives “elegance” to the writing. Likewise, the speaker does not have to imitate classical Chinese grammar by using *suo* and may instead use modern Chinese grammar in many instances. The choice of *suo* over its alternative forms thus supports our claim for its aesthetic function. As we have seen in Table 4 and Table

5, Type II *suo*, namely the type of *suo* often associated with Classical Chinese grammar, has a relatively high frequency in editorials and speeches. These two registers, according to Biber (1988:159), often present information “in relation to the attitudes, opinions, or statements of specific individuals.” We suggest that the aesthetic function of *suo* is employed to reinforce the speaker’s or writer’s affective tones.

Summarizing, *suo* serves ideational, (non-)contextual, personal and aesthetic functions. These functions could be multiple roles simultaneously played by *suo* and interacting with one another. Thus, it is sometimes not easy to tease out which function of *suo* is at play in a particular case. We tend to think that all the four functions of *suo* are closely related to its explicit form. Explicitness of the form makes it an elaboration feature, presenting informational purposes and also helps convey highly explicit, context-independent, endophoric references. Explicitness of the form, in addition, adds emphasis in the clause, thus achieving personal functions. Due to close association with Classical Chinese style, this explicit form also gives ‘elegance’ to the language, serving an aesthetic function. Although this remark is fairly tentative, we believe that this line of reasoning examining a close relation between a linguistic form and its communicative function is on the right tract and worth further pursuing.

6. Concluding remarks

A major goal of this paper is to argue against a single dimension view and support a multi-dimensional approach to register variation. By examining *suo*’s distribution in several written and spoken registers, we show the inadequacy of previous analyses characterizing *suo* solely as conveying emphasis or as associated with written or formal registers. Rather, it is the situational characteristics of a register, written or spoken, that determine the appropriateness of *suo*’s occurrence in the register. To illustrate, fiction, though a written register, is not quite compatible with *suo* because *suo*’s use is highly independent from the context but fiction is a register showing a high dependence on the context, thus resulting in the low frequency of *suo* in fiction. This gains support from the fact that spontaneous dialogues, sharing the situational characteristics of being exophoric with fiction, also exhibit low frequency of *suo*. Therefore, in terms of conveying exophoric sense, fiction and spontaneous dialogues are grouped together and need to be distinguished from other registers not conveying exophoric sense. In this approach, textual relations are defined by the situational characteristics shared among written and spoken registers (see Biber 1986, 1988 and subsequent works).

In addition to the ideational, (non-)contextual, personal and aesthetic functions of *suo* identified in §5, processing functions, one of the seven types of functions of linguistic features classified by Biber (1988), is worth further exploring. As pointed out by Hsu

(2006), the reaction times are numerically higher in clauses not containing *suo* than in their counterparts with *suo*. This indicates that the presence of *suo* provides information that helps with the parsing of relative clauses to avoid potential garden path effects. In addition to issues regarding such processing functions, equally interesting are issues concerning the use of *suo* for fulfilling prosodic requirements in instances such as (7), (9c) and (17a) and the use of *suo* from social-linguistic perspectives such as social status, age and gender of the speakers. All these issues are beyond the scope of this paper and will be left to future studies.

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