

On the Form and Function of the Particle *Suo* in Mandarin Chinese*

Jen Ting

National Taiwan Normal University

Studies of the *suo* construction in modern Chinese, said to be a remnant from its Classical counterpart, have achieved good results in the implications for the phrase structure, Case assignment, chain relations in Chinese syntax. 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. The goal of this paper is two-fold: first, to argue against the prevalent impression of *suo* being optional and show that *suo* is used to fulfill a purpose and is thus never optional; second, to propose that the function of *suo* is reflected by the syntactic position it occupies in the clause structure. Based on the results of our research on both the written and spoken corpus we have collected, we find that *suo* serves ideational, contextual and personal functions in the communicative situation. We propose that there is a functional projection in the INFL domain which *suo* undergoes head movement to adjoin to. Interestingly, Romance clitics also display a wide variety of discourse functions, which are captured by the positing of a functional projection by Uriagereka (1995). This parallelism between *suo* and Romance clitics thus supports an approach treating them on a par as proposed by Ting (2003).

1. Introduction

Properties of the *suo* construction in Classical Chinese have generated heated discussion in the literature (see Yao 1998, Ting 2005 and references cited there). More recently, studies of the *suo* construction in modern Chinese illustrated in (1), a remnant from its Classical counterpart (Chu 1987, Chiu 1995), have also achieved good results in the implications for the phrase structure, Case assignment, chain relations in Chinese syntax (e.g. Chiu 1995, Ting 2003).

(1) 張三所愛的人

* I would like to express my sincere gratitude to Shu-chuan Tseng at Academia Sinica for generously providing the oral corpuses she constructed, sharing her precious time discussing with me various issues in this article and offering valuable comments. Thanks also go to the audience at NACCL-18, in particular Miao-ling Hsieh, Mei-chun Liu, Kuo-ming Sung and Kathleen Tomlonovic, whose questions and comments have greatly improved the version of this paper. Mistakes are exclusively my own. Research for this article was supported by NSC grant # 94-2411-H-003-023.

To illustrate, Ting (2003) argues that *suo* behaves on a par with pronominal clitics in Romance in many respects (cf. Chiu 1995). Crucially, the licensing of *suo* is argued not to involve any functional projection associated with accusative Case licensing. One of the arguments is based on examples such as (2).

(2) 河上所漂浮的枯葉

Given the failure of *suo* to be licensed by grammatical subject relativization, along with other types of licensing asymmetry, it is proposed by Ting (2003) that the facts of *suo* follow from an analysis that treats *suo* and pronominal clitics in Romance on a par. To capture such parallelism, Ting (2003) adopts a head movement analysis of Romance clitics first advocated by Kayne (1989, 1991). More specifically, *suo* is suggested to undergo successive cyclic head movement from the nominal headed by it and left adjoin to INFL. We will assume with Ting (2003, 2005) that a pronominal clitic analysis of *suo* in Mandarin Chinese is on the right track.

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. The common impression that *suo* is optional is simply due to the fact that most of the *suo* constructions have GRAMMATICAL counterparts without the occurrence of *suo*. But even in these cases are clauses containing *suo* and not containing *suo* interpreted in the same way? The major goal of this paper is to argue against this prevalent view and show that *suo* is used to fulfill a purpose and thus never optional. When this goal is achieved, we would like to suggest that the functions of *suo* are reflected by the syntactic position it occupies in the clause structure.

2. Previous analyses

To the best of our knowledge, the scarce studies of the function of *suo* in the literature fall to four types of claims. First, *suo* does not have any effect on the clause and is thus optional (Zhang 1981). This conclusion is reached probably because all relatives containing *suo* appear to have their non-*suo* counterparts. Although this observation is likely to be true, yet it cannot be used to argue that the particle *suo* plays no role 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 genre 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.

In fact, there have been other studies which claim that the particle *suo* does serve a function. To begin with, consider those claiming *suo* to give emphasis. Chao (1968)

regards it as an adverb added for emphasis; thus, (3) can mean ‘the words he actually said’ or ‘all the words he said.’¹

(3) 他所說的話

Another claim that has been suggested in the literature is that *suo* is limited to the formal or written register (e.g. Chu 1987, Lu 1983/1999, cf. Chiu 1995). For example Chu (1987, 53) points out “the presence of *suo* renders the whole utterance more formal depending on the style of speech”. Lu (1983/1999, 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), Lu’s observation can be subsumed under the generalization that *suo* is used in formal registers.

Lastly, *suo* has been observed to fulfill syllabicity requirement in the clause (Lu 1983/1999, cf. Ting 2003). According to Lu (1983/1999), the monosyllabic words that follow *suo* in (4) cannot stand alone; their disyllabic counterparts 得到, 賦予, 遭受 have to be used instead.

- (4) a. 我個人在這個月中*(所)得的只是一點點微小的收穫了。
b. 他的慈悲性情是上天*(所)賦的。
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。

Lu thus concludes that *suo* is used for the purpose of syllabicity in modern Chinese. We agree that this line of reasoning is on the right tract, but as pointed out in section 4.4, this constraint should be characterized as on prosody rather than on syllabicity.

In order to investigate whether *suo* is used for any particular purpose in the clause, we examine the distribution of *suo* in written and spoken corpuses.

3. Methodology

3.1 Database

Corpuses of both written and spoken language are included in this study. The database for written language includes the corpuses 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

¹ Wang (1980) 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) 我昨天所買的书

Ting: Form and Function of *Suo*

Weekly, China Times Weekly, China Times Weekly, Marie Claire, etc. The corpus of fiction comprises 5 text samples containing the particle *suo* we collected from novels or novel excerpts written by Pizi Tsai, Teng Jing Shu, Ailing Chang, Kuang Ni and Guangzhong Yu.

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 26229 words of running text; the total corpus for magazines contains approximately 22900 words; and the total corpus for fiction contains approximately 9291 words.²

Table 1 Information of the written corpora

	Editorials	Magazines	Fiction
Text	34	25	5
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 Pizi Tsai, Teng Jing Shu, Ailing Chang, Kuang Ni, Guangzhong Yu
Words	26229	22900	9291

The database for spoken language comprises 3 corpora of dialogues collected by Dr. Shu-chuan Tseng at Academia Sinica: Mandarin Conversational Dialogue Corpus (MCDC), Mandarin Map Task Corpus (MMTC) and Mandarin Topic-Oriented Conversation Corpus (MTCC). The description of each corpus is summarized in Table 2. MCDC consists of 8 transcribed dialogues on free topics between two strangers, totaling 6.5 hours. The transcription comprises 84165 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 particular destination. The transcription comprises 30390 words after segmentation. MTCC consists of 29 topic-oriented dialogues between two subjects 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 91408 words after segmentation by the segmentation system at Academia Sinica.

² This project is still in progress. The total amount of data for fiction will be expanded to a similar size as that for editorials and magazines.

Table 2 Information of the spontaneous spoken corpuses

	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

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* 前所未有的 and *zhong suo jie zhi* 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 (5) to (8) respectively.

(5) Type I

- a. 「湯」所扮演的角色看似微不足道 (Magazine)
- b. 我想這是一般人所無法擁有的高檔待遇 (Magazine)

(6) 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)
- b. 形成一個由陸地通向全世界的陸上交通，打破海上由美日安保所形成封鎖之勢 (Magazine)
- 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)

(7) 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)
- 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)

(8) Type IV

- a. 香奈兒的創意再度為主流所崇拜 (Magazine)
- b. 兩千三百萬人卻總覺得自己的命運在被一個人所決定 (Editorial)

³ With thanks to Miao-ling Hsieh for pointing out the 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.

Ting: Form and Function of *Suo*

There are some expressions containing *suo* which are not considered in this study including: *suo* occurring in the conjunction item *suoyi* 所以, *suo* used as part of a nominal such as *yanjiu suo* 研究所, *paichusuo* 派出所, *cesuo* 廁所, *suode* 所得, meaning income, and *suoyouquan* 所有權, and also *suo* occurring in the expression *suowei(de)* 所謂(的) and *suoyou(de)* 所有(的).

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

Qualitatively, we examine the patterns of Type II *suo*'s occurrence and also investigate whether *suo* co-occurs with emphasis expression. 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 will be classified into two types: lexical expressions such as emphatics and amplifiers and syntactic devices such as pseudo-cleft. According to Biber (1988, p. 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 (9).

- (9) 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*-cleft illustrated in (10a/b/c) respectively.

- (10) 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 (11) are taken from Tang (1980, 252).

- (11) a. 湯先生十五年前在美國學的是語言學

b. 十五年前在美國學語言學的是湯先生

4. Results

4.1 Overall distribution of *suo* in the registers

The distribution of *suo* in the three written registers and in the three spontaneous oral corpora are shown in Table 3 and Table 4 respectively.

Table 3 Distribution of *suo* in the written registers

	Editorials	Magazines	Fiction
Optional	38 (50.00%)	40 (65.57%)	1 (50.00%)
Obligatory	27 (35.52%)	8 (13.11%)	1 (50.00%)
Fixed expressions	8 (10.52%)	9 (14.75%)	4 (50.00%)
Passive	3 (3.94%)	4 (6.55%)	0
Total	76 tokens (100%)	61 tokens (100%)	6 tokens (100%)
Mean frequency	2.89/1000 words	2.66/1000 words	0.64/1000 words

Table 4 Distribution of *suo* in the spontaneous spoken corpora

	MCDC	MMTC	MTCC
Optional	18 (54.54%)	0	22 (62.85%)
Obligatory	6 (18.18%)	0	6 (17.14%)
Fixed expressions	8 (24.24%)	0	7 (20.00%)
Passive	1 (3.03%)	0	0 (0%)
Total	33 (100%)	0	35 (100%)
Mean frequency	0.39/1000 words	0/1000	0.37/1000 words

4.2 Mean frequency of *suo* across the registers

First, we shall consider the mean frequency in each corpus. As shown in Table 3, the frequency of *suo* in editorials is a bit higher than in magazine articles (2.89/1000 in editorials vs. 2.66/1000 in magazines) but both are much higher than the frequency count in fiction (i.e. 0.64/1000). Statistics indicate that in terms of *suo*'s frequency, editorials and magazines show no significant difference but either of them shows significant difference 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 them.

When we examine the result of oral corpora shown in Table 4, the two corpora MCDC and MTCC exhibits almost the same frequency counts of *suo*. We will take this to mean that these two oral corpora 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 30390 words. This absence of *suo* in MMTC has statistically significant difference with the other two oral corpuses that contain some tokens of *suo*. If *suo*'s occurrence is simply random, there is no good explanation for this fact. It is thus obvious that the nature of such tasks is incompatible with the use of *suo*, a fact that supports the claim that *suo*'s use is never optional. The absence of *suo* in MMTC also shows the inadequacy of simply characterizing *suo* as rarely occurring in spoken registers since the distribution contrast of *suo* between MMTC and the other two oral corpuses requires an explanation. We will discuss this in section 5.

In brief, comparing the mean frequency of *suo* across written and spoken corpuses, we found that four groups are distinguished: editorials/magazines, fiction, MCDC/MTCC and MMTC. Editorials/magazines have the highest frequency of *suo* while MMTC has none. All the four groups show statistically significant difference among one another.

4.3 Distribution of types

We shall now consider the distribution of types within and across each register. As shown in Table 3 and Table 4, within each register with the only exception of fiction, percentage of *suo* of Type I is much higher than that of *suo* of Type II. This shows that the use of *suo* must have some functional purpose because *suo*'s occurrence is not required in many cases. Comparing the percentage of types across the registers, we found first that *suo* of Type III has a higher percentage in oral corpuses than in editorials and magazines. This may be because non-idiomatic use of *suo* occurs less often in oral registers. Furthermore, editorials have the highest percentage of Type II *suo* and the lowest percentage of Type I *suo*. This may have to do with the general seriousness associated with the register of editorials and the characteristics of Type II *suo* we shall discuss in the next sub-section.

4.4 *Suo* of Type II

It is found that occurrences of Type II *suo* fall into two types: one involves imitation of Classical Chinese style as shown in (12a/b/c) and the other involves prosodic requirement in modern Chinese as shown in (13a/b/c).

- (12) 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)
b. 形成一個由陸地通向全世界的陸上交通，打破海上由美日安保所形成封鎖之勢 (Magazine)
c. 我 (unrecognizable_speech_sound)我所知道最大的業務 (MCDC)
- (13) a. 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)
b. 是在告訴我們說E人生所屬的四大象限(inhale)就是說 (MTCC)
c. 所以可以花時間鑿出所要的精鋼筆尖 (magazines)

Ting: Form and Function of *Suo*

First, notice some properties of *suo* in Classical Chinese: it is not allowed to be optional as shown in (14a). The *suo* construction, furthermore, does not have to include an overt head noun as shown in (14b) (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 (14c) (see Ting to appear for the syntactic differences between *zhi* and its modern Chinese counterpart *de*).

- (14) a. 民*(所)食者
b. 行法志堅，好修正其所聞，以矯飾其惰性（荀子、儒效）
c. 和氏璧，天下所共傳寶也。（史記、廉頗藺相如列傳）

Now we see that the examples (12a/b/c) with obligatory occurrence of *suo* exactly reflect these characteristics of the *suo* construction in Classical Chinese. It is then not surprising that *suo* is obligatory in these modern Chinese examples.

The other environment for the obligatory occurrence of *suo* is when some prosodic constraint of modern Chinese is at work. One of the subtypes involves a monosyllabic verbal bound morpheme such as *ji* and *shu* in (13a/b) respectively. 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 (13c) is not a verbal bound morpheme in modern Chinese but its occurrence without *suo* in the clause would yield unacceptability.

4.5 Co-occurrence with emphasis expressions

First, it is observed that *suo* quite often co-occurs with emphatic adverbs and amplifiers. Illustrated in (15) are emphatic adverbs meaning *best*, *most* and *more* illustrated in (16/17) are amplifiers meaning *perfect*, *enormous*, *fully*, *especially*.

- (15) 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
b. 它所被要求的是能夠伴隨著用筆者一生，書寫生命中最重要的時刻，書寫給生命中最重要的人
c. 萬寶龍所堅持的雋永人文特質，也因此更顯特殊
d. 西也比較廣泛我們早期所學的東西都比較(short_break)(inhale)窄 (MCDC)
- (16) a. 我想這是一般人所無法擁有的高檔待遇
b. 六角星完美的四十三個切割面所散發出的亮度，讓人驚豔
c. 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
- (17) 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

Ting: Form and Function of *Suo*

- b. 因此湯汁不必加糖也滿是海鮮肉質所散發出來的鮮甜

Other lexical emphasis expressions that are observed to co-occur with *suo* are expressions with intensifying force, for example, the universal quantifier *dou* in (18) and *meiyijian* in (19). Note that the latter also illustrates an environment of a contrastive focus with the syntactic pattern *bushi... ershi* ‘not ... but ...’.

- (18) a. 一向致力絕對亮麗、發光風采的眾家Movie Stars，皆不約而同以單色系的色彩，讓人感受她們因為戰爭所表態的壓抑情懷
b. 這些聽起來有些天馬行空但卻又平易近人的點子，其實都是荷蘭設計大師團隊Droog於過去 10 多年來所精心設計的一些日常用品
c. 至於湯頭所使用的複方花茶原料，皆採自法國及德國山區
- (19) 品牌區隔不單指在產品廣告，而是員工所做的每一件事

In addition to co-occurrence with these emphasis-associated lexical expressions, *suo* is also found to appear in the pattern of pseudo-clefts, for example, in the written corpuses (20) and the oral corpuses (21).

(20) Written corpuses

- a. 我們所堅持的是好的產品及正確的彩妝技巧 (magazine)
b. 「潮流」這件事一向都不是他所在意的 (magazine)
c. 陳總統冒進的理念在當下所反映的，早已非台灣的主流民意 (editorial)
d. 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)

(21) Spoken corpuses

- a. 十幾歲EI(inhale)而且(inhale)他們所說的都是很好死(inhale)就是 (MCDC)
b. BA(inhale)我們一般的醫學它所講的是身體上肉體上的 (MCDC)
c. (pause)以前我們下雨天我們所擔心的是什麼(uncertain)譬如說 (MCDC)
d. NE就是(inhale)(pause)就是我剛所講的BA大概就是所謂的 (MCDC)
e. 像(inhale)很多東西是你以前所沒有學到的像我以我本 (MCDC)
f. 些力量不是我們人人力所能夠去改變的(inhale)那些人 (MTCC)
g. 成果到最後(pause)不是他[6iaN2]所想像的 (MTCC)
h. 她黑也不是她(short_break)她(short_break)她所能控制的[x@n]這是她們 (MTCC)

When we count the frequency of optional occurrence of *suo* whose environment include some emphasis/focus expressions or patterns, we get the results as summarized in Table 5.

Table 5 Frequency counts of optional occurrences of *suo* involving emphasis

	Editorial	Magazine	MCDC	MTCC
Optional <i>suo</i> involving emphasis	20	22	10	13
Total optional occurrences of <i>suo</i>	38	40	18	22
Percentage	52.63%	55.00%	55.55%	59.09%

These results indicate 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.

Summarizing, it has been found in this section that *suo* tend to occur in stereotypically literate registers, to fulfill the prosodic requirement in modern Chinese, and to add emphasis in the clause.

5. Discussion

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

The multidimensional approach to register variation is advocated by Biber (1988), Biber and Finegan (1994, 2001), among others. According to them (Biber and 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 identifies 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 and 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 and Finegan 1994, 326)

Given this characterization of register variation, the fact that *suo* tends to appear in stereotypically literate registers follows naturally. In contrast to Classical Chinese, *suo* V

and V may alternate with each other in most cases of modern Chinese as shown in Table 4. Thus, as an apparent 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 is 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 in magazines, which are stereotypically literate varieties, the frequency counts of *suo* are the highest and those in the two oral corpora, which are stereotypically oral varieties, are the lowest. Crucially, fiction, a register falling between the stereotypically literate and oral extreme, has frequency counts of *suo* that fall between those of editorials/magazines and those of the two oral corpora. This result indicates that the distribution of *suo* cannot be adequately characterized as relating to a single parameter such as formal/informal as in Chu (1987, 53) or written/spoken as in Lu (1983/1999, 256). Fiction is a written register and can be defined as formal in style if formality is defined as attention paid to speech (cf. Labov 1972, Trudgill 1974). If either Chu or Lu is correct, then it is expected that fiction would not show statistically significant difference from editorials/magazines in terms of the frequency of *suo*. This prediction, however, is not borne out. The result that we obtained thus does 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.

In addition to being an elaboration feature with an ideational function, *suo* also shows a contextual function. Compared to registers like editorials and magazines, fiction has a low frequency of *suo* though not as low as the two oral corpora containing *suo*. This overall distribution of *suo* in registers we have seen receives a reasonable explanation if this particle *suo* conveys highly explicit, context-independent, endophoric references. 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. Like conversations, fiction also makes endophoric reference in the sense that “there is a fictional situation that is referred to directly in the text” 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).

This interpretation of the function of *suo* is further supported by the absence of *suo* in the corpus MMTC. As described in section 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 oral corpora MCDC and MTCC, which contain dialogues more resemble 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 presents a statistically sharp contrast with the distribution of *suo* in the other two oral 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.” The high co-occurrence of *suo* with emphasis expressions we have seen shows the speaker’s feelings, judgments or attitudinal ‘stance’ towards the content.

Lastly, we shall compare the use of *suo* and the use of alternative forms. Since type I *suo* appears to be optional, here we shall focus on type II *suo*. For example, in the first place the speaker does not have to select the monosyllabic verb *shu*, which requires the use of *suo*. Instead of *suo shu* ‘belong’, a disyllabic *shuyu* may be used. Likewise, the speaker does not have to imitate classical Chinese grammar by using *suo* and may instead use modern Chinese grammar. The speaker’s choice to use *suo* supports the major claim made in this article: *suo* serves a function in the discourse. As we have seen, *suo* serves ideational, contextual and personal functions. These functions may be multiple roles simultaneously played by *suo* and interact with one another. Thus, it is sometimes not easy to tease out which function is at play in a particular case. We tend to think that all the three 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. Although this remark is fairly tentative, we believe that this line of reasoning that examines a close relation between a linguistic form and its communicative function is on a right tract.

6. Implications of the functions of *suo* for a syntactic analysis

To capture the functions of *suo* observed above, we follow an innovated analysis of *suo* proposed by Ting (2006). Based on the distribution of *suo* in bi-clausal structures, namely the facts comparable to the so-called clitic climbing phenomenon in Romance, it is argued there that it is necessary to posit a functional projection in the split-INFL domain to which *suo* adjoins by successive cyclic head movement. More specifically, *suo* starts as a head of DP and relativization takes place from the complement position of *suo*. On a traditional analysis of relativization, this means that the null operator in the relative clause moves from the complement position of *suo* to spec/CP. Given such a functional projection hosting the moved *suo*, the functions of *suo* observed above are actually the manifestation of the import of the projection to which *suo* adjoins. Interestingly, Romance clitics also display a wide variety of

discourse functions (Uriagereka 1995, Gutiérrez-Rexach 2000, Capone 2003), which are captured by the positing of a functional projection by Uriagereka (1995). Following the term used for such a clitic projection by Uriagereka (1995), we shall use FP to label the functional projection to which *suo* adjoins. According to Uriagereka, the import of F is explicitly “functional.” “F syntactically encodes a speaker’s or an embedded subject’s point of view. This is what allows attribution of reference, loaded descriptions (e.g., epithets), emphasis, and so on.” (Uriagereka 1995: 93). This parallelism between *suo* and Romance clitics in identifying a type of information that is marked in discourse thus once again supports an approach treating them on a par as proposed by Ting (2003). Regarding the position of the FP to which *suo* adjoins in the clausal hierarchy, in addition to being located between vP and TP, it should be higher than the projection hosting *lian-dou*, given the contrast in (22).

- (22) a. (?) 他所連李四都敢罵的話
b. *他連李四所都敢罵的話

Furthermore, FP may occupy the same position of the projection headed by the emphatic *shi* (see Huang, Li and Li 2004 for distinction between the emphatic *shi* and focus *shi*) given the complementary distribution between *suo* and such *shi*.

- (23) a. 我（的確）是看過兩次的那本書
b. *我（所）是（所）看過兩次的那本書

Finally, some words are in order regarding cases where *suo* is required to occur with a verbal bound morpheme such as 得 and 遭 in (4a) and (4c) respectively. We claim that words such as 所得 and 所遭 are phonological words formed post-syntactically (cf. Feng 2002) rather than words formed in the lexicon. Supporting evidence for this claim comes from the subject/object asymmetry as shown by the unacceptability of examples in (24).⁵

- (24) a. *所遭不幸的那個人
b. *所得大獎的那個人

⁵ Regarding why the bound morpheme can form a phonological word with *suo* but not with a free morpheme shown by the contrast in (i), we suggest that this is due to a word formation constraint in Chinese (cf. Feng 2002).

- (i) a. 他所得的
b. *他想得的

7. Concluding remarks

Summarizing, a major goal of this paper is to argue that *suo* has its functions in the communicative situation. These functions are then captured by assuming that *suo* is hosted by a functional projection in the split-INFL domain in the overt syntax. An important implication of postulating such a functional projection is that a motivation is now provided for why *suo* or clitics in general must move. In addition to the functions of *suo* identified above, processing functions, one of the seven types of functions of linguistic features classified by Biber (1988), are 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* 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 for future studies.

References

- Biber, Douglas. 1988. *Variation Across Speech and Writing*. Cambridge University Press.
- Edward Finegan & Douglas Biber. 1994. Register and social dialect variation: an integrated approach. *Sociolinguistic Perspectives on Register*, ed. by Douglas Biber and Edward Finegan, 315-47. Oxford University Press.
- Edward Finegan & Douglas Biber. 2001. Register variation and social dialect variation: the register axiom. *Style and Sociolinguistic Variation*, ed. by Penelope Eckert and John Rickford, 235-67. Cambridge University Press.
- Capone, Alessandro. 2003. Theories of presuppositions and presuppositional clitics. *Perspectives On Dialogue In The New Millennium*, ed. by Zeevat, Rieser and Kuehnlein, 111-133. New York, John Benjamins.
- Chafe, Wallace L. 1982. Integration and involvement in speaking, writing, and oral literature. *Spoken and Written Language: Exploring Orality and Literacy*, ed. by D. Tannen, 35-54. Norwood, N.J.: Ablex.
- Chao, Yuen-Ren. 1968. *A Grammar of Spoken Chinese*. Berkeley, California: University of California Press.
- Chiu, Bonnie. 1995. An object clitic projection in Mandarin Chinese. *Journal of East Asian Linguistics* 4. 77-117.
- Chu, Chauncey G. 1987. *Historical Syntax—Theory and Application to Chinese*. Taipei: The Crane Publishing Co Ltd.
- Collins, Peter C. 1991. *Cleft and Pseudo-cleft Constructions in English*. London and New York: Routledge.
- Feng, Shengli. 2002. *Prosodic Syntax and Morphology in Chinese*. Lincom Europa.
- Gutiérrez-Rexach, J. 2000. The formal semantics of clitic doubling. *Journal of Semantics* 16. 315-380.

Ting: Form and Function of *Suo*

- Hsu, Chun-chieh Natalie. 2006. *Incremental Processing and Cues for Head-final Relative Clauses in Chinese*. University of Delaware, ms.
- Huang, C.T. James. 1988. Shuo shi he you” [on 'be' and 'have' in Chinese], *Bulletin of the Institute of History and Philology, Academia Sinica* 59. 43-64, 1990.
- Kayne, Richard. 1989. Null subjects and clitic climbing. *The Null Subject Parameter*, ed. by O. Jaeggli and K. Safir, 239-263. Kluwer Academic Publishers.
- Kayne, Richard. 1991. Romance clitics, verb movement and PRO. *Linguistic Inquiry* 22. 647-686.
- Labov, William. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Lu, Jianming. 1983/1999. ‘De’ zi jiegou han ‘Suo’ zi jiegou. *Xiandai Hanyu Xuci Sanlun*, ed. by Xianming Lu and Zhen Ma, 243-258. Yuwen Publisher, Beijing.
- Tang, Ting-chi. 1980. Cleft and pseudo-cleft constructions in Chinese: structure, function and constraint. *Bulletin of National Taiwan Normal University* 25. 249-296.
- Tannen, Deborah. 1982. Oral and literate strategies in spoken and written narratives. *Language* 58. 1-21.
- Ting, Jen. 2003. The nature of the particle *suo* in mandarin Chinese. *Journal of East Asian Linguistics* 12. 121-139.
- Ting, Jen. 2005. On the syntax of the *suo* construction in classical Chinese. *Journal of Chinese Linguistics* 33. 233-267.
- Ting, Jen. 2006. Clitic climbing and *suo* in Mandarin Chinese and its implications for universal grammar. Paper presented at 2006 Annual Meeting of Linguistic Society of America, Albuquerque, Poster session.
- Ting, Jen. To appear. The nature of the particle *suo* in the passive constructions in classical Chinese. *Journal of Chinese Linguistics*, to appear.
- Trudgill, Peter. 1974. *The Social Differentiation of English in Norwich*. Cambridge: Cambridge University Press.
- Uriagereka, Juan. 1995. Aspects of the syntax of clitic placement in western Romance, *Linguistic Inquiry* 26. 79-124.
- Yao, Zhenwu. 1998. Gebiexing zhicheng yu ‘Suo’ Zi Jiegou. *Gu Hanyu Yanjiu* 40. 45-49.
- Zhang, Jing. 1981. Hanyu jufa jiegou de jiben leixing. *Zhongguo Yuwen* 3. 195.