

## **Subjectivity and Objectivity in Chinese Academic Discourse: How Attribution Hedges Indicate Authorial Stance\***

Miao-Hsia Chang

Yu-Wen Luo

Yueh-Kuei Hsu

*National Taiwan Normal University*

Hedges can be used to show a speaker's less than full commitment to the truth of a proposition in spoken discourse or to strengthen an author's argument in academic discourse. Attribution hedges are hedges used by writers to qualify their claims by relating their arguments to a given source of information. This paper explores authorial stance in attribution hedges in Chinese academic discourse and their disciplinary variation. The disciplines investigated include the pure humanities, the social sciences and the hard sciences. The results show that writers in the pure humanities and social sciences use more attribution hedges in their writing. Furthermore, these writers reveal a greater tendency to use subjective accounts when they seek support for their claims, with social sciences writers reflecting a lesser degree of subjectivity. Specifically, writing in the pure humanities is characterized by hedges which display more individuality and which involve readers in the argument. Hard sciences writers, by contrast, reflect an objective stance with attribution hedges that imply the authors detachment from the argument. In short, pure humanities writing reveals a rhetorical style that is closer to interactively oriented spoken register. The incorporation of more informal elements may arise from the uncertain nature of findings in the pure humanities, where claims or propositions are mainly based on subjective evaluation or interpretation of data.

Key words: Chinese, academic discourse, attribution hedges, disciplinary variation, subjectivity, objectivity

### **1. Motivation and goals**

The term "hedges" has been used by linguists to refer to expressions in interactional spoken discourse that signal speakers' lack of full commitment to a proposition so as to weaken a potential face-threatening act (Fraser 1975, Lakoff 1975, Hübler 1983, Brown & Levinson 1987, Channell 1994, Mauranen 2004). However, whereas hedges weaken the strength of propositions in spoken discourse, they may "serve to strengthen the argument" in academic writing (Meyer 1997:21). Although researchers in academic discourse intend their work to be appealing to readers, they have to defend themselves from potential opposition or criticism (Bazerman 1988). In such cases, hedges serve to weaken the definiteness of statements and thus make claims "impregnable" (Meyer 1997:39). One type of hedge that is generally adopted by authors is to attribute the truth of a proposition to a given source. By attributing

---

\* This research project has been funded by the National Science Council, Taiwan, R.O.C., under grant Number NSC 99-2410-H-003-095-. We would like to thank two anonymous reviewers for their insightful comments on an earlier version of this paper. Special thanks go to Dr. Chichun Hsu for providing statistical support. The authors are solely responsible for any errors contained herein.

their arguments to someone else (called “attribution shields” by Prince et al. 1982:89), to the writers themselves (Hyland 1998a), or to knowledge that is commonly shared by the authors and the readers (Hinkel 2004), authors seek support for their claims to alleviate the force of their arguments so as to avoid criticism from readers. Since all these hedges involve attribution of the truth of a claim to a given source, they will be referred to as “attribution hedges” in the current study. While there is a rich literature in the use of attribution hedges in English academic writing (e.g. Prince et al. 1982, Chafe 1986, Hyland 1996, 1998a), to date, except for studies on Chinese writers’ use of English hedges in an EFL/ESL context (Hinkel 1997, 2002, 2004, Li 1998, Lau 2001) or in spoken discourse (Biq 1990, Chen 2006), little attention has been given to the use of hedges in Chinese academic discourse. In light of this, this paper has two goals. First, we explore the linguistic realizations and functions of hedges in Chinese research articles. In particular, we focus on attribution hedges whereby writers qualify their claims by relating their arguments to a certain source of information. Second, as it has been shown that differences in the use of hedges exist between soft sciences (humanities and the social sciences) and hard sciences (the natural sciences) writers in English research articles (e.g. Hyland 1998b, 1998c, 1999, Varttala 2001, Abdi 2002, Blagojevic 2004, Hyland & Tse 2004), we examine how Chinese writers in different disciplines vary in their use of attribution hedges. The distinction between hard and soft sciences in this study follows the definition adopted by Hyland (1998c). The hard sciences, e.g. microbiology and astrophysics, involve “abstract conceptualization”, are “predominantly analytical and structuralist”, and are concerned with “quantitative model building and the analysis of observable experience to establish empirical uniformities”. The soft sciences, e.g. applied linguistics or the humanities, on the other hand, employ a “synthetic” approach with the arguments involving “concept experiencing” and “how human actions influence events” (Hyland 1998c:448).

The organization of this study is as follows. Section 2 reviews previous literature on attribution hedges in spoken and academic discourse. Section 3 describes the methodology adopted for this study. Section 4 presents and discusses the forms, functions, and distribution of attribution hedges in our databank. A conclusion is given in Section 5.

## **2. Previous studies**

Quantitative analysis has shown that hedges are mainly used to perform two functions: to prevent opposition and thus save an author’s face, and to express appropriate cautiousness. In line with Brown & Levinson’s (1987) proposal that the use of hedges is motivated by negative politeness, Myers (1989) argues that hedges in

scientific writing can also be considered as face-saving devices because they mark a statement as merely tentative or approximate, leaving room for other possibilities or interpretations.

However, in addition to preventing opposition and saving face, hedges can also be utilized to show researchers' evaluation of the reliability and accuracy of their arguments, which is a common characteristic of academic research. To show true understanding of knowledge, when writers lack full evidence about certain statements or about the relationship between data and analysis, they may employ hedges to qualify their claim (Prince et al. 1982, Dubois 1987, Channell 1994, Hyland 1996, 1998a). In addition, hedges may be used when imprecision is permissible in a particular research community (Dubois 1987, Channell 1990, 1994, Hyland 1998b). The above functions show that hedges are used by writers to express writers' caution when evaluating and interpreting their findings (Hyland 1998a).

## **2.1 Attribution hedges**

One manifestation of how speakers and writers are cautious about evaluating and interpreting their propositions is that they relate the truth of a proposition to a given source. Attribution to a certain source allows speakers and writers to hedge their claims and yields a softer tone to propositions. As also noted in the Introduction, a common type of attribution hedge, called an "attribution shield" by Prince et al. (1982:89), is for speakers to attribute the truth of propositional content to someone else in order to alleviate the force of the proposition. For example, the expression *according to* in utterances like *Um according to her estimates, she got the baby's high heart rate back within ...two to three minutes or so* indicates that the nature of the proposition is "knowledge or belief via hearsay" (Prince et al. 1982:89-91). Similarly, Chinese speakers employ *genju* 'according to' in spoken discourse to attribute a statement to a source other than their personal opinion, thus increasing objectivity (Liu 2006, Chen 2008). In academic writing, hearsay evidence is connected with source attribution, frequently realized as quotations or citations (Chafe 1986, Hyland 1996, 1998a). In such circumstances, writers avoid full responsibility for statements by acknowledging and taking a stance based on previous findings (Hyland 1998a).

Another type of attribution hedge is personal attribution. It is frequently realized in forms such as *we think* and *in my opinion* to attribute a claim to speakers or writers themselves. Personal attribution can function as a hedging device in that it suggests speakers' or writers' "attempt to limit the generalizability" of claims (Hyland 1998a:188), indicating that the statements are personal judgment or interpretation rather than facts and invite alternative views (Myers 1989, Salager-Meyer 1994,

Hyland 1996, 1998a, 1998b, 2000, Crompton 1997, Koutsantoni 2006). This interpretation is actually based on the negative politeness strategy of hedges (Myers 1989). The other hedging function of personal attribution is to signal solidarity or shared context with the academic community through the personal pronoun *we*, which invites readers to participate in the reasoning process and, on the other hand, implicitly attributes the responsibility of a claim to both the writer and the reader whilst decreasing the writer's presence (Myers 1989, Hyland 1998b, Koutsantoni 2006). The function of the inclusive *we* is a strategy for positive politeness, as it involves both the speaker and addressee in the same activity (Brown & Levinson 1987:101). As in English academic texts, Chinese spoken discourse contains a number of personal pronouns to signal a speaker's subjective attitude, e.g. *women(de)* 'we (our)', *wo xiang* 'I think', *dui wo lai shuo* 'as for me'. The use of a plural pronoun or cognitive verb functions to reduce a speaker's responsibility for the truth of a proposition (Lin 2005, Liu 2006).

A third type of attribution hedge is impersonal attribution. Compared to personal attribution, impersonal attribution is more common in academic discourse. It includes constructions where writers "attribute agency to abstract rhetors" (Hyland 1998b:365). This strategy is treated as a type of hedge in that it protects an author from possible criticism, especially regarding hard sciences writers, who tend to display objectivity by hiding their personal views with impersonal constructions (Gilbert & Mulkey 1984, Myers 1989, Meyer 1997, Hyland 1998a, 1998b, Koutsantoni 2006). The impersonal constructions are usually expressed through agentless passives and sentences with impersonal subjects such as *It is generally believed...* (Hyland 1998b:372). The latter often appears with "discourse-oriented verbs" like *suggest* and *indicate*, which convey less subjectivity than cognitive verbs (1998b:365). Therefore, impersonal constructions distance writers from personal involvement and responsibility for statements by leaving findings or evidence to speak for itself (Gilbert & Mulkey 1984, Meyer 1997, Hyland 1998b, 2000, Lau 1999). In Chinese spoken discourse, on the other hand, impersonal constructions usually take the form of impersonalized pronouns, used to refer to an unspecified person or group, or an unspecified referent, e.g. the non-referential second person singular pronoun *ni* 'you' (Biq 1991), the non-referential third person singular pronoun *ta* 's/he', the third person plural pronoun *tamen* 'they', and the indefinite pronoun *mou ouhey'uhey*, and the indefinite pronoun noun singular pronounoun pronounther hand, impersonal constructions usually take the form of impersonalized

In addition to the three types of strategies outlined above, Brown & Levinson (1987) and Hinkel (2004:325) identify a further type of hedge whereby a speaker makes assumptions about shared knowledge between the interlocutors and attributes a

claim to the addressee to avoid taking full responsibility and to distance themselves from the claim. While these forms are mainly found in conversational and informal registers, ESL writers also use them in academic writing (Hinkel 2004). Additionally, according to our preliminary analysis, Chinese authors also employ this type of attribution in their writing. Therefore, we will also explore such uses by the Chinese writers in our study.

In short, the use of attribution hedges allows speakers and writers to reduce the strength of their claims by limiting the generalizability of the claims or by shifting responsibility to a given source. Studies have shown that writers in soft and hard knowledge fields vary in their use of hedges. In the following, we review previous research on disciplinary variation.

## **2.2 Disciplinary variation in the use of hedges**

The main disciplinary variation in hedges lies in the amount of hedges used and the style in which they are expressed. Regarding the amount of hedges used, studies show that social sciences and humanity texts have a higher rate of hedges than hard sciences articles (Hyland 1998b, 1998c, 1999, 2000, 2004, 2005, 2008a, 2008b, Varttala 2001, Abdi 2002, Blagojevic 2004, Hyland & Tse 2004). This result reflects the epistemic and interpersonal nature of hedges since their use involves both a writer's uncertainty and a reader's engagement with a text, which is characteristic of writing in social sciences and the humanities (Hyland 1996, 2000, 2008a).

The types of hedges used by different disciplines also reflect different styles. In the hard sciences, questions or problems mostly arise from shared frameworks or knowledge and research issues are usually clearly defined (Bazerman 1988, Hyland 1998b, 1998c, 1999). In addition, claims or explanations are mostly based on empirical evidence and objective observation, with a limited number of controlled variables. Therefore, the need to express uncertainty or to involve readers in the arguments is reduced and personal involvement is minimized (Gilbert & Mulkay 1984, Hyland 1998b, 1999, 2005). In other words, writers in the hard sciences demonstrate objectivity and neutrality to stress that their results are not subject to individual factors but are unaffected generalizations (Hyland 2005, 2008a, 2008b). This objectivity could explain why scientific writers prefer modal auxiliaries and discourse-oriented verbs like *suggest* and *indicate* combined with impersonal subjects (Hyland 1998a, 1998b, 1999, 2005, 2008a, 2008b). These forms of hedge carry implicit writer evaluation and so function to detach the source of judgment from the writer.

In soft knowledge subjects, by contrast, where studies mainly deal with human activities, much less can be assumed or taken for granted due to relatively fewer

uniform frameworks and criteria of acceptance among community members (Bazerman 1988, Hyland 1998b). Moreover, it is more difficult to control research variables, and results are often affected by contextual factors (Hyland 1998b, 1998c, 2004, 2005, 2008a, 2008b, Hyland & Tse 2004). Therefore, claims in the soft knowledge fields are at a higher risk of negation and readers are more likely to have alternative views (Hyland 2005, 2008a). More specifically, studies in these fields often involve testing hypotheses in specific theoretical frameworks, interpreting statistical probabilities, and suggesting possible relationships between variables; consequently, statements have to be carefully evaluated (Varttala 2001, Hyland 2004, Lafuente et al. 2006). In addition, soft sciences studies contain a large proportion of qualitative description, and interpretation and speculation. Therefore, writers must persuade readers to follow their negotiation and plausible reasoning and accept their claims. As a result, authors in the soft sciences cannot present statements as confidently as writers in the natural sciences; rather, they have to present their claims with a proper level of uncertainty and tentativeness, thus using more hedges (Hyland 1998b, 2005, 2008a). This subjectivity is reflected in writers' strengthening of their personal projection. Therefore, there are far more cognitive verbs like *believe* and *suppose* and hedges are usually combined with personal subjects (Hyland 1998b, 1999, 2005, 2008a). Moreover, use of the first person subject suggests that "a degree of freedom to manipulate conventions is permitted" (Hyland 1998c:452) in soft knowledge disciplines and may serve as a means of distinguishing an author's research, thus establishing authority and gaining personal credit (Hyland 2000, 2005, 2008a, Lafuente et al. 2006).

### 2.3 Summary

The foregoing discussion of attribution hedges indicates that hedges enable speakers and academic writers to present their arguments with appropriate caution and modesty when interpreting data, making critical judgments, or making general claims. As for variation in different fields of academic discourse, it has been found that writers in scientific fields tend to use fewer hedges than writers in the social sciences and humanities. Moreover, writers in hard knowledge fields prefer to use hedges with impersonal constructions while writers in fields dealing with 'soft' knowledge tend to use hedges indicating personal involvement. These observations reflect a subjective stance and objective perspective taken by authors when qualifying their claims.

Despite the insights gained into hedges in English and Chinese spoken discourse, far less is known about how writers express their stance through attribution hedges in Chinese academic discourse. Moreover, the difference in hedging frequency between

the social sciences and pure humanities seems unclear because the pure humanities and social sciences are both included within the broad category of the humanities. Besides, except philosophy, fields of pure humanities such as literature and history are rarely included in studies about disciplinary variation (Hyland 1998c, 1999, 2000, 2004, 2005, 2008a, 2008b, Hyland & Tse 2004). In view of the limited literature on disciplinary variation, the present study attempts to fill the gap by comparing attribution hedges used in the pure humanities, social sciences, and hard sciences.

### **3. Data and method**

The data used for this study includes 90 Chinese journal articles from the following three fields: history & literature, business, and biology, representing the pure humanities, social sciences, and natural sciences, respectively. In addition to the use of attribution hedges examined in these academic fields, we also explore the variation between the pure humanities and social sciences. Owing to limited resources in the pure humanities, we have combined the research articles in history and literature into a single area.

To control the quality of the language, in each field three academic journals were selected from the outstanding journals recognized by the National Science Council (2000-2004, as the National Science Council cancelled this award after 2004) and those listed in the Taiwan Social Science Citation Index (2000-2008). For ease of analysis, only journals available in electronic versions were included in our corpus. The search yielded three journals from the pure humanities, three journals from social sciences, and another three from biology (See Appendix for details). From each journal, we randomly chose one research paper (cf. Hyland 1998c) from each volume published between 2000 and 2008. From these articles, we selected 10 papers of average text length within the same discipline (7-12 pages in biology, 14-34 pages in business, 22-45 pages in history & literature). To prevent personal writing preference, we also avoided choosing more than one research article written by the same author. By text length we mean text sections excluding titles, journal and author information, abstracts, tables of contents, endnotes, references, and appendices.<sup>1</sup>

In this study, the term “attribution hedge” refers to the linguistic device used by writers to indicate a source of knowledge in support of an argument. The hedge may represent a complete structural unit or it may bridge two phrase or clauses. By

---

<sup>1</sup> An issue excluded in this study is the comparison among different rhetoric sections in research papers. Although many studies have shown that the distribution of hedges varies with rhetoric sections in research articles (Salager-Meyer 1994, Hyland 1998a, Lau 2001), our Chinese data in business and literature and history, especially the latter, are rarely presented in the so-called “IMRAD” structure, i.e. introduction, method, result and discussion (Salager-Meyer 1994:153). Therefore, sectional difference in the distribution of hedges is not included in the present study.

placing responsibility for their argument on another source, an author qualifies a claim and reduces the potential of criticism. In the identification of attribution hedges, only attribution hedges which include explicit linguistic forms (cf. implicit citations) and which convey an author's tentativeness or epistemic judgment were included in our analysis (Varttala 2001, Chen 2008). According to the type of source to which the authors attribute their claim, hedges are classified into four types: Attribution to previous research, attribution to assumed common knowledge, personal attribution, and impersonal attribution.

Owing to a lack of studies regarding attribution hedges in Chinese academic discourse in Taiwan, instead of searching for keywords from a given list, we made a manual word-by-word search of each academic article for possible attribution hedging devices. In the identification of hedges, ambiguous cases occur most frequently when a linguistic form seems to illustrate an attribution hedging function while in fact it doesn't. Therefore, we provided two raters with the following information for coding: 1) the definition of attribution hedges as given in Section 2.1 and in the above paragraph; 2) examples that illustrate each attribution hedge (See Section 4.1.1-4.1.4 for exemplifications of these uses); 3) the following confounding examples along with their surrounding paragraph(s); and 4) explanations as to why the expressions in the following examples do not serve a hedging function:

- (1) Chuantong huobi xuqiu hanshu shizheng moxing de lilun jichu,  
 traditional currency demand function empirical model DE theoretical basis  
 dadi shi **genju** Baumol (1952), To-bin (1956) de jiaoyi dongji  
 mostly be **base.on** PN PN DE transaction motivation  
 moxing, huoshi Friedman (1959) de zichan zuhe moxing.<sup>2</sup>  
 model or PN DE property combination model  
 'Traditionally, the theoretical basis of empirical models of the money demand  
 function is mostly **based on** Baumol's (1952) and To-bin's (1956) model of  
 transaction motive, or on the portfolio theory proposed by Friedman (1959).'
- (bus-economy-1)

<sup>2</sup> The following abbreviations are used for the morphemic gloss in the examples cited in the current study: BA: the *ba* marker, CL: classifier, DE: the *de* marker, LE: the marker LE, NOM: nominalizer, PASS: passive construction marker, PN: proper name, PROG: progressive marker.

- (2) **Ci shizheng jieguo yu guonei xuezhe ru: liangmingyi (1982) deng de this empirical result and domestic scholar like PN etc. DE** duanqi huobi xuqiu hanshu **zhi guji jieguo xiang leisi.** short.term money demand function of estimate result shared similar ‘**This empirical result is similar to the estimated result** regarding the short-term money demand function as **reported in studies like Liangminayi’s (1982).**’ (bus-economy-1)
- (3) Songdai meikuang zhi jinri rengran jixu zai kaicai, you Song.Dynasty coal.mine till now still continue PROG mine have neirong fenxi de, **wo** zhaodao le wu chu. content analysis DE **I** find LE five place ‘Coal mining is still going on in areas where coal was mined in the Song Dynasty. **I** found five (coal mining) areas whose (coal) content analysis (is provided in previous studies).’ (his&lit-NTU-1)
- (4) **Women kongzhi le jige yingxian faren shuominghui juban de we control LE several influence corporation conference hold DE** yinsu. determinant ‘**We** controlled several variables that would affect corporations’ decision to hold investors’ conferences.’ (bus-management-8)
- (5) Yinci, dengji huangdi linxing **mou** gong juan riqi de therefore record emperor personal.visit **certain** palace dependent date DE ren, bingfei qingdai de jingshifang taijian, er shi person not Qing.Dynasty DE household.managing.room eunuch but be liushang tixi de nu guan. six.matron system DE female official ‘Therefore, in the Qing Dynasty, the person who recorded on which date and **which** concubine the emperor visited was not a eunuch from the Household Management Room but a female official from the Six Matrons System.’ (his&lit-NTU-9)

In (1), rather than making their own argument, the authors refer to Baumol, To-bin and Friedman to introduce the theoretical framework adopted by the study. In (2), although the authors show agreement with previous research, they do not present the main claim but embed the statement in their report about figures in a table. The main discussion is not made until a later section, after all the statistical results are presented. In (3), instead of presenting the main claim, the author reviews available studies containing information about coal mining. Example (4) is used by the authors in the

section of methodology in the article analyzed. The sentence starting with the pronoun *women* ‘we’ introduces a method about the control of variables that would affect corporations’ decision to hold investors’ conferences. As for the use of impersonal reference, in addition to those which are not used with authors’ claims, an indefinite pronoun like *mou* ‘certain’ in (5), which functions as a question word, meaning ‘which’, is also excluded from our analysis, as *mou* ‘certain’ is not related to a main proposition. No hedging function is intended for the author to avoid specifying the identity of the concubine. Instead, the main predication is about which official recorded the emperor’s personal visit.

The interrater reliability was .87 for attribution to previous research, .90 for attribution to assumed common knowledge, .92 for personal attribution, and .95 for impersonal attribution. Where disagreement occurs, the coding of each identified token was fully discussed between the raters before the final decision was made.

The texts were then segmented into words using the Chinese Word Segmentation System (Retrieved from <http://ckipsvr.iis.sinica.edu.tw/>, August 7<sup>th</sup>, 2009), a free program offered online by Academia Sinica of Taiwan since this is a prerequisite for any language processing system for linguistic analysis, machine translation or for information retrieval. A Chinese word, i.e. *ci*, is defined by this Segmentation System as the smallest meaningful linguistic unit which can be used independently (Retrieved from [http://ckipsvr.iis.sinica.edu.tw](http://ckipsvr.iis.sinica.edu.tw/), August 7<sup>th</sup>, 2009). This definition is consistent with the one provided by Li & Thompson (1981:13): “a unit in the spoken language characterized by syntactic and semantic independence and integrity”. The smallest word contains one character, *chi* ‘to eat’; however, a word may contain several characters, e.g. the NP *dianbingxiang* ‘refrigerator’ contains three characters. Although the latter word can be separated into three words, the componential meaning of these does not equal the meaning of *dianbingxiang* as a modern electrical appliance. In addition, *dianbingxiang* ‘refrigerator’ can be used as an independent unit and it stands in a paradigmatic relation with other NPs in the same syntactic slot. For example, *dianbinxiang* ‘refrigerator’ fills the same syntactic position as does *qiche* ‘car’ in *Dianbingxiang/Qiche shi renlei yi xiang zhongyao de faming* ‘The refrigerator/car is an important human invention’. Likewise, the two words can act as an independent semantic unit and fill other syntactic positions where NPs are permissible.

After the Chinese academic texts were segmented, Antconc 3.2.1w was used to count the word frequency. The occurrence of attribution hedges was then measured based on a normalized frequency per 1,000 words of text.

After the frequency count, we adopted statistical measurements, including ANOVAs and a *t*-test with the software SPSS, to investigate whether the observed

differences were statistically significant. The results of the analysis of source attribution hedges are presented and discussed in the following section.

#### 4. Results and Discussions<sup>3</sup>

Analyses of the overall results showed that the density of attribution hedges varied in the different fields. The pure humanities articles contained the highest density of hedges, followed by the social sciences articles, with the biology texts containing the lowest number. The mean and standard deviations of the use of hedges across the three fields are displayed in Table 1.

**Table 1. Overall distribution of attribution hedges (per 1,000 words)**

Academic fields		Humanities	Business	Biology	<i>F</i>
Attribution hedges	<i>M</i>	.761	.464	.464	10.012*
	<i>SD</i>	.683	.326	.326	
Total of all attributions		224	113	27	
Total of words		326,207	243,465	113,584	

\*  $p < .05$

One-way analyses of variance (ANOVAs) were used to analyze the data. They revealed a significant overall disciplinary difference [ $F(2, 49.336) = 10.012, p < .001$ ].<sup>4</sup> Given the overall disciplinary variation, a Bonferroni post-hoc comparison was performed. The comparison revealed that the pure humanities articles had a higher proportion of total attribution hedges than the business and biology articles ( $ps < .040$ ).

<sup>3</sup> Although the average length of the articles in the three fields was different, the results of our analyses show that there is not a clear correlation between text length and the hedges used. In fact, the contents of the articles in the three disciplines contain the major components of research articles. For example, although articles in biology are generally shorter than those in the other two fields, all the biology articles contain an introduction, the method/instruments used, results and discussion, and a conclusion. On the other hand, although some pure humanities articles do not contain a clear introduction or conclusion, the authors always provide extended arguments and a discussion of the research topic. Furthermore, of the 15 articles business and pure humanities articles longer than 30 pages, seven have a total frequency of hedges lower than two. In other words, text length does not seem to significantly correlate with the frequency of hedges. The main difference, instead, lies in the styles adopted by authors in different disciplines, as we discuss in detail in Section 4. We thank one of the reviewers for pointing out the influence of text length.

<sup>4</sup> As the assumption of homogeneity of variance was not met, Brown-Forsythe's *F* was computed for the overall distribution and the distribution of attribution to previous research, personal attribution and impersonal attribution. As for attribution to assumed common knowledge, since the biology variance was zero, the Brown-Forsythe correction was not performed. Instead, we used a *t*-test to compare the means of the three fields. To prevent an inflation of the Type I error rate, the alpha level was set at .017.

Given the significant difference in the overall distribution of attribution hedges, in Section 4.1, we further investigate the use of each strategy in different fields. Furthermore, we discuss the use of different strategies within the same field in Section 4.2. A summary and discussion is presented in Section 4.3.

#### 4.1 Each attribution hedge in different fields

In the following, the use of each type of attribution hedge is discussed in terms of its function and use in different fields. Attribution to previous research is discussed first.

##### 4.1.1 Attribution to previous research

Writers in all three fields commonly seek support from previous research when making reasonable judgments, predictions, or when proposing possible explanations for their findings.

Table 2 presents the means and standard deviations of attribution to previous research.

**Table 2. Distribution of attribution to previous research**

		Humanities	Business	Biology	<i>F</i>
Frequency per 1,000 words	<i>M</i>	.048	.151	.055	4.826*
	<i>SD</i>	.079	.203	.118	

\*  $p < .05$

Analyses of variance (ANOVAs) were carried out to analyze the differences among the three disciplines and they revealed an overall significant difference [ $F(2, 56.716, p = .012^*)$ ]. A post-hoc comparison showed that writers in business use a significantly higher proportion of attribution hedges than writers in the other two fields ( $ps < .04^*$ ), whereas no significant difference was found between the pure humanities and biology writers in use of this strategy. This difference might be due to the nature of research in these three fields. In business studies, writers are required to make hypotheses based on previous work. They also more often turn to previous studies for support when speculating on their findings. In contrast, biology writers mostly focus on the results of a new experiment rather than on checking the observed results with previous studies since research issues and experimental methods are much more clearly defined from shared frameworks in this field. As for writers in the pure humanities, they prefer to soften their claims with the other three hedges, as will be

shown in the upcoming sections. In what follows, we provide a qualitative analysis of the use of explicit reference to previous research by writers in the three fields.

One of the most common forms of attribution hedges across the three fields is the expression *yiju/genju* ‘according to’, used to introduce a previous study to strengthen the author’s argument, as exemplified in (6-7):

- (6) Tongshi, zhide zhuyi de shi, **genju chaoyuan fang de yijian,**  
meanwhile worth notice DE be **according.to** PN DE **opinion**  
xiaoeryixue cong zhonggu dao liusong shiqi, touguo luxinjing  
pediatrics from middle.ages to Liusong.period through PN  
wenben de chuandi, sihu xingcheng yi ge juyou lianxuxing de  
text DE transmission seem form one CL have continuous DE  
yixue zhishi chuantong.  
medica knowledge tradition

‘Meanwhile, what is worth noticing is that, **according to Chao yuan-fang,** through the dissemination of the Luxinjin text from “The Middle Ages” to Liu Song period, pediatrics seemed to have become a discipline with a continuing medical tradition.’ (his&lit-new-9)

- (7) Ciwai, **genju Houston and Ryngaert (1992) de shizheng jieguo,**  
in.addition **according.to** PN DE **empirical result**  
faxian jiaoyi liang yu baochou bianyi shu zai xiushi  
find transaction amount and return variation number at recess  
hou you buchang de xianxiang, yinwei bufen siren zixun  
after have compensation DE phenomenon because part private information  
yao zai xiushi zhihou cai neng qude. Ben yanjiu renwei  
need at recess after then can obtain this research consider  
duiyu caiqu changqi touzi celue zhe, youyu shuangzhou zhouliu  
toward adopt long.term invest strategy person because even.week Saturday  
de xiushi... changqi touzi ren jiao you keneng denghou  
DE close long.term invest person more have possibility wait  
zhi ci zhou zai jinxing jiaoyi.  
to next week again carry.on transaction

‘In addition, **according to Houston and Ryngaert’s (1992) empirical findings,** the amount of trade and the rate of returns show a compensative effect after a long weekend because part of the private information (of the investors) can only be accessed after the market close. We believe that for long term traders, owing to the recess of Saturday in the 2nd or 4th week... they are more likely to wait until the following week to carry out their transactions.’ (bus-finance-4)

In (6), the author refers to an argument made by a researcher in the Sui Dynasty (6<sup>th</sup> century), *Chao Yuanfang*, to legitimize his claim about the transmission of knowledge in pediatrics. As for (7), an existing study is referred to about the amount of the transactions after a stock recess. Based on the previous observation, the authors then make predictions about stock investors' strategies.

Writers may also align themselves with other researchers by using explicit agreement forms to strengthen their findings or claims. Comparison of the three academic fields shows that business writers employ most attribution hedges of this type (85%, 11/13) to approximate their findings to other research, as illustrated in excerpts (8-9):

(8) Yinci ben wen ke xiangxin zhongguodalu jumin touzi B gu  
 therefore this. text can believe Mainland.China resident invest B stock  
 de jine reng shu weixia, erqie A gu yu B gu shichang reng  
 DE amount still belong slight and A stock and B stock market still  
 shu quge; **ci yi lundian yi shou dao Bailey (1994)**

belong distinct **this one argument also receive reach** PN

**yiji Poon, Firth yu Fung (1998) de zhichi.**

**and** PN PN **and** PN DE **support**

'Therefore, we believe that the amount of investment in Type B stock by Mainland Chinese residents is still very small and that there is still a clear distinction between Type A and Type B markets; **this argument finds support in Bailey (1994) and Poon, Firth and Fung (1998).**' (bus-finance-5)

(9) Zhe xianshi touzi jine jiao gao de gongtong jijin touzi ren,  
 this show invest amount more high DE mutual fund invest person  
 keneng shi shuhui jine jiao gao de zhu yin,  
 possible be redeem amount more high DE major reason

**gai jieguo yu Shu, Yeh ji Yamada (2002) xiangsi.**

**that result and** PN PN **and** PN **similar**

'This shows that investors who have invested larger amounts of money in mutual funds may be the main investors who redeem larger amount of money. **This result is similar to Shu, Yeh and Yamada's (2002) finding.**' (bus-management-9)

In (8-9), the authors cite other researchers in the explanation of their results and decisions to adopt a given model. By turning to other studies, the authors increase the credibility of their claims and shift partial responsibility to other researchers so as to avoid criticism.

To sum up, writers attribute their claims to previous studies to support an argument. Writers in the social sciences (business) use a significantly higher proportion of this hedge than the other two fields, whereas writers in the pure humanities and biology do not differ significantly in their use of this hedge. In the next section, we show that writers in the pure humanities have a stronger preference for attribution to common knowledge.

#### 4.1.2 Attribution to assumed common knowledge

The authors included in the database also hedge their claims by making reference to “assumed common knowledge” to establish common ground with their readers. Such a strategy is treated as a hedge because it distances “the authors from the information by attributing it to an external source” (Brown & Levinson 1987, Hinkel 2004:325). As reviewed in Section 2, reference to common knowledge is conversational and used in informal registers (Hinkel 2004). Although it has not been observed in English academic discourse or Chinese spoken discourse in previous studies, interestingly, the Chinese writers in our database were found to utilize this strategy in a significant fashion. Table 3 displays the distribution of attribution to assumed common knowledge, followed by a statistical account:

**Table 3. Distribution of assumed common knowledge**

		Humanities	Business	Biology	<i>T</i>
Frequency per 1,000 words	<i>M</i>	.533	.067	.000	3.00*
	<i>SD</i>	.973	.365	.000	

\*  $p < .017$

Because Biology’s variance was zero, the Brown-Forsythe correction could not be applied. Therefore, we used a *t*-test to compare the means of the three fields.<sup>5</sup> The results show that the articles in the pure humanities had a higher proportion of references to common knowledge than biology papers [ $t(29.000) = 3.00, p = .005^*$ ]. No difference was found, however, between the social sciences and biology articles, or between the social sciences and pure humanities papers [ $t(29.000) = 1.00, p = .326; t(37.006) = p = 019$ ]. In other words, writers in the pure humanities, in particular, stand out by regularly establishing common ground with readers while avoiding taking full responsibility for their claims. In the following, a qualitative analysis of the forms of common knowledge attribution is presented.

<sup>5</sup> To prevent an inflation of the Type I error rate, the alpha level was set at .017 for the analyses.

Typical expressions used for attributing opinions to common knowledge can be found in (10) and (11), where the inclusive *women (zhidao)* ‘(as) we (know)’ and *zhong suo zhou (jie) zhi* ‘as known to all’ are used, respectively, to achieve mutuality between writers and readers:

- (10) Zuoze yijing chenggongdi ba ziji de shengming zhuanhuan cheng  
 author already successfully BA self DE life transform become  
 yuyan de huoli... suiran wenzhang buceng toulu zhe wei nianqing  
 language DE vivacity although article never reveal this CL young  
 zuojia de xingming, **women zhidao**, zhe ge juzi nai chu zi  
 writer DE name **we know** this CL sentence be out from  
 hengguangliyi de tou yu fubu.

PN DE PN

‘The author has successfully transformed his life into lively language... Although the name of the young writer is never revealed in the article, **we know that** this sentence comes from Hengguang Liyi never revealed in the article, riters and r

- (11) Huobi de zhuyao gongneng ji zuowei shangpin mai mai guocheng  
 currency DE major function be do.as goods buy sell process  
 zhong de jiazhi chidu, yinci shi jiaoyi de zhongyao meijie,  
 middle DE value measure therefore be transaction DE important medium  
 zhe shi **zhongsuozhouzhi de**.

this be **as.known.to.all** NOM

‘The main function of currency is as a measure of value for the transaction of goods. Therefore, it is a major medium in transaction. **This is a commonly known fact.**’ (his&lit-new-2)

The author of excerpt (10) presents an assumption about the identity of a young scholar discussed in the article. However, instead of citing published works, the author involves the readers in justifying this assumption. Likewise, the argument that currency is an important medium of transaction in (11) is reinforced by recourse to reader-writer shared knowledge. With the generality of the claim, the author reduces the distance between the audience and the writer and thus establishes solidarity between them (Vladimirou 2007:151, Chang 2011:85). Meanwhile, by holding the audience also accountable for the validity of the claim, the argument is softened and potential criticism is avoided.

The above quantitative and qualitative analyses regarding Chinese authors’ use of attribution to commonly held assumptions provide significant findings about a

hedging strategy not observed by prior studies on academic discourse. On the other hand, they offer additional support for the observation that in the soft sciences, more speculation and qualitative statements are presented and less scientific evidence is provided (Bazerman 1988, Hyland 1998b, 2004, 2005, 2008a, Hyland & Tse 2004). Furthermore, variation within the pure humanities, social sciences and hard sciences in this type of hedge demonstrates a stylistic distinction not previously noted in the literature. Put differently, the rhetorical pattern of vague reference to common knowledge seems to be characteristic of writers in the pure humanities in Chinese. As for texts in the other two fields, the scarcity of common knowledge attribution may be due to the focus of their study. In biology, the main purpose is to present the results of an experiment, whereas business articles usually involve theories of financial management and statistical analysis. Both approaches require established research to corroborate the findings. Therefore, knowledge that is known to the general public is generally avoided.

#### 4.1.3 Personal attribution

Personal attribution often occurs with cognitive or speculative verbs like *believe* and *suspect* and indicates that statements are a personal judgment or interpretation rather than indisputable facts (cf. Section 2). In general, personal attribution allows academic writers to reduce the generalizability of claims by attributing their reliability to the authors themselves. The mean and standard deviations of personal attribution in the three fields are given in Table 4.

**Table 4. Distribution of personal attribution**

		Humanities	Business	Biology	Total	<i>F</i>
Frequency per 1,000 words	<i>M</i>	0.386	.208	0.050	0.215	7.348*
	<i>SD</i>	0.473	.297	0.183	0.363	

\*  $p < .05$

Analyses of variance showed that there was an overall significant difference among the three fields [ $F(2, 58.737, p = .001^*)$ ]. A post-hoc comparison indicated that writing in the pure humanities contained a significantly higher proportion of personal attribution than that in biology ( $p = .001^*$ ), whereas no significant difference was found to exist between writing in business and biology or between that in the humanities and business. In fact, of the four strategies, personal attribution comprised almost half of all attribution hedges in this field (48.7%). On the other hand, although no significant difference was found between the humanities and business articles, the

means presented in Table 4 and the following section regarding pronominal personal attribution suggest that business writers have a tendency to use plural pronouns to express their subjective authorial stance.

The linguistic forms of personal attribution can be divided into two types: pronominal and non-pronominal personal attribution. Both types are discussed in turn.

### *Pronominal personal attribution*

Pronominal personal attribution forms include the first person singular *wo* ‘I’ and plural *women* ‘we’. When an article is written by a single author, the author may present an argument as his/her own belief or subjective opinion by using *wo* ‘I’. Twenty-three tokens of *wo* ‘I’ were found in the databank. It is noteworthy that all 23 occurrences of ‘I’ were used by writers in the pure humanities (21.3% of all personal attribution hedges). These uses are suggestive of the great personal involvement in the history and literature writers’ claims:

- (12) Buguo **wo** geng yuanyi ba zhe zhong xiao, kan zuo shi  
 but I even willing BA this CL laugh see do be  
 kongdong de huai xiao, youqi shi, tamen sihu bu zhi  
 empty DE bad laugh especially be they seem not know  
 weihe er xiao, sihu zhi shi zai huihuo xiao de biaoqing.  
 for.what and laugh seem only be PROG lavish laugh DE expression  
 ‘However, I would rather consider such a laugh as vacuous and vicious,  
 especially because they do not seem to know why they are laughing but are  
 merely lavishing their expressions of laughing.’ (his&lit&philosophy-4)
- (13) **Wo** xiang dadandi shuo, zuozhe shi youyi chuango zao yi  
 I want boldly say author be intentionally create one  
 zhong fengge xingshi, suiran jintian kan lai, ta dabufen de  
 CL style form although today see come he most DE  
 yuyan dou jiequaoya.  
 language all difficult.to.read.and.understand  
 ‘I can boldly claim that the author intends to create a certain kind of style (with  
 his article), despite the fact that most of the language (in this work) is difficult  
 to read and understand.’ (his&lit&philosophy-4)

- (14) **Wo** renwei chengui de huoqiang shi yong ju zhu zhicheng de,  
I think PN DE fire.gun be use giant bamboo produce DE  
xian ba huoyao zhuang zai zhu tong li, zai jiaofeng  
first BA gunpowder place in bamboo tube inside PROG fight  
shi dianran, fashe, yong lai shao diren.  
time ignite fire use come burn enemy  
'I believe that Chen Gui's guns were made of giant bamboo. The gunpowder  
was first placed in bamboo tubes, and then was ignited and fired to kill enemies  
during wars.' (his&lit-NTU-8)

In (12), the author presents a claim about the disagreeable nature of laughs in some sculptures. The claim is embedded in a sentence beginning with the first person pronoun and using a speculative/cognitive verb to express a personal stance. Likewise, *wo* 'I' in (13) introduces the writer's claim about another author's style, and in (14), it prefaces the writer's assumption about the material and functioning of ancient guns. These uses of *I* display a subjective authorial stance by the Chinese writers in the pure humanities.

A slightly different trend is seen in the business articles. That is, instead of using *wo* 'I', writers in this field mainly make use of the exclusive *women* 'we' to qualify their claims (61.5% of all personal attribution forms). Even when an article is written by a single author, the author may use the exclusive 'we' as a substitution for the singular 'I' to humbly refer to himself or herself or to avoid direct reference (Liu et al. 2007). This enables the writers to project a more "modest self-image" (Vladimirou 2007:151) and to achieve solidarity with the readers. Consider (15) and (16):

- (15) Yinci **women** tuilun zai ziben shichang jiegou jiao jianquan  
therefore we deduce at capital market structure more sound  
shi, changshang weile yao kongzhi lingzujian bing kuozhang lirun,  
time industry for want control parts and expand profit  
hui zhuisui cengji moshi.  
will follow hierarchy model  
'Therefore, **we** deduce that when the capital market structures are relatively  
sound, in order to control computer parts and increase profit, the industry will  
follow a hierarchy model.' (bus-management-3)

- (16) Suoyi, **women** juede muqian reng bu neng qingyidi digu  
 so **we** feel currently still not can easily underestimate  
 shenzhi genbendi fouding le tade shi liao jiazhi.  
 even radically deny LE its historical material value  
 ‘Therefore, **we** feel that we cannot easily underestimate or even deny the value  
 of its historical material.’ (his&lit-new-2)

In (15), the exclusive *women* ‘we’ is used to refer to the writers themselves because the paper is written by two authors. (16), however, is from an article written by a single author, who argues for the reliability of the cited historical material due to the limited amount of literature available. However, since there is not enough historical evidence to support his interpretation, the author utilizes *women* ‘we’ to avoid explicitly referring to himself and therefore minimizes the chance of opposition. The use of the exclusive *women* in history and literature in a single-authored article is also found when writers lack confidence in the truth of a claim. With *women* ‘we’ instead of *wo* ‘I’, the writers’ personal views are played down and a mitigating effect is achieved.

Another pronominal use of personal attribution is the inclusive *women* ‘we’. It is only found in the soft sciences (30.3% in H&L and 19.2% in business). The inclusive ‘we’ involves the readers in the authors’ reasoning process. It directs the readers to an argument or speculation and is slightly different from the inclusive *women* ‘we’ in “attribution to common knowledge”, which is used to invite the readers’ agreement. The following extracts exemplify how authors involve readers in their reasoning:

- (17) Shouxian, **women** keyi jiang shiye qian xinzi, shiwei baoliu  
 first **we** can take unemployment before salary regard reserve  
 gongzi, xianqian xinzi gao zhe duiyu gongzuo keneng jiao  
 wage before salary high person to work possibly more  
 tiaoti, suoyi zai jiuye jilu jiao di.  
 picky so again work chance more low  
 ‘First, **we** can treat the pay received before unemployment as the wages of  
 reservation. Those who have received higher pay before (being laid off) may be  
 more picky about their jobs, so the re-employment rate is lower.’  
 (bus-economy-9)

- (18) Tamen ren shu, **women** keyi liyong jialiwan shijian de  
they people number **we** can use PN event DE  
lingsui ziliao, lue zuo tuice.  
fragmental material roughly make estimate  
'We can use the fragmental material related to the Battle of Kaleawan to  
estimate the actual number of people in Kaleawan.' (his&lit-new-4)

In (17) and (18), the inclusive 'we' holds both the writers and the readers accountable for the claim (Vassileva 1998, Chang 2011). Moreover, *women* 'we' suggests "a degree of freedom to manipulate conventions" or research variants in business (Hyland 1998c:452). The tentativeness of the modal auxiliary *keyi* 'can' further strengthens the subjective manipulation of the inclusive 'we'. Unlike the detachment implied in nominal expressions like *zuozhe* or *bizhe* 'the author', the inclusive *we* involves the reader and signals solidarity in the disciplinary community. In pragmatic terms, it is a strategy to fulfill positive politeness by implying that the writer and addressee "are cooperatively involved in the relevant activity" (Brown & Levinson 1987:125).

#### *Non-pronominal personal attribution*

Non-pronominal self-reference forms, including *zuozhe/bizhe* 'the author' and *wuren/geren* 'I', are common across the three fields (humanities: 37.4%, business: 19.2%, biology: 100% of all personal attribution forms). They are characteristic of Chinese academic writing, and to date no English counterparts have been identified by research.<sup>6</sup> It is also worth noting that non-pronominal self-reference was the only type of personal attribution used by biology writers. Some stylistic differences, however, were observed among the three disciplines, especially in the choice of linguistic forms. While the form *wuren* 'I/we' was the most general expression across the three fields, *zuozhe* 'the author(s)' was preferred by business and biology writers, and *bizhe* 'the writer' was exclusively used by writers in the pure humanities to refer to themselves (31/41, 75.6%). The following excerpts (19-22) illustrate these forms:

<sup>6</sup> Sometimes, an author may refer to himself/herself as *yanjiuzhe* 'the researcher.' However, in the 90 articles we investigated, we did not find an author referring to himself/herself with this term. This may be attributed to disciplinary difference. Further study is required to investigate the use of such self-reference in other research articles. We thank one of the anonymous reviewers for pointing out this possible self-referring term.

- (19) **Wuren** tuice ci nai jingyou zhonguo limushi chuanbo  
**I/we** infer this be through China cacopsylla.chinensis spread  
 PDTW phytoplasma, zaocheng li shuairuo bing zhi shiji  
 PN PN lead.to pear weak disease of real  
 tian jian anli.  
 field between case  
 ‘**We** infer that the disease of pears in orchards (in central Taiwan) resulted from the spread of PDTW physoplasma by Chinese cacopsylla chinensis.’  
 (bio-plant-9)
- (20) Muqian jiu **bizhe** er mu suo ji, sihu jin you zhangruan,  
 currently as.for **author** ear eye place reach seem only have PN  
 qianzhangfan liang wei jiang gudian haiyang shici jia yi fenlei.  
 PN two CL take classical ocean poetry add use classify  
 ‘As far as **the author** knows, it seems that only Qianzhangfan and Zhangruan have categorized classical maritime poetry.’ (his&lit&philosophy-3)
- (21) Suiran xuezhe duiyu mingdai gongting shanshi shu he  
 although scholar toward Ming.Dynasty palace food belong which  
 zhong cai xi, huo yun qi shi nanfang shi de, huo yung  
 kind vegetable system or say it be southern style NOM or say  
 xi yi nanfang fengwei wei zhu, jian ji beifang fengwei, bing  
 be use southern taste be major include reach northern taste and  
 zhujian jiarong, dan **geren** hai shi renwei qi yi beifanghua.  
 gradually blend but **individual** still be think it already northernized  
 ‘Although scholars have different arguments about the style of palace meals—some say that they belong to the southern style; others say that they are mainly of the southern style mixed with a northern flavor and that the two styles have gradually incorporated each other—I still believe that they have been northernized.’ (his&lit-NTU-9)
- (22) **Zuozhe** jianyi yu jingjixing zaipai qiaomai tian zhouwei, bu  
**author** suggest at economic cultivate buckwheat field surrounding not  
 yi sa bo youcai zuowei dao tian dongji lu fei zuowu.  
 proper spread sow rape do.as rice field winter green manure crop  
 ‘**The author** (I) suggests that for economic purposes, it is inappropriate to sow rapeseed around buckwheat plots as green manure in winter.’ (bio-plant-6)

The above examples show that, compared with pronominal reference, although the authors still state their own beliefs or assumptions, the argument sounds more formal and suggests a sense of detachment. That the biology writers employ only non-

pronominal forms to refer to themselves reflects their objective stance. Even when they are presenting their own beliefs, they maintain a detached attitude and tend to obscure their identity, thus achieving a distancing effect. A detailed distribution of the personal reference forms used by writers of the three fields is given in Table 5.

**Table 5. Distribution of subtypes of personal attribution hedges**

Discipline	Humanities	Business	Biology
<b>Subtype</b>			
<i>Non-pronominal</i>			
<i>wuren</i> 'I'	3.7% (4)	9.6% (5)	<b>57.1% (4)</b>
<i>geren</i> 'I'	0.55 (6)	1.9% (1)	<b>0% (0)</b>
<i>zuozhe</i> 'the author'	0	7.7% (4)	<b>42.9% (3)</b>
<i>bizhe</i> 'the author'	28.4% (31)	0% (0)	0% (0)
<b>Total of Non-pronominal</b>	<b>37.6% (41)</b>	19.2% (10)	<b>100% (7)</b>
<i>Pronominal</i>			
1 <sup>st</sup> p. sg. pron. <i>wo</i> 'I'	<b>21.2% (23)</b>	0 % (0)	0% (0)
Excl. 1 <sup>st</sup> p. pl. pron. <i>women</i> 'we'	11.01% (12)	<b>61.5% (32)</b>	0% (0)
Incl. 1 <sup>st</sup> p. pl. pron. <i>women</i> 'we'	<b>30.3% (33)</b>	<b>19.2% (10)</b>	0% (0)
<b>Total of Pronominal</b>	<b>62.3% (68)</b>	80.8% (42)	0% (0)
<b>Total of Personal Attribution</b>	<b>100% (109)</b>	<b>100% (52)</b>	<b>100% (7)</b>

Several points can be made about the use of self-reference forms in addition to the above discussion. First, *wo* 'I' was exclusively used by the writers in the pure humanities. Second, the biology writers only employed the formal, non-pronominal forms to refer to themselves. Third, writers in the soft knowledge fields preferred to use the plural *women* 'we' even if they were the sole author of an article. In brief, when writers make a personal attribution to support a claim, writers in the pure humanities discipline reveal the greatest degree of subjectivity and individuality in their use of 'I'. Subjectivity is also seen in business articles, especially in the use of pronominal self-reference. Writers in the hard sciences show the greatest degree of objectivity even when referring to themselves given the exclusive use of the more detached, non-pronominal self-referring forms.

#### 4.1.4 Impersonal attribution

Writers can also mitigate their authority by attributing a proposition to an unspecified person, group or unspecified referent. Our results are partially in line with

previous findings in Chinese spoken discourse but dissimilar to findings on English impersonal constructions. That is, the writers in our databank mainly use the indefinite pronoun *mou* ‘certain’, although a small proportion of impersonal attribution hedges take the passive construction *bei* without an explicit agent. Before we discuss the functions of impersonal attribution in the academic articles we studied, we present the overall distribution of this strategy.

**Table 6. Distribution of impersonal attribution**

		Humanities	Business	Biology	Total	<i>F</i>
Frequency per 1,000 words	<i>M</i>	0.269	0.100	0.129	0.166	4.329*
	<i>SD</i>	0.327	0.174	0.177	0.246	

\*  $p < .05$

Table 6 shows the mean and standard deviations of impersonal attribution hedges in the three fields. The *F*-test showed that there is an overall inter-disciplinary difference in the use of impersonal attribution [ $F(2, 61.589, p = .017^*)$ ]. Post-hoc comparison revealed that writers in the pure humanities use a significantly higher proportion of such hedges than biology writers ( $p = .022$ ). However, no statistical difference was found between the pure humanities and business writers or between business and biology writers. Similar to the results regarding personal attribution, the writers in the pure humanities exhibited a strong preference for attributing their claims to a nonspecific group or referent.

As noted above, the linguistic forms of impersonal attribution comprise *mou* ‘certain’ and the agentless *bei* construction. When using *mou* ‘certain’, the authors displayed their plausible judgments by hedging the exact identity of a referential form:

- (23) Zhe biashi huoxing chengfen chule shengtai zhiwei, **mouxie**  
 this indicate active element in.addition.to peptide besides **certain**  
 shuirongxing dafenzi wuzhi keneng ye han muli zhi  
 water.soluble macromolecule substance possibly also with oyster of  
 guoyanghua yizhi nengli youguan.  
 peroxidation resist ability related  
 ‘This indicates that in addition to peptide, **certain** water-soluble macromolecule  
 substances may also be related to oysters’ ability to resist peroxidation.’  
 (bio-agriculture-2)

- (24) Dongduji guanyong mingming de xiangzheng shoufa, chule  
 PN common.practice naming DE symbolic method except  
 lishi shang zhenshi renwu, didian zhiwai, qita dabufen de  
 history on real character place except other most DE  
 mingming ke shiwei wenhua yishi de biao Zheng, daibiao  
 naming can view.as culture consciousness DE symbol symbolize  
 wenhua zhong de **mouzhong** fanshi.  
 culture within DE **certain** convention  
 ‘Except for real people and places in history, most of the naming conventions in  
 Dongdu Ji ‘Passage to the East’ can be viewed as symbols of cultural  
 consciousness, representing a **certain** convention in the culture.’  
 (his&lit&philosophy-1)

The use of *mou* ‘certain’ in (23) indicates the authors’ uncertainty about the exact identity of water-soluble macromolecule substances, whereas in (24), the author implies that a specific referent is not necessary for the current purpose (Wang 1947, Liu et al. 2007, Chen 2008). Instead of focusing on a specific convention, the sentence stresses the symbolic meaning of the method of naming in *Passage to the East*.

With regard to the agentless passive construction, only seven examples out of 123 impersonal attribution hedges (5.7%, 7/123) were found in the databank:

- (25) Raner, ruo jingliren de li zhi shi yinwei qi geren shengya de  
 however if manager DE leave job be because his individual career DE  
 guihua, xiang genghuan xin huanjing huo bei wajiao dao  
 plan want change new environment or PASS head.poaching reach  
 qita jijin gongsi deng, ze gai xunxi nai **bei shiwei** huai xiaoxi.  
 other fund company etc. then that news be PASS **view.as** bad news  
 ‘However, if managers quit their jobs because of personal career planning, of  
 their wish to change their working environment, or due to head hunting etc.,  
 then such news **is viewed as** bad news.’ (bus-finance-7)

The passive marker *bei*, like the remaining cases of *bei* in our databank, occurs when the authors are defining research variables. Omission of the agent after *bei* allows the authors to distance themselves from taking the responsibility for the definition of the variables. Meanwhile, the definition involves unfavorable news. This is consonant with Wang’s (1947) contention that passives are mainly used to describe undesired events in Chinese. Table 7 summarizes the distribution of *mou* ‘certain’ and *bei* constructions in our databank:

**Table 7. Distribution of subtypes of impersonal attribution**

Distribution & subtypes \ Academic fields	Humanities	Business	Biology
<i>mou</i> ‘certain’	97.6% (83)	83.3% (20)	92.9% (13)
<i>bei</i> (passive marker)	2.35% (2)	16.7% (4)	7.1% (1)
Total	100% (85)	100%(24)	100% (14)

#### 4.2 Comparison among hedges within the same field

In the foregoing discussion, we have presented quantitative and qualitative analyses of the use of hedges in Chinese academic discourse in the disciplines of the pure humanities, business and biology. After investigating the use of each strategy and its disciplinary variation, we examined whether differences exist among strategies within the same discipline. Table 8 displays the mean and standard deviations of each type of attribution hedge in pure humanities:

**Table 8. Distribution of each attribution hedge in pure humanities**

Attribution hedge \ Fields	Humanities		<i>F</i>
	<i>M</i>	<i>SD</i>	
To previous research	.048	.079	10.466*
To assumed common knowledge	.059	.120	
Personal attribution	.386	.473	
Impersonal attribution	.269	.327	

\* $p < .05$

Prv Res = Common; Person > Prv Res; Person > Common; Person=Impersonal; Impersonal > Prv Res; Impersonal > Common.

The differences among attribution hedges used in the pure humanities were tested with one-way Repeated-measures ANOVA.<sup>7</sup> The results revealed an overall significant difference among types of attribution hedges [ $F(1.87, 54.28) = 10.466, p < .001^*$ ]. A Bonferroni post-hoc comparison depicted “personal attribution” and “impersonal attribution” hedges as both being higher than the “to previous research” and “common knowledge” hedges in the pure humanities ( $ps < .012$ ) while no significant difference was found between the personal and impersonal attributions. This statistical results accord with our previous argument (Sec. 4.1.3-4.1.4) that personal and impersonal

<sup>7</sup> Because Mauchly’s test of sphericity was not met in the three fields, degrees of freedom were corrected with Greenhouse–Geisser estimates of sphericity ( $\epsilon = .62$ ).

attribution hedges count as a major attribution hedge among writers in the pure humanities. That is, pure humanities writers more frequently attribute responsibility for their claims to themselves or to an unspecified source.

The mean and standard deviations for hedges within the business articles are shown in Table 9:

**Table 9. Distribution of each attribution hedge in business**

Field Type of attribution	Business		<i>F</i>
	<i>M</i>	<i>SD</i>	
To previous research	.151	.203	5.048*
To assumed common knowledge	.004	.023	
Personal attribution	.208	.298	
Impersonal attribution	.100	.174	

$p < .05$

Prv Res > Common; Prv Res = personal; Prv Res = impersonal; personal > common; Impersonal > common; Impersonal = person.

Analyses of variance among the hedges used by business writers showed a significant difference among hedges in this field [ $F = (2.08, 60.298) = 5.048, p = .009^*$ ]. A Bonferroni post-hoc comparison suggested that appeals to assumed common knowledge were significantly lower in proportion than “previous research”, “personal”, or “impersonal” hedges ( $ps \leq 0.5$ ), whereas no significant difference was found between any other two strategies. These results indicate that when business writers present a given claim, they prefer to alleviate their responsibility by making explicit reference to previous research, by making a self-reference or by referring to an unspecific source. Part of the results correspond to the style observed in the pure humanities, which showed a stronger preference for making personal and impersonal attribution.

In the following, we discuss the results from biology articles. Table 10 shows the mean and standard deviations.

**Table 10. Distribution of each attribution hedge in biology**

Type of attribution \ Field	Biology		<i>F</i>
	<i>M</i>	<i>SD</i>	
To previous research	.055	.118	3.913*
To assumed common knowledge	.000	.000	
Personal attribution	.050	.183	
Impersonal attribution	.129	.177	

$p < .05$

Prv Res = Common; Prv Res = Person; Prv Res = Impersonal; Common = Personal; Personal = Impersonal; Impersonal > Common

Analyses of variance indicated an overall significant difference among hedges within biology ( $F(2.08, 60.306) = 3.913, p = .024^*$ ). A post-hoc comparison showed that similar to the business articles, impersonal attribution was significantly higher in proportion than “common knowledge” ( $p = .002^*$ ). On the other hand, no difference was found between any other two strategies in the biology articles.

The results presented in this section show a tendency for writers in the three fields to use attribution to previous research, personal attribution and impersonal attribution, with common knowledge being least preferred. This in general seems in accord with the nature of academic writing, since assumed common knowledge involves the source which is the least specific—the general public. On the other hand, it should be noted that there is a disciplinary difference regarding the “common knowledge” hedge. As discussed in Section 4.1.2, writers in the pure humanities exhibit the greatest tendency to use this hedge even though it is not the most frequently adopted one. In short, variations are found both among strategies by writers in the same field and across different academic disciplines.

### 4.3 Summary and discussion

The above discussion on attribution hedges in Chinese academic discourse provides both theoretical and empirical findings about authorial stance and use of rhetorical options in academic discourse. Regarding the distribution of the first type of hedge—explicit reference to previous research, it was surprising to find that it did not always emerge as a major device. Of the three disciplines, business writers employed a significantly higher proportion in the use of such a hedge. The relatively lower incidence in pure humanities articles of this type of attribution may be due to their preference for other attribution hedges, in particular, personal attribution. The small

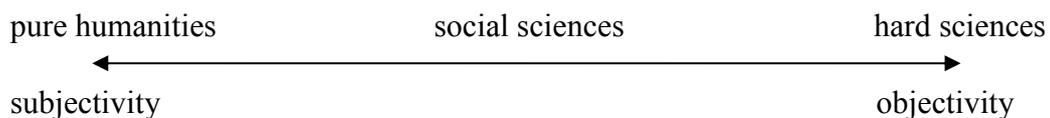
number of uses in biology articles, on the other hand, may be a result of the general avoidance of attribution hedges in this field.

The second type of hedge—attribution to assumed common knowledge—is not found in English academic discourse. Chinese writers in the pure humanities, in particular, demonstrate a strong preference for this hedge. When authors refer to a generally held truth, they involve the readers in their reasoning process with expressions like *women zhidao* ‘as we all know’ or *zhong suo zhou zhi* ‘as known to all’. The use of *we* not only reflects an author’s subjective evaluation but also expresses an intention to build solidarity with readers in the academic community (Vladimirou 2007:151). Biology writers demonstrate an objective stance and detached attitude by *never* referring to commonly held perceptions to support their arguments. In fact, even in personal attribution, biology authors never use ‘we’ to refer to themselves. Business writers display a style that approximates to that of biology writers, i.e. only a small number of arguments are supported by commonly held knowledge. Involvement of readers and the obscurity of an individual presence may well be attributed to the concepts of harmony maintenance (Hinkel 1994:373) and “collectivism” (Chen 2007:227, Chang 2011:89), which are highly valued in the Chinese society and are therefore particularly salient in Chinese academic writing.

The next type of hedge—personal attribution—had the highest rate of occurrence of all attribution hedges in the pure humanities and business articles. By stating beliefs or speculation, authors demonstrate greater individuality by making reference to their own viewpoint to justify their claims. Two major linguistic types of personal attribution were identified: pronominal self reference and non-pronominal self-reference. Pronominal reference includes the first person singular and first person plural pronouns. A sizeable proportion of such hedges took the form of first person pronouns among the soft sciences writers. While the subjective account was more pronounced among writers in the pure humanities in that ‘I’ is exclusively used by writers in this field, business writers are more moderate in making personal references. That is, even in articles written by single authors, they use *women* ‘we’ to downgrade the agent involvement and qualify the strength of their claims. Biology writers tend to signal an intent to “de-personalize” themselves (Berman 2005:105) with *bizhe/zuozhe* ‘the author’ for self-reference, which indicates a lesser degree of individuality.

Impersonal pronominal reference is also used as a major type of attribution hedge. Writers in the three disciplines, in the pure humanities, in particular, often express uncertainty about the specific referent associated with a given proposition. All the Chinese writers in our databank prefer the indefinite pronoun *mou* ‘certain’ to agentless passives when they hedge about the identity of a referent/entity or the exact quality of a certain concept/idea.

In general, the results and discussion so far show that writers in different disciplines display varying styles in their attribution hedges, with the pure humanities articles demonstrating the greatest tendency for more subjective accounts when seeking support for their claims. Business writers display a more variant style in the distribution of different hedges. Although significant disciplinary variation is mainly found in their attribution to previous research, there was a high proportion of first person pronouns in the business writing compared to the non-presence of such personal attribution in the biology writing (cf. Table 5). In fact, according to the information presented in Table 4, the means of personal attribution in the business writing was much closer to that of the writing in the pure humanities. This finding partially supports the observation (Gilbert & Mulkay 1984) that authors in soft knowledge disciplines express greater subjectivity and personal involvement in their writing whereas social sciences writers demonstrate a lesser degree of subjectivity. Given these results, we may place the three fields of study on a subjectivity scale, with the pure humanities situated toward the subjective end and the hard sciences (i.e. biology) on the objective end, and the social sciences located in between:



**Figure 1. Degree of subjectivity/objectivity in authorial stance**

The features of reader involvement and the establishment of solidarity either by use of first person pronouns or attribution to widely held knowledge have generally been noted in spoken discourse (Brown & Levinson 1987). This suggests that writing in the pure humanities has a rhetorical style closer to interactively oriented spoken register. The incorporation of more informal and interactive elements may arise from the uncertain nature of studies in the pure humanities, where claims or propositions are mainly based on subjective evaluation or interpretation of information. When scientific evidence is not readily accessible, writers involve readers in the process of argumentation to alleviate the force of the subjective claim. For writing in biology, hedging devices are used sparingly, and this implies a stronger objective authorial stance. The lack of more subjective attribution could be due to the more scientific nature of the subject of biology research, which requires authors to avoid individuality (Vassileva 1998:178) and speculation when experimental evidence is insufficient.

## 5. Conclusion

Attribution hedges have been used by speakers and writers to qualify the strength of their claims or arguments by attributing information to a given source. In this study, we have explored attribution hedges in Chinese academic discourse by analyzing 90 research articles in the pure humanities, social sciences and hard sciences. Quantitative and qualitative analyses revealed both intra-disciplinary variations and inter-disciplinary variations. Writers in the the pure humanities tend to follow rhetorical patterns to build solidarity with readers and to display their subjective stance. Writers in the social sciences also take on an evaluative tone that is subjectively oriented, though to a lesser degree. Hard sciences writers demonstrate their objective authorial stance, detachment and avoidance of individuality that are characteristic of academic writing. As there have been few studies exploring attribution hedges used by Chinese writers, the findings reported in this study provide an important reference for both research in Chinese academic discourse and for teachers in the pedagogy of Chinese academic writing.

There are some remaining issues which await future research. Due to the limit of time, we only included journals published in Taiwan. Furthermore, owing to limited e-resources of well-established journals written in Chinese, we chose the fields of biology, business, and the pure humanities. In our business data, we included journals in the fields of economics, finance, and management. However, some researchers may not consider management as a social science. Also, there may be variations in the use of hedges among different disciplines within a broad academic field, e.g. variations might exist among different subfields (Hernández Guerra & Hernández Guerra 2008). These issues are worth further investigation to obtain a more comprehensive picture of how attribution hedges and other hedges are used in Chinese academic discourse.

### **Appendix: Journals used in this study**

#### *Pure humanities:*

New History

Bulletin of the Institute of Chinese Literature and Philosophy

Bulletin of the Department of History of National Taiwan University

#### *Business/Social science*

Journal of Financial Studies

Taiwan Economic Review

Journal of Management

*Biology/Hard science*

Taiwanese Journal of Agricultural Chemistry and Food Science

Formosan Entomologist

Plant Protection Bulletin

### References

- Abdi, Reza. 2002. Interpersonal metadiscourse: An indicator of interaction and identity. *Discourse Studies* 4:139-145.
- Bazerman, Charles. 1988. *Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science*. Madison: The University of Wisconsin Press.
- Berman, Ruth A. 2005. Introduction: Developing discourse stance in different text types and languages. *Journal of Pragmatics* 37:105-124.
- Biq, Yung-O. 1990. Question words as hedges in conversational Chinese: A Q and R exercise. *Pragmatics and Language Learning, Monograph Series 1*, ed. by Lawrence B. Bouton and Yamuna Kachru, 141-157. Urbana-Champaign, Illinois: University of Illinois.
- Biq, Yung-O. 1991. The multiple uses of the second person singular pronoun in conversational Mandarin. *Journal of Pragmatics* 16:307-321.
- Blagojevic, Savka. 2004. Metadiscourse in academic prose: A contrastive study of academic articles written in English by English and Norwegian native speakers. *Studies about Languages* 5:60-67.
- Brown, Penelope, and Stephen C. Levinson. 1987. *Politeness: Some Universals in Language Usage*. Cambridge: Cambridge University Press.
- Chafe, Wallace. 1986. Evidentiality in English conversation and academic writing. *Evidentiality: The Linguistic Coding of Epistemology*, ed. by Wallace Chafe and Johanna Nichols, 261-272. Norwood, NJ: Ablex Publishing Corporation.
- Chang, Yin-ling. 2011. A Functional Analysis of Personal Pronoun Use in Argumentation by Taiwanese College Students. Unpublished doctoral dissertation, National Chengchi University, Taiwan.
- Channell, Joanna. 1990. Precise and vague quantities in writing on economics. *The Writing Scholar: Studies in Academic Discourse*, ed. by Walter Nash, 95-117. California: Sage Publications.
- Channell, Joanna. 1994. *Vague Language*. Oxford: Oxford University Press.
- Chen, Li Yin. 2006. A Comparative Study of Authority in English and Chinese Writing: Analyzing Grammatical Subjects and Modal Verbs in Academic Discourse. Unpublished MA thesis, National Tsing Hua University, Taiwan.

- Chen, Yuan-Shan. 2007. EFL Learners' Strategy Use and Instructional Effects in Interlanguage Pragmatics: The Case of Complaints. Unpublished doctoral dissertation, National Taiwan Normal University, Taiwan.
- Chen, Yi-Ting. 2008. A Corpus-based Study of Hedges in Mandarin Spoken Discourse. Unpublished MA thesis, National Taiwan University, Taiwan.
- Crompton, Peter. 1997. Hedging in academic writing: Some theoretical problems. *English for Specific Purposes* 16:271-287.
- Dubois, Betty Lou. 1987. "Something on the order of around forty to forty-four": Imprecise numerical expressions in biomedical slide talks. *Language in Society* 16:527-541.
- Fraser, Bruce. 1975. Hedged performatives. *Syntax and Semantics, Vol.3: Speech Acts*, ed. by Peter Cole and Jerry Morgan, 187-210. New York: Academic Press.
- Gilbert, Nigel G., and Michael Mulkey. 1984. *Opening Pandora's Box: A Sociological Analysis of Scientists' Discourse*. Cambridge: Cambridge University Press.
- Hernández Guerra, Concepción, and Juan M. Hernández Guerra. 2008. Discursive analysis and pragmatic metadiscourse in four sub-areas of economics research articles. *IBÉRICA* 16:81-108.
- Hinkel, Eli. 1994. Native and nonnative speakers' pragmatic interpretations of English texts. *TESOL Quarterly* 28:353-76.
- Hinkel, Eli. 1997. Indirectness in L1 and L2 academic writing. *Journal of Pragmatics* 27:361-389.
- Hinkel, Eli. 2002. *Second Language Writers' Text: Linguistics and Rhetorical Features*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hinkel, Eli. 2004. *Teaching Academic ESL Writing: Practical Techniques in Vocabulary and Grammar*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hübler, Axel. 1983. *Understatements and Hedges in English*. Amsterdam & Philadelphia: John Benjamins.
- Hyland, Ken. 1996. Writing without conviction? Hedging in science research articles. *Applied Linguistics* 17:433-454.
- Hyland, Ken. 1998a. *Hedging in Scientific Research Articles*. Amsterdam & Philadelphia: John Benjamins.
- Hyland, Ken. 1998b. Boosting, hedging and the negotiation of academic knowledge. *Text* 18:349-382.
- Hyland, Ken. 1998c. Persuasion and context: The pragmatics of academic metadiscourse. *Journal of Pragmatics* 30:437-455.

- Hyland, Ken. 1999. Disciplinary discourses: Writer stance in research articles. *Writing: Text, Process, and Practices*, ed. by Christopher N. Candlin and Ken Hyland, 99-121. London: Longman.
- Hyland, Ken. 2000. *Disciplinary Discourses: Social Interactions in Academic Writing*. London: Longman.
- Hyland, Ken. 2004. Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal of Second Language Writing* 13:133-151.
- Hyland, Ken. 2005. *Metadiscourse: Exploring Interaction in Writing*. New York: Continuum.
- Hyland, Ken. 2008a. Persuasion, interaction and the construction of knowledge: Representing self and others in research writing. *International Journal of English Studies* 8:1-23.
- Hyland, Ken. 2008b. Genre and academic writing in the disciplines. *Language Teaching* 41:543-562.
- Hyland, Ken, and Polly Tse. 2004. Metadiscourse in academic writing: A reappraisal. *Applied Linguistics* 25:156-177.
- Koutsantoni, Dimitra. 2006. Rhetorical strategies in engineering research articles and research theses: Advanced academic literacy and relations of power. *Journal of English for Academic Purpose* 5:19-36.
- Lafuente, Enrique, Rosa Lorés, María Pilar Mur, and Vázquez Ignacio. 2006. How to explore academic writing from metadiscourse as an integrated framework of interpersonal meaning: Three perspectives of analysis. *Actas del V Congreso Internacional AELFE [Proceedings of the 5<sup>th</sup> International AELFE Conference]*, ed. by Carmen Pérez-Llantada, Ramón Plo, and Claus-Peter Neuman, 197-208. Zaragoza, Spain: Prensas Universitarias de Zaragoza.
- Lakoff, Robin. 1975. *Language and Woman's Place*. New York: Harper and Row.
- Lau, Hieng-hiong. 1999. Hedging expressions as signals of evidence in academic journal discourse. *The Proceedings of the 8<sup>th</sup> International Symposium on English Teaching*, 431-440. Taipei: The Crane Publishing Co., Ltd.
- Lau, Hieng-hiong. 2001. Xueshu qikan lunwen de qingtai biaoda: Taiwan boshisheng de "jinyan shenxing" [Modality in academic journal articles: Hedges by PhD students in Taiwan]. *Proceedings of the Eighteenth Conference on English Teaching and Learning in the Republic of China*, 456-467. Taipei: The Crane Publishing Co., Ltd.
- Li, Charles N., and Sandra A. Thompson. 1981. *Mandarin Chinese: A Functional Reference Grammar*. Berkeley & Los Angeles, California: University of California Press, Ltd.

- Li, Tzu-ching. 1998. A Study of Hedging Expressions in Academic Journal Articles. Unpublished MA thesis, National Tsing Hua University, Taiwan.
- Lin, Huey Hannah. 2005. Contextualizing Linguistic Politeness in Chinese—A Socio-pragmatic Approach with Examples from Persuasive Sales Talk in Taiwan Mandarin. Unpublished doctoral dissertation, The Ohio State University, Ohio.
- Liu, Yi-chun. 2006. Euphemistic Speech of Mandarin in Taiwan—Pragmatic Strategies and Linguistic Structure. Unpublished MA thesis, National Taiwan Normal University, Taipei, Taiwan.
- Liu, Yue-hua, Wen-yu Pan, and Wei Gu. 2007. *Shiyong Xiandai Hanyu Yufa* [Practical Chinese Grammar]. Taipei: Shida Shuyuan.
- Mauranen, Anna. 2004. “They’re a little bit different”: Observations on hedges in academic talk. *Discourse Patterns in Spoken and Written Corpora*, ed. by Karin Aijmer and Anna-Brita Stenström, 173–197. Amsterdam & Philadelphia: John Benjamins.
- Meyer, Paul Georg. 1997. Hedging strategies in written academic discourse: Strengthening in argument by weakening the claim. *Hedging and Discourse: Approaches to the Analysis of a Pragmatic Phenomenon in Academic Texts*, ed. by Raija Markkanen and Hartmut Schröder, 21-41. Berlin: Walter De Gruyter.
- Myers, Greg. 1989. The pragmatics of politeness in scientific articles. *Applied Linguistics* 10:1-35.
- Prince, Ellen F., Frader Joel, and Charles Bosk. 1982. On hedging in physician-physician discourse. *Linguistics and the Professions*, ed. by Robert J. Di Pietro, 83-97. Norwood, NJ: Ablex Publishing Corporation.
- Salager-Meyer, Françoise. 1994. Hedges and textual communicative function in medical English written discourse. *English for Specific Purpose* 13:149-170.
- Varttala, Teppo. 2001. Hedging in Scientific Oriented Discourse: Exploring Variation According to Discipline and Intended Audience. Unpublished doctoral dissertation, University of Tampereen Yliopisto, Finland.
- Vassileva, Irena. 1998. Who am I/who are we in academic writing? A contrastive analysis of authorial presence in English, German, French, Russian and Bulgarian. *International Journal of Applied Linguistics* 8:163-190.
- Vladimirou, Dimitra. 2007. ‘I suggest that we need more research’: Personal reference in linguistics journal articles. *Papers from the Lancaster University Postgraduate Conference in Linguistics and Language Teaching*, Vol. 1. Papers from LAEL PG 2006, ed. by Costas Gabrielatos, Richard Slessor, and Johann W. Unger, 139-157.
- Wang, Li. 1947. *Zhongguo Xiandai Yufa* [Contemporary Grammar of Chinese]. Shanghai: The Commercial Press.

[Received April 10, 2012; revised July 19, 2012; accepted August 15, 2012]

Department of English  
National Taiwan Normal University  
Taipei, TAIWAN  
Miao-Hsia Chang: [mhchang@ntnu.edu.tw](mailto:mhchang@ntnu.edu.tw)  
Yu-Wen Luo: [0-1-2-3@yahoo.com.tw](mailto:0-1-2-3@yahoo.com.tw)  
Yueh-Kuei Hsu: [hsu.yuehkuai@gmail.com](mailto:hsu.yuehkuai@gmail.com)

## 中文學術論文的主觀性及客觀性： 作者如何以歸因策略表現謹言慎行

張妙霞 羅予玟

許月貴

國立台灣師範大學

在談話中，說話者可藉由謹言慎行策略緩和命題內容的強度，而在學術論文中，此策略卻可因此鞏固作者的論點。在學術論文論證中，作者常將所提論點之訊息，歸因於某一特定來源，來緩和論證強度。本文研究中文學術論文中的歸因策略如何表現不同作者的立場，同時並討論領域之間的作者風格的差異。本文所研究領域包括純人文科學，社會科學，及自然科學。分析結果顯示，純人文科學論文作者最常使用較含主觀性的描述來支持其論證，其次為社會科學論文作者。換言之，人文科學作者的歸因策略，較常直接以文字清楚反應個人觀點，或將讀者及一般大眾觀點引入，來參與某一論證。反之，自然科學論文反應作者較客觀的立場及作者與論證較疏離的態度。簡言之，純人文科學論文的歸因策略，包含較多口語對話中的特質。此風格可能起因於純人文科學論證內容的本質；亦即，許多該領域的論證內容含較多概念性的陳述或文化、思想的省思，其命題內容的真值也因此較難以科學方式來驗證，並含有較強的不確定性。為了支持自己的論點，作者因而轉向以個人、讀者或大眾觀點來支持其論證，語氣也因此帶有較多主觀色彩。

關鍵詞：中文、學術論文、歸因策略、領域差異、主觀性、客觀性