

**PART 1**

## **Discursive characteristics of AD**

# Certainty and commitment in the construction of academic knowledge in the humanities

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In this paper we report on the analysis of thirty two research articles written in Spanish in the fields of education, linguistics, philosophy and psychology, with the purpose of identifying writers' choices of modality and modal commitment. The objective was to find out how disciplinary discourse varies across disciplines in the humanities with respect to the use of possibility, probability, obligation, inclination and quantity, along the dimensions of knowledge about the discipline, the research process and text organization. The analysis shows high modal commitment in most disciplines studied, but important differences are found as far as use of the signals used and the type of knowledge referred to.

**Keywords:** research articles, humanities, modality, commitment

## 1. Introduction

The construction of knowledge in academic discourse has to do with how knowledge is negotiated and evaluated in a scientific/academic community (Chafe 1986; Hyland 1999, 2000; Swales 1990, 2004) and with how writers encode this knowledge in the text as they interact with an "imagined" or "ideal" reader (Coulthard 1994). The writer-reader interaction implies linguistic choices by writers concerning degrees of certainty and commitment to propositional content in their endeavour to persuade their readers (Thompson & Thetela 1995), and these choices must respond to the conventions that their colleagues find convincing (Hyland 1999, 2000).

In the last two decades, there has been a growing interest in disciplinary discourse practices, especially in the context of the English language (among many others, Swales 1990, 2004; Hyland 1999, 2000, 2005). Cross-cultural and linguistic differences have also become a main concern of linguistic research (for example, Connor & Kaplan 1987; Ventola 1992; Connor 1996; Ventola & Mauranen 1996;

Moder & Martinovic-Zic 2003). In Spanish, however, this is a relatively new field with particular interest in sciences rather than in humanities. Different aspects have been studied, such as information hierarchy in the critical review of scientific literature (Ferrari 1999), epistemic modality in journalistic texts about sciences (Gallardo 1999, 2002), epistemic modality and degrees of certainty in the introduction and conclusion sections of research articles in medicine (Ferrari 2003), abstracts in medical journals (Ciapuscio 1998), epistemic modality in the academic scientific context (Lopez Ferrero 2001), corpus analysis of specialized texts in professional and technical discourse communities (Parodi 2005). In the context of Venezuela in particular, Salager-Meyer has carried out research in medical discourse (1990a, 1990b, 1993, 1994); Bolívar (1994, 1997a, 1997b, 1999a, 1999b) has focused on interaction in written text in linguistics and applied linguistics; Bolívar and Beke (1999), and Blanco (2007) have examined the construction and the structure of research abstracts in humanities and sciences. Academic discourse in the humanities has been recently the focus of attention: Bolívar (2004a) critically described the differences in citation styles and use of references in the areas of arts, linguistics, education, history, philosophy; Bolívar (2006) studied the role of evaluation in research articles and essay-type articles in the humanities; Beke (2005, 2007) studied the use of interpersonal metadiscourse and citation practices in research articles in the area of education and Arcay Hands (2000) compared metadiscourse in academic texts in Spanish and English; Bolívar and Shiro (2005) have examined the use of epistemic and deontic modality in Psychology and Arts.

In this paper, we focus on the analysis of researcher's commitment and certainty in the construction of knowledge in education, linguistics, psychology and philosophy in a sample of thirty-two articles published in indexed Venezuelan journals. It is important to point out that these are labelled "research articles" or "essays" by the editorial committees. We examine how modal variation manifests itself across disciplines in an attempt to answer the following research questions: (1) how is knowledge approached linguistically through the use of modalisation and modulation in different disciplines in the humanities? and (2) in what way are degrees of certainty and commitment affected by subject-matter and communicative purposes?

## 2. Theoretical framework

We assume that disciplinary discourse has to be viewed from two perspectives: on the broader level, disciplines are a space for the interaction between scientific community members who share a common goal and general attitude towards knowledge (theoretical, empirical) and have different ways of approaching,

constructing and reporting knowledge; on a more restricted level, in each individual discipline, writers respond to the conventions, norms and traditions resulting from the strategies used by researchers in a particular discourse community. These two levels combined will exert influence not only on the hierarchical organization of texts and propositional content, but also on the ways writers create knowledge in their particular discipline and project themselves as persona.

Writers resort to linguistic and discursive strategies that are not new to them but are part of a kind of action already existing in the community when they join it (Bolívar 2004a). In academic journals, these actions are encoded in texts that present research activity of different types: research reports, reviews, essays, interviews, among others. Specifically in the Venezuelan context and in the humanities, journals make explicit these differences by locating these texts in different sections of the journal. Editors seem to assume that a research article focuses on reporting finished research and that essays aim at arguing for or against a point of view concerning theories or methods within a field. Very often they take the form of research proposals, and are therefore, more argumentative than expository, and more evaluative than descriptive (Bolívar 2004b). From this perspective, the essay is a type of research article, whose length may vary depending on the discipline and on the criteria established by the journal and by the academic committee. As a result it is possible to assume that there will be variation in the use of modality.

Our analysis followed Thompson (1996, based on Halliday 1994) who classifies modality into *modalisation* and *modulation*. Modalisation is concerned with *probability* – how likely the information is to be true –, or *usuality* – how frequently it is to be true. Modulation is concerned with the degree of *obligation* and *inclination* of the speaker/writer (Thompson 1996: 57–58). Modal commitment can have three basic values depending on (a) the higher, medium or lower degree of certainty about the validity of a proposition or (b) a higher, medium or lower degree of pressure on the other to carry out a command (ibid.: 59).

While we basically followed Thompson (1996), in order to analyze modalisation and modulation in the corpus, we focused on the following subcategories: probability, possibility, frequency, quantity, obligation and inclination, as linguistically signalled by writers. Quantity is not mentioned by Thompson but we included it on account that it is often classified as a type of modality (Calsamiglia & Tusón 1999; Cervoni 1987), is associated with epistemic modality (Shiro & Núñez 2003; Shiro 2004, 2005) and the strategic use of affect (Janney 1996).

The search for the linguistic signals (see Table 2 in the next section) was carried out using the software WordPilot. From a more qualitative point of view and based on the frequency of modality signals found in the corpus, we examined each instance along three dimensions in order to determine the type of knowledge dealt with by writers: knowledge about the field, knowledge about the research process

and knowledge about the textual world (Bolívar 2004b). We claim that the variation between disciplines is mainly due to variation in subject-matter, attitude towards research and text organization.

### 3. Method

#### 3.1 Corpus

For this study, we analyzed thirty-two articles in digital format (sixteen research articles and sixteen essays) published in four Venezuelan indexed journals during the period 2000–2003. The education articles were extracted from *Revista de Pedagogía*, linguistics from *Akaderos* and *Boletín de Lingüística*, psychology from *Akaderos* and philosophy from *Episteme*. For the purpose of observing any possible variation in the use of modality, we separated the research articles (RA) from the essay-type articles (EA) as they appear in the journals with no attempt to apply pre-determined criteria.

**Table 1.** Distribution of total words per discipline and type of article

	N° Words analyzed		Original N° of words	
	RA	EA	RA	EA
Education 1	7,572	3,925	8,392	4,538
Education 2	8,653	2,599	9,404	2,949
Education 3	8,845	3,486	10,543	4,093
Education 4	5,777	3,693	6,914	4,301
Linguistics 1	3,919	3,704	5,116	5,342
Linguistics 2	6,746	6,354	8,475	9,962
Linguistics 3	5,777	3,706	9,063	4,350
Linguistics 4	5,397	10,356	6,865	11,657
Psychology 1	5,073	8,416	6,514	10,272
Psychology 2	8,038	4,475	10,006	6,620
Psychology 3	4,983	2,750	6,271	3,438
Psychology 4	4,388	6,661	5,472	8,263
Philosophy 1	16,988	5,276	21,923	5,397
Philosophy 2	5,946	4,817	6,942	5,226
Philosophy 3	6,776	6,130	6,289	6,239
Philosophy 4	4,604	5,307	6,240	5,549
Subtotal	109,049	81,655	137,429	93,313
<b>Total</b>		<b>190,704</b>		<b>240,742</b>

For the actual analysis, textual citations were eliminated to ensure that data was restricted to the writer's own words. Tables, figures and bibliography were also eliminated so as not to contaminate the analysis.

**Table 2.** Categories, subcategories and linguistic signals

Major categories	Subcategories	Linguistic Signals
Modalisation	Probability	puede/n, podemos, podría/n, podríamos, pudiera/n, pudiéramos, pudo, podía, pudieron, podrá/n parece/n, pareciera/n, parecía/n (se) supone, suponen, suponemos, supongo, supondría/n, supondrá/n probabilidad, probable, parecía/n (se) supone, suponen, suponemos, supongo, supondría/n, supondrá/n probabilidad, probable, aparente, probablemente, aparentemente, quizás, tal vez, al parecer
	Possibility	puede/n, podemos, podría/n, podríamos, pudiera/n, pudiéramos, pudo, podía, pudieron, podrá/n permite/n, permitieron, permitiría/n, permitirá/n, permitió, permitieron, permitía/n posibilidad, posible, posiblemente
	Frequency	suele/n, solía/n frecuente siempre, a veces, raras veces, algunas veces, jamás, nunca, a menudo, frecuentemente
	Quantity	mucho, poco, nada, casi, muchísimo, tanto/tan, nadie, todos, ningún, ninguno/a, menos, más, mayor, mayoría, mayormente
Modulation	Obligation	debe/n, debemos, debería/n, deberíamos, debiera/n, debiéramos, deberá/n, debía/n hay que, había que, habrá que ha/n de, habrá/n de, habría/n de tendré que, tendremos que, tendrá/n que, tendremos que, tendría/n que, tendríamos que, tuvimos que necesidad necesario/a/s, preciso/a/s, obligatorio/a/s necesariamente, obligatoriamente, obligadamente, definitivamente, absolutamente
	Inclination	tiende/n, tendería/n, tenderá/n, tendía/n estar dispuesto/a tendencia

Table 1 shows the number of words per type of article as they appear for the analysis and in the original article. In each discipline, we selected eight articles generically variable. It is interesting to notice that our writers dedicate on the average approximately 25% of their text to quoting other sources, approximately 208 cited words per 1000 words. This number, however, has to be taken cautiously since there does not seem to be any indication of particular tendencies within disciplines.

The classification of modality into modalisation and modulation and their respective subcategories were specified together with their corresponding linguistic signals according to word class: verbs, nouns, adjectives and adverbs. These are shown in Table 2.

### 3.2 Procedures

The articles were processed individually using the software WordPilot and the results of the search were then transferred to Word documents. This allowed us to analyze the data from a quantitative perspective in order to have a general idea of the tendencies in each discipline. Every case of concordance was then examined in detail to discard items that did not fall into the categories. For example, *puede* (can) refers to either possibility or probability, and *debe* (must) can indicate possibility or obligation depending on the context.

The results were also analyzed qualitatively taking into account the writers' approach to knowledge along the three dimensions mentioned earlier. The different approaches to knowledge are illustrated in the following examples.<sup>1</sup>

- (1) Knowledge about the field (subject-matter). For example:
  - a. *La palabra "perro" no muerde. Es verdad. Pero pronunciada con odio conminante puede inducir a los caninos a morder* (Ling RA2) (The writer is explaining a concept)
  - b. *Chomsky parece afirmar que hay naciones que no son enemigas de Estados Unidos pero que podrían empezar a hacerlo* (Ling RA4) (The writer is presenting part of the content attributed to another author)
- (2) Knowledge about the research process itself, as illustrated below:
  - a. *La variabilidad, si se considera como impuesta sobre los datos y no como intrínseca a ellos, puede explicarse mediante demostraciones, en las que la manipulación experimental puede eliminar dicha variabilidad* (Psych RA3) (The writer refers to the research process by saying how a phenomenon can be explained by means of experimental manipulation)

1. The reference in the examples indicates the field (Educ, Phil, Psy, Ling), the type of article (RA or EA). Notice that the number may refer to RA or EA.

- b. *En este último grupo pueden ubicarse las madres desnutridas graves (Psych EA4)* (The writer reports on the findings of the investigation)
- (3) Knowledge about the textual world, as in:
- a. *Podríamos resumir la matriz de opinión recogida en las siguientes direcciones: económicas, etc. (Educ RA1)* (The writer anticipates the act of summarizing what s/he has just said, and then summarizes)
  - b. *Tal como se puede observar en el siguiente pasaje (Phil RA3)* (The writer directs the reader to observe what follows in the text)
  - c. *En el gráfico 1 puede notarse que el número de evaluaciones halladas en el corpus supera (Ling RA 4)* (The reader is asked to look at a figure in the text).

#### 4. Results

The results from a quantitative point of view are reflected in tables 3 and 4 below. Table 3 shows that RA's are more modalised than EA's (1240 items vs. 886). When normalized to a thousand words, these results indicate that RA writers used 11.37 modality markers for each 1,000 words in contrast to 10.85 in EA's.

As can be seen in Table 3, possibility is the more frequent subcategory of modalisation in RA's and EA's with 614 (or 5.63 signals per 1000 words) and 443 (or 5.42 per 1000 words) respectively. Possibility is the preferred category of modalisation used by philosophers, linguists and psychologists, while educators give quantity more prominence (193 versus 100). Obligation is the most frequent category of modulation with 334 in RA's (or 3.06 per 1000 words) and 295 in EA's (or 3.61 per 1000 words).

With respect to the other subcategories, probability is more frequently used by linguists in both types of articles; probability, frequency and quantity markers are used more often by linguists in EA's; probability is more frequent in linguistics RA's and frequency markers in philosophy RA's. In both types of articles and in all disciplines, inclination markers are less frequent and variable.

Table 4, where the data has been normalized to 1,000 words, suggests that modality is more frequent in philosophy and education EA's while more frequent in psychology RA's. In linguistics, however, modality is stable in both types of text. Philosophy and education seem to distinguish between the two types of articles in terms of length, while EA's are longer in linguistics. No real difference is found in Psychology.



**Table 3.** Distribution of frequency of items according to categories and subcategories

Modalisation	RA				
	Educ.	Ling.	Psych.	Phil.	Total
Probability	15	46	34	27	122
Possibility	100	121	128	265	614
Frequency	26	17	29	33	105
Quantity	193	54	89	63	399
Total	334	238	280	388	1240
	EA				
	Educ.	Ling.	Psych.	Phil.	Total
Probability	19	38	27	34	118
Possibility	63	115	141	124	443
Frequency	16	57	15	42	130
Quantity	33	67	40	55	195
Total	131	277	223	255	886
Modulation	RA				
	Educ.	Ling.	Psych.	Phil.	Total
Obligation	101	47	48	138	334
Inclination	15	15	19	3	52
Total	116	62	67	141	386
	EA				
	Educ.	Ling.	Psych.	Phil.	Total
Obligation	76	52	73	94	295
Inclination	12	2	3	12	29
Total	88	54	76	106	324

**Table 4.** Distribution of frequency of modality markers across article types and disciplines

Discipline	Total words in RA	Total words in EA	Total modality markers in RA	Total modality markers in EA	Modality in RA per 1000 words	Modality in EA per 1000 words
Education	30,840	13,703	450	219	14.76	15.98
Linguistics	21,839	24,120	300	331	13.73	13.72
Psychology	22,482	22,302	347	299	15.43	13.41
Philosophy	34,324	21,530	529	361	15.41	16.77

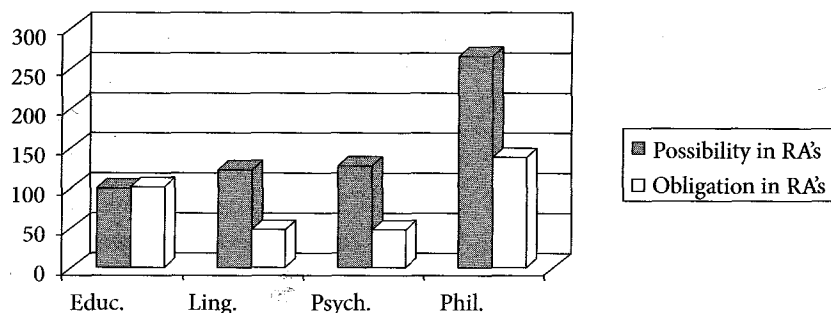


Figure 1. Distribution of Possibility and Obligation in RA's

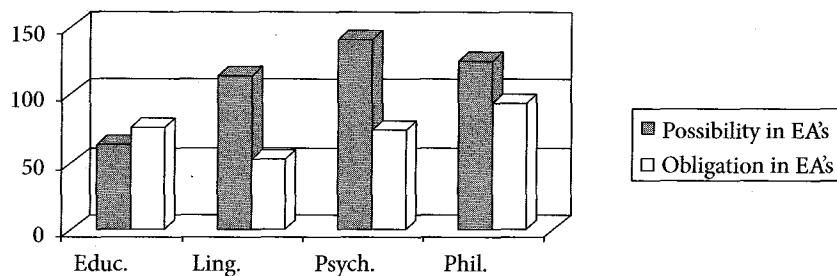


Figure 2. Distribution of Possibility and Obligation in EA's

Figure 1 shows the distribution of possibility and obligation in research articles in all disciplines analyzed, and Figure 2 represents obligation and possibility in essay articles. In Figure 1, we can see that Education makes similar use of possibility and obligation, while in all other disciplines, possibility predominates. Figure 2 shows that Education also tends to use more obligation in essay articles.

A closer look to the actual data revealed that writers in all disciplines are highly committed to their propositional content. This commitment is shown by the tendency to use present indicative of *poder* as in Examples 1–4:

- (1) *Este tipo de formación otorga herramientas que sólo pueden ser aplicadas dentro de un limitado contexto cultural (EducEA1);*
- (2) *La aplicación de ese modelo triangular del amor nos puede indicar teóricamente el grado de satisfacción y la duración de una relación (PsychRA2);*
- (3) *En la obra deleuziana podemos hallar en distintos pasajes una oposición firme contra el planteamiento hermenéutico (PhilEA3);*

- (4) *La estructura discursiva puede definirse como la secuencia lógica de cláusulas mediante la cual se organiza el mensaje en el texto... (LingRA4).*

Medium commitment is indicated by the use of the conditional form of *poder* (see Examples 5–11). Generally speaking, this form is not used as frequently as the indicative. In Education it is not used at all in EAs.

- (5) *Se podría establecer que el cambio en esa concepción fue impulsado por el modelo psicolingüístico de Goodman (LingRA3);*
- (6) *De este modo, la pauta SOV, como tal, podría recibir genéricamente el nombre de “patrón japonés” (LingEA4);*
- (7) *No se podría inferir que Kant utilizó dos vías que paralelamente conducen a la fundamentación del Estado (PhilRA2);*
- (8) *Y a partir de él podríamos dar razón de ser a la concepción de la filosofía como una actividad creativa (PhilEA3);*
- (9) *en ellos la experiencia de ruptura no dejó huellas traumáticas como podría suceder en el caso de parejas de más edad y que ya hubieran constituido una familia (PsychRA2);*
- (10) *la topografía de la conducta pronto muestra exageraciones que podrían ser calificadas de “bizarras” (PsychEA1);*
- (11) *lo que podría explicar que la selección favoreciera, como en efecto ocurrió, a los aspirantes de esos niveles (EducRA4).*

The subjunctive form “*podiera*” as an indicator of low commitment is rarely used by our writers, except for one or two isolated cases in Philosophy and Education, as in

- (12) *Cierto es que tal empeño por suprimir “el elemento humano” pudiera tener un lugar legítimo en ciertas áreas de la investigación científica o lógica, (PhilRA3);*
- (13) *Falta de entrenamiento del personal, lo cual pudiera explicarse de igual manera en términos económicos (EducRA3).*

As for the management of knowledge, Philosophy tends to deal mainly with the world of ideas, arguments for or against positions, definitions of concepts, explanations and clarification of theories. There is also a concern for making sure thinkers and positions are understood:

- (14) *Es decir, cuando Gadamer habla de diálogo con el “otro”, es siempre diálogo con un texto, y no diálogo entre realidades personales que (PhilEA3)*

The modalisations and modulations therefore concentrate on the world of ideas and theories, and on the act of reasoning and arguing. Preferred verbs with modal verbs are: *decir, hablar de, objetar, responder a una objeción, argumentar, pasar sobre un problema, iluminar el debate, entenderse, someter a la razón, inferir, sostener una idea, explicar, definir, reconocer, mostrar, advertir (sobre equivocaciones), defender, reconocer, formular, enunciar, suponer, calibrar (el saber)*.

Education favours quantity and possibility in RA, and possibility and quantity in EA. “Mucho” (much/many) and “poco” (a little) are both used to generalize and sometimes assign a sense of vagueness and imprecision, as can be seen in the following examples:

- (15) *un director con mucho tiempo en la escuela (EducRA2)*
- (16) *se han logrado muchas mejoras (EducRA2)*
- (17) *se entrega a los docentes mucho material escrito (EducRA2)*
- (18) *los alumnos asisten poco tiempo (EducRA2)*
- (19) *Sin embargo, estos cambios, en muchas ocasiones no pasan de ser cambios de poca trascendencia (EducRA3).*

The verbs used in Education point to the knowledge about problems in the world, such as “*el sistema educativo ha resultado en muchas ocasiones insuficiente*” (EducRA3) and to the research process, as in “*Los aspirantes de los planteles privados fueron favorecidos al ser seleccionados 1,8 veces más que los provenientes de colegios oficiales*” (EducRA4). One thing that strikes our attention in Education is the use of obligation to introduce desirable changes at the conceptual level as well as to recommend actions, as the examples below show:

- (20) *Hay que superar el peligroso y asfixiante concepto político que identifica falsamente poder con verdad (EducEA2)*
- (21) *Hay que darle un nuevo contenido a la propuesta de nación (EducEA2)*
- (22) *El venezolano debe ser protagonista de los procesos educativos creando, recreando y fortaleciéndola diversidad cultural (EducEA2).*

As for Linguistics and Psychology, both favour possibility in research articles and essays. Writers in Linguistics and Psychology tend to give more indications to the reader about text organization and the research itself, which brings to the fore a major difference with Philosophy and Education. For example:

- (23) *En el ejemplo 13 puede verse como Chomsky selecciona una cita corta (LingRA4)*
- (24) *Como puede observarse en el cuadro 1 (PsyRA2)*

- (25) *Es interesante destacar aquí la edad de esta muestra, ya que- por su juventud- el otro puede representar un complemento de su misma identidad (PsyRA2).*

Also, Linguistics and Psychology make more references to the research process itself (methods, procedures, techniques), as seen in the use of verbs like: *observar, medir, describir, clasificar, representar, indicar, discriminar, seleccionar, tabular, explicar, adquirir (valores).*

## 5. Conclusions

The results of this investigation indicate that, in Venezuelan Journals written in Spanish in the area of humanities, writers tend to show a high degree of modal commitment as seen in the use of modal verbs. However, the study has shown that there seems to be similarities and differences between the disciplines, which have to do with (a) the subject matter and aims of each discipline, (b) how clear cut the line is between research articles and essays in each discipline, (c) how willing the writers are to give indications to the reader regarding the organization of the text and the research process.

The major differences seem to be between Philosophy and Education on the one side, and Psychology and Linguistics on the other. Philosophy and Education, which are more inclined to the essay like style, show less detachment than Psychology and Linguistics. Apparently, researchers in Education seem to have a more clear-cut view of RA and EA with respect to length. But they feel an obligation to make recommendations for future action in the field, both in research articles and essays, with the result that these two types of texts adopt more features of the essay type. Linguistics and Psychology share similarities in that they are both more inclined to the RA style, which gives the essays characteristics of research articles as well. These findings serve to stress the need to pay more attention to how writers interact with their readers to present research reports and research proposals which focus on knowledge from two different perspectives.

For further studies, it is recommended that verbs be studied in detail with reference to how writers of research articles and essays use them for the following purposes: to manage knowledge about the world (objects and concepts); knowledge about the research process itself (the handling of theories and methods); knowledge about the text (textual processes and text organization) as well as to the argumentation for defending points of view. A more detailed examination of these dimensions will give us a better understanding of how academic knowledge is constructed in the humanities.

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# Citation in business management research articles

## A contrastive (English-Spanish) corpus-based analysis\*

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Citation is a common, recurrent feature of written academic discourse in general and of research articles in particular. It has been found that different disciplinary discourse communities develop particular citation conventions (Hyland 1999, 2000, 2002, 2005). It is believed, however, that not only the discipline but also the language in which the research article (RA) is written and the cultural context within which the RA is published, might influence the use made of citations. Hence, this paper investigates citation conventions in RAs from a single discipline, business management, written in two languages, American English and Spanish, published in two different socio-cultural environments. The aim of this paper is to carry out a contrastive analysis of (i) the frequency of use of citations, (ii) their distribution across the different moves of a RA, (iii) the type of citation (non-integral vs. integral), and (iv) the use of reporting structures. Both similarities and differences were found between the citation practices of American-based and Spanish scholars. It can be inferred from this that whereas the rhetorical similarities can be discipline-bound, the differences are to be seen as language and culture-driven and should be best explained in terms of the different socio-cultural contexts in which the RAs composing the corpus were produced and distributed.

**Keywords:** citation, intercultural rhetoric, research article, business management

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## 1. Introduction

Citation, the inclusion and acknowledgement of propositional content from other sources, is an essential feature of academic discourse. By reporting on prior research scholars can justify their own investigation and integrate it into the disciplinary knowledge of the community to which they belong. Citation enables them to create a necessary intertextual framework for their research to gain validity and acceptance. It has therefore a significant interpersonal value since, by making explicit references to previous related literature, writers can persuade their peers of the importance, novelty and appropriacy of the research undertaken. As Hyland (2004: 94) puts it, "citation is a major indication of a text's dependence on a disciplinary context, helping writers to demonstrate familiarity with the field and establish a persuasive epistemological and social framework for their arguments".

Citation in written academic discourse has received quite a lot of scholarly attention from a number of discourse analysts and applied linguists. Dubois (1988) – with a pedagogical application in mind – studied the extent of use of quotations, paraphrasing, summarising and generalising citations in biomedical journal articles and reported on a survey of biomedical scientists on their citation practices. A typology of citations as used in the Introductory move of Research Articles (RAs), was presented by Swales (1990), who drew a significant distinction between integral and non-integral citations. Thompson & Yiyun (1991) investigated the denotative and evaluative force of reporting verbs in RA Introductions from several disciplines. Shaw (1992) looked into the significance of verb forms in reporting verbs and established an interesting correlation between voice and tense in reporting verbs with sentence function and topicalization. A thorough semantic analysis of reporting verbs in medical journal articles was carried out by Thomas and Hawes (1994). Berkenkotter and Huckin (1995) traced the rhetorical and textual changes in subsequent drafts of a biologist's experimental article urged by journal reviewers to argue for novelty and to position her research within a related body of literature. Finally, Hyland (1999, 2000, 2002, 2005) carried out a contrastive disciplinary analysis of citation in RAs. Citation practices have also been recently researched within a specific spoken academic genre, namely, *Honoris Causa* speeches (Fortanet 2004). However, very few crosscultural analyses of citation practices in academic discourse have been carried out; among them is Bloch and Chi's (1995) study of citations in academic discourse written by Chinese and American scholars.

It will be argued here that it might be the case that not only the disciplinary community affects the writing scholars' citation practices, as Hyland (1999, 2000, 2002, 2005) demonstrated, but that these are also conditioned by the big or national culture in which the RAs are produced and distributed. The notion of national (or big) culture is opposed to that of small (or professional, academic)

culture by Atkinson (2004) in an attempt to explain the complexity and dynamism of the concept, which although underlying contrastive rhetorical studies it had not yet been adequately theorized (Atkinson 2004: 278). He stated that there is overlap between them and that not only the small culture but also the big one can account for rhetorical variation and preferences.

This paper analyses citations in RAs belonging to a single discipline, business management (BM), written by culturally distant scholars – American-based and Spanish – in their respective native languages. The aim is to see whether there are any differences in their citation practices and, if any differences are found, try to explain them in terms of the different socio-cultural contexts in which the two sets of RAs are produced. It is believed that spotting and analysing those differences might help Spanish scholars belonging to this particular disciplinary community to adjust their own practices when writing their RAs in English, which they may need to do if they want to promote their research internationally.

## 2. The corpus

The corpus chosen for the analysis is composed of 24 RAs on BM grouped into two sub-corpora: the first sub-corpus consists of 12 RAs written in English by scholars based at American institutions and the second sub-corpus consists of 12 RAs written in Spanish by Spanish scholars; all of them were published during the years 2003 and 2004. The same criteria were followed for the compilation of both sub-corpora to ensure their comparability. The total number of words in the corpus is summarised in the following table:

Table 1. Description of the corpus

	N° of words
American sub-corpus	79,607
Spanish sub-corpus	57,952
TOTAL	137,559

## 3. Results

### 3.1 Frequency of citations

The total number of citations found in each sub-corpus is presented in Table 2 below. The results have been normalised per 1,000 words, given the different length of the RAs composing the corpus and they show that, all in all, American scholars

Table 2. Frequency of citations in both sub-corpora

	American sub-corpus		Spanish sub-corpus		
	Total	Per 1,000w.	Total	Per 1,000w.	
AMJ1	62	11.24	AD1	7	2.12
AMJ2	57	7.72	AD2	13	3.17
AMJ3	42	8.11	AD3	43	11.94
JM1	70	8.63	DyO1	34	7.13
JM2	54	14.88	DyO2	25	4.82
JM3	95	12.95	DyO3	66	14.26
SMJ1	104	10.42	REDyEE1	35	4.04
SMJ2	49	5.95	REDyEE2	36	8.25
SMJ3	55	11.14	REDyEE3	41	5.85
JIM1	57	8.65	IE1	24	7.05
JIM2	62	10.38	IE2	14	3.39
JIM3	67	9.93	IE3	11	2.30
TOTAL	774	9.72	TOTAL	349	6.02

include more citations in their RAs than Spanish scholars do. In the American sub-corpus the normalised frequency counts range from 5.95 to 14.88, whereas in the Spanish sub-corpus they range from 2.11 to 14.26. Although some Spanish RAs show a similar frequency of citations to most American RAs, there are many other Spanish RAs that present a much lower frequency than the American average.

It can be inferred from the higher frequency of citations in the English RAs that American-based scholars are more inclined than Spanish scholars to contextualise and justify their research and to show their allegiance to a particular discourse community. In fact, most English RAs presented a sub-section or step within the Introduction move in which the literature in the field is reviewed. This step is presented under different headings (i.e., "Theoretical background and hypotheses," "Theory and hypotheses" or "Theory and hypothesis development"). Only 3 Spanish RAs presented such a sub-move (DyO1, DyO3 and REDyEE 3). American-based scholars ground their own research more firmly on previous work, possibly due to the higher level of competitiveness that exists among scholars wishing to publish internationally. Whereas Spanish BM scholars address a national readership, their American-based peers address an international readership, and so they need to establish stronger links between their own research and previous work in order to convince gatekeepers first and then their peers of the validity and appropriacy of their research.

### 3.2 Distribution of citations

The different distribution of citations across the four moves of the RAs (Introduction, Methods, Results and Discussion) in both sub-corpora is presented in Table 3. Citations are used throughout the article, although it is in the Introduction that most citations are found in the corpus (68.09% in the sub-corpus in English and 71.06% in the Spanish sub-corpus).

**Table 3.** Distribution of citations in both sub-corpora

	American sub-corpus			Spanish sub-corpus		
	Total	Per 1,000w	(%)	Total	Per 1,000w	(%)
Introduction	527	15.08	68.09	248	11.10	71.06
Methods	117	7.07	15.12	50	4.11	14.33
Results	21	2.57	2.71	33	2.08	9.46
Discussion	109	5.58	14.08	18	2.56	5.16

Although it was expected that more citations would be found in the Introduction and Discussion sections than in the other two moves, the figures in the table show that both in the English and the Spanish sub-corpora the Methods move runs second in the distribution of citations:

English sub-corpus	Introduction (68.09%)
	Method (15.12%)
	Discussion (14.08%)
	Results (2.70%)
Spanish sub-corpus	Introduction (71.06%)
	Method (14.32%)
	Results (9.45%)
	Discussion (5.15%)

**Figure 1.** Summary of citation distribution in both sub-corpora

The unexpected high use of citations in the Methods move could be explained by taking into account the empirical basis of the RAs composing the corpus. In the managerial cases reported, special attention is paid to how tests, measurements and statistics were carried out. In this sense citing not only previous literature, which tends to occur in the Introduction and Discussion sections, but also choosing previously tested methods, scales, surveys, etc. seems to be crucial to promote one's research and gain acceptance within this disciplinary community.

In addition, whereas in the American sub-corpus the number of citations per 1,000 words in the Discussion move is 5.58, it is only 2.56 in the Spanish sub-corpus. There are 7 Spanish RAs in which no citations at all have been included in this move. American-based scholars tend to compare the (in)consistency of the results of their own research with previous work reviewed in the Introductory section, thus rounding off their RAs, which again can contribute to gaining their readers' acceptance. This is not something Spanish scholars tend to do. Although they most commonly review the literature in the field at the beginning of the RA (though more briefly and including fewer citations than American scholars), not many attempts are made on their part at contrasting the results of their own research with those summarised in the Introduction. Whereas English RAs tend to include the following two optional sub-sections of the Discussion move stated by Hopkins and Dudley-Evans (1988), "*Reference to Previous Research (Comparison)*" and "*Reference to Previous Research (Support)*," Spanish RAs tend to focus only on the obligatory "*Statement of Results*." From here it can be inferred, then, that Spanish BM scholars trying to publish a RA in English may need to pay particular attention to this rhetorical difference to come out with a successful piece of writing in the eyes of the international readership.

### 3.3 Types of citations: integral vs. non-integral

Integral citations are, according to Swales (1990: 148), those which "show the name of the researcher as subject [...], passive agent [...], as part of a possessive noun phrase [...] and as what Tadros (1985) calls 'an adjunct of reporting' [...]," whereas non-integral citations are those in parentheses and superscripted ones. The citations in Examples 1 and 2 below are integral, whereas the citations in Examples 3 and 4 are non-integral.

- (1) Cultural relatedness (distance) between the two JV parents was calculated following Kogut and Singh's (1988) cultural distance formula and [...]. (JIM2-M)<sup>1</sup>
- (2) Como señalan, entre otros, Aubert et al. (1996), Corbett (1994), Grover et al. (1994), Grover et al. (1996), Gupta y Gupta (1992), King (1994), Lacity et al. (1996), Quinn y Hilmer (1995) y Smith et al. (1998), adoptando un enfoque basado en los recursos, esta estrategia permite a la empresa concentrarse en sus negocios principales (*core business*, en terminología inglesa). (AD3-I)

1. The information in brackets indicates the RA from which the example has been taken as well as the move within that RA (I= Introduction, M= Methods, R=Results and D=Discussion).

- (3) In other words, there was considerable support for the belief that larger firms with related experience can more easily afford to wait before they enter (King and Tucci, 2002; Lambkin, 1988; Mitchell, 1991; Schnaars, 1986; Schoenecker and Cooper, 1998). (SMJ2-D)
- (4) En los trabajos sobre iniciativa y desarrollo empresarial no existe consenso a la hora de establecer las medidas sobre el éxito empresarial que se pueden utilizar (Chandier y Jansen, 1992; Greenley, 1993, p. 3; Phillips y Moutinho, 2000, p. 370). (REDyEE2-I)

As Table 4 shows, the results drawn from the comparative analysis are very similar. Many more non-integral than integral citations are used in both sub-corpora. Taking into account Hyland's statement (2000: 23) that "[t]he use of one form rather than the other appears to reflect a decision to give greater emphasis to either the reported author or the reported message," it seems that BM scholars tend to focus on the text reference itself rather than on its source. The only difference between both sub-corpora lies in the sub-division within non-integral citations. Whereas only one citation in the sub-corpus in English is introduced by a superscript, 34 non-integral citations (13.33%) in the Spanish sub-corpus are thus introduced. Within integral citations the cited researchers' names are most commonly shown as subject of the reported statement in both sub-corpora. They are sometimes shown as part of a possessive noun phrase or as a passive agent and very rarely as an adjunct.

Table 4. Integral vs. non-integral citations in both sub-corpora

	American sub-corpus		Spanish sub-corpus	
	Total	(%)	Total	(%)
Non-integral citations	619	80	255	73.07
– Parenthetical	618	100	221	86.67
– Superscripted	1	0	34	13.33
Integral citations	155	20	94	26.93
– Subject	95	61.29	50	53.19
– Passive agent	17	11	17	18.09
– Possessive NP	40	25.81	22	23.40
– Adjunct	3	1.94	5	5.32

### 3.4 Reporting verbs

According to Hyland (2002: 116), “[t]he use of a reporting verb is one of the most explicit ways of attributing content to another source and represents a significant rhetorical choice.” The use of a particular reporting verb in rendering an explicit intertextual reference to previous work is particularly significant because it might also signal the writer’s position in relation to it. Following Thompson and Yiyun’s (1991) and Thomas and Hawes’ (1994) parallel classifications of reporting verbs, these have been divided according to their denotative meaning into:

Research verbs (or experimental activity verbs following Thomas and Hawes’ (1994) classification)

- (5) Other studies using this database have found the information on industry and type of joint venture agreement to be quite accurate (Anand and Khanna, 2000). (JIM2-M)
- (6) Mcknight y Glass (1995)<sup>11</sup> trataron de observar, en una muestra de 100 enfermeras, cuáles eran los síntomas del Burnout y de la depresión. (AD2-D)

Textual verbs (or discourse activity verbs)

- (7) [...] researchers as well as practitioners note that the sellers are the primary beneficiaries of these transactions (Chatterjee, 1992; Jarrell et al., 1988; Jensen & Ruback, 1983 and Porter, 1987; *Business Week*, October 30, 1995). (JM1-I)
- (8) Littier, Leverick y Wiison (1998), tras realizar un análisis de la literatura existente, sugieren que existen unos factores susceptibles de influenciar el resultado de un acuerdo de cooperación y [...] (DyO2-I)

Mental verbs (or cognition activity verbs)

- (9) Interfirm network ties are thought to influence decision makers because the comfort and trust existing between two tied firms encourage the transmission of high-quality, detailed information (Nahapiet & Ghoshal, 1998). (AMJ3-I)
- (10) Numerosos autores consideran el aprendizaje organizativo como un proceso duradero y lo vinculan a la adquisición del conocimiento y la mejora del *performance* (ej. Garvin, 1993; Probst y Büchel, 1997). (IE1-I)

Tables 5 and 6 below show the extent of use and the type of reporting verbs used in each of the two sub-corpora. Whereas the types of reporting verbs used in the two sub-corpora are very similar, a difference arises in the frequency of use of reporting structures (19.58 vs. 7.25). Both American-based and Spanish BM scholars have been found to use research and textual reporting verbs to the same extent (around 45%) and to make very little use of mental reporting verbs.



**Table 5.** Frequency of reporting structures in both sub-corpora

	American sub-corpus	Spanish sub-corpus
Total	235	87
Average per RA	19.58	7.25
% of total citations	30.32 %	24.92 %

**Table 6.** Classification of reporting verbs in the corpus according to their denotative meaning

	American sub-corpus		Spanish sub-corpus	
	Total (%)		Total (%)	
Reporting verbs	235		87	
– Research verbs	109	46.38	40	45.98
– Textual verbs	106	45.11	39	44.83
– Mental verbs	20	8.51	8	9.20

The results drawn from this analysis are more in line with those of Thomas and Hawes (1994), who found experimental activity reporting verbs to be more frequent (52%) than discourse activity reporting verbs (39%) in their analysis of medical journal articles than with those of Hyland (1999, 2000, 2002) who found textual verbs to be much more common than research verbs, especially in the soft-discipline RAs composing his corpus. The different findings could be explained taking into account the different nature of the RAs compiled. Whereas Hyland included both theoretical and applied RAs in his corpus, the corpus here under analysis is only composed of applied, quantitative RAs.

To explore reporting verbs further and following Hyland's (1999, 2000) work, these will now be classified according to their evaluative force as used in the corpus (Table 7), that is, according to whether the writer encodes the reported information as being true (in which case the writer will use a factive verb such as *point out* or *establish*), false (in which case the writer will use a counter-factive verb such as *fail* or *ignore*) or non-factive. In this last case, the writer can attach a positive, neutral, tentative or critical view to the information reported and/or the source author(s). Non-factive reporting verbs outnumber by far factive ones in both sub-corpora. Counter-factive reporting verbs have not been found in the Spanish sub-corpus, and only one has been found in the sub-corpus in English. Within non-factive reporting verbs, neutral reporting ones have been found to be the most frequent verbs in both sub-corpora. However, proportionally their frequency is slightly higher in the Spanish sub-corpus than in the English one. Spanish BM

**Table 7.** Classification of reporting verbs in the corpus according to their evaluative meaning

	American sub-corpus		Spanish sub-corpus	
	Total	(%)	Total	(%)
Factive	21	8.94	6	6.90
Counter-factive	1	0.43	0	0
Non-factive	213	90.64	81	93.10
– Positive	43	18.78	16	19.75
– Neutral	124	58.22	55	67.90
– Tentative	49	23.00	10	12.35
– Critical	0	0.00	0	0

scholars do not tend to attach a tentative view to the cited authors to the same extent as American BM scholars; they remain neutral in a higher proportion of reporting structures than their American colleagues.

It can be inferred from this that BM scholars, especially non-native speakers of English, who read English RAs or try to publish their research in that language, should be made aware of the implications of choosing a particular type of reporting verb, since the selection of a particular reporting verb is a delicate choice as it is a crucial means of both situating one's work appropriately and communicating with one's peers effectively, a way of engaging with colleagues and of appealing to the epistemological and interactive understandings of one's community (Hyland 2002: 130).

#### 4. Concluding remarks

Throughout the contrastive analysis, it has been shown that there were both similarities and differences between both sets of RAs regarding the use of citations. On the one hand, it has been found that the overall frequency of citations was different in the English and Spanish sub-corpora, the latter containing fewer citation tokens than the former. The distribution of citations was also found to be partially different, the main difference lying in the scarce inclusion of citations in the Discussion section of Spanish RAs in comparison to English ones. Most Spanish RAs were found to lack a "Reference to Previous Research (Comparison)" or a "Reference to Previous Research (Support)" step in the Discussion move, which could account for the different frequency of use of citations in this move. A further difference has been found within non-integral citations; whereas English RAs presented one single example of superscripted citation, these were quite common in Spanish RAs.

Finally, Spanish scholars were found to use fewer reporting structures than American-based scholars and to use neutral non-factive reporting verbs to a greater extent. On the other hand, the comparison of the distribution of citations brought about very similar outcomes for the Introduction and Methods moves. The overall use of non-integral vs. integral citation and of the types of reporting verbs (i.e. research, textual, mental) was also found to be very similar in both sub-corpora. It can be concluded that both the discipline or small culture and also the big or national culture in which RAs are written and published can affect certain textual and rhetorical choices. It could be argued that the fact that these RAs belong to the same discipline explains the similarities, whereas the differences could be best accounted for bearing in mind the different national cultures in which they were published.

The scope of this study did not allow for the exploration of other aspects in this area, which could yield interesting results. This is the case of the voice, tense and aspect of verbs accompanying reporting structures (following Shaw's (1992) line of research), the analysis of self-citations or the analysis of the use of direct quotation, as compared to the use of paraphrase, summary, and generalization citations. These points could, then, become the focus of future research that expands the crosscultural analysis of citation practices presented here.

In any case, the differences in citation practices outlined in this paper should be taken into account by BM Spanish scholars when writing their RAs in English. Their citation practices will most probably have to be adjusted to those commonly used by their American peers. Contrastive analyses such as the one presented here and future ones in relation to this or other rhetorical features within this or other disciplines can be of help for our fellow Spanish scholars to get their research accepted for publication in prestigious, international journals.

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# A cross-cultural comparison of the functions and sociolinguistic distribution of English and German tag questions and discourse markers in academic speech

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This article investigates the speech of Humanities and Natural Science instructors and students in 32 German and 32 American lectures and interactional classes. It examines how English and German structural markers and question tags contribute to variations of style in response to social and contextual factors in academic discourse. The data analysis couples qualitative, discourse-analytic methods with a quantitative sociolinguistic analysis. Among instructors and students in both cultures the factors of conversational role, academic discipline, and conversational mode – not gender – are most influential in the use of structures investigated. It is argued that these results arise from discourse restrictions in academic speech, such as turn type pre-allocation, speech length restrictions, as well as varying knowledge building and teaching strategies. A cross-cultural comparison shows remarkable similarities when it comes to a link of several structures to conversational role and discipline. Differences are primarily frequency of use of some of the structures investigated.

**Keywords:** academic interaction, cross-cultural, German, American

## 1. Introduction

This paper examines the sociofunctional distribution of discourse markers and various types of question tags in spoken academic discourse in respect to gender, discourse role, academic division, discourse mode, and academic culture. Previous research on the sociolinguistic distribution of question tags and discourse markers such as *okay* has produced many contradictory and confusing findings when it comes to a link of these structures to gender (Lakoff 1973; Swacker 1975;

Levin & Gray 1983; Heisler 1996; O'Barr & Atkins 1980; Dubois & Crouch 1975; Holmes 1984; Calnan & Davidson 1998; Cameron et al. 1988).

Question tags have been linked to powerless (O'Barr & Atkins 1980) and to women's language, with some research finding women use more tag questions (Lakoff 1973), fewer tag questions (Dubois & Crouch 1975), or more tag questions of the facilitative kind, while men use more modal question tags (Holmes 1984). Some research found no gender difference at all (Calnan & Davidson 1998), or that the use of facilitative question tags is instead tied to powerful discourse roles as well as gender (Cameron et al. 1988). Similar contradictory claims have been made for many discourse markers. As an example, Swacker (1975) found structural *okay* and *alright* used more frequently by men; however, Levin & Gray (1983) found no such difference.

When it comes to discourse markers and question tags, a proposed effect of gender on the use of these structures is usually linked to the idea that, in mixed sex groups, women tend to put more effort into maintaining and facilitating conversation (Fishman 1978, 1980) and men dominate talk, as for instance proposed by Coates (1993: 194). The rationale is that men talk more and therefore use more structural devices, while women cooperate more in conversations and take more responsibility for interactional work. It is the role of the conversational facilitator to ask questions, use facilitative question tags and discourse markers, and to make minimal responses that encourage the speaker to continue. It was therefore assumed that women use more of these facilitative and cooperative devices.

However, it is frequently data collected from instructors in the academic context that indicate that women do not use more question tags (Dubois & Crouch 1975; Bauman 1976), or fewer structural *okays* (Levin & Gray 1983), all of which are in contrast to much other research (Lakoff 1973; Holmes 1984; Swacker 1975). Thus, generalizations made for gender-specific language do not seem to hold for academic discourse, which is not surprising, since academic discourse – like most institutional discourse – is produced under very particular social constraints and restrictions and is subject to variations in academic style depending on a number of social and contextual categories.

Apart from an insufficient consideration of the academic context, previous research has also rarely taken culture into consideration, so that the possibility of culture-specific gender and academic speech styles has not been explored in detail. Variation in written academic discourse has been widely investigated during the last two decades focusing on cross-cultural and cross-disciplinary aspects in structure and rhetorical style of a number of written academic genres (Mauranen 1993; Berkenkotter & Huckin 1995; Chang & Swales 1999; Hyland 1999). However, relatively little is known about variation in spoken academic discourse. Since written academic discourse differs quite substantially depending on discipline and

culture, this might also be true for spoken academic discourse which will be investigated in this paper. This article investigates discourse markers and question tags from two perspectives: the contextual, i.e. their use and occurrence in academic discourse and their link to several social and contextual factors; and the cross-cultural, i.e. their use in German versus American academic speech.

This investigation is guided by two major questions: How do structural markers and question tags in their various functions contribute to variations of style in a variety of academic contexts and social roles, and what does a cross-cultural comparison tell us about the culture specificity of the use of these structures across the sexes, academic divisions, and contexts? I show that not one single factor – e.g. gender or power – but rather a constellation of the following factors are linked via conversational styles and their social meanings to the use of these structures:

1. conversational tasks in different academic divisions (Humanities / Natural Sciences);
2. discourse roles (instructor / student);
3. gender (male / female);
4. context (lecture / interactional class format);
5. culture (American / German).

## 2. Data

The English data for this project are drawn from the MICASE corpus of academic speech compiled at the University of Michigan (Simpson et al. 2000). The German data stem from a small corpus of German academic speech assembled by the author at a university in southern Germany. This article investigates the academic speech of male and female Humanities (history, literature, media, art history, philosophy) and Natural Science (physics, math, chemistry, engineering, geography) instructors and students in 32 lectures and seminars in each language. Of the 32 instructors in each language, 16 are male and 16 are female. 181 American undergraduate students and 125 German students participate in the classroom discourse.

An initial qualitative analysis of only a subset of classes resulted in a topography of functions for the structures under investigation. All transcripts were then coded for these functions manually and a statistical analysis was conducted, using Poisson regression analysis. The figures in this article list average numbers of use followed by tables listing the total numbers of use. Statistically significant results ( $p < .05$ ) are marked in bold and with an asterisk in these latter tables.

### 3. Structures

Qualitative analysis revealed a variety of lexical items that function as structural markers and four major functions of question tags used in academic discourse (other types of question tags exist, e.g. softeners, peremptory, aggressive tags, etc. – see Algeo 1988, and Holmes 1982; however, they occur less frequently in academic speech and are therefore not discussed here). A brief discussion of these categories and functions follows below. English structures and examples (all taken from MICASE; Simpson et al. 2000) are listed on the left and German structures and examples are on the right.

Structural markers mark information stage transitions to express discourse and conversational structure. This includes general thematic shifts as well as switches from monologic to interactional mode.

Most frequent English structural markers: <i>Okay, alright, right, now</i>	Most frequent German structural markers: <i>Ja, nun, gut, so, (okay)</i>
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S1:...don't be worried it almost never falls. I've been told that. **okay** hormonal signals, how does a hormone work? It is produced by very specialized, cells...

Deswegen wird die Vorlesung Frau Professor Müller halten. **Ja**. Zum Ablauf heute, Ich mach die kurze Einführung ins Thema...  
[That's why Professor Müller will give the lecture. **Okay**. Concerning today's lecture, I'll give a short introduction into the topic,...]

Four types of question tags are distinguished here and are discussed below: progression checks, modal question tags, facilitative question tags, and common ground question tags. Progression checks check on the listeners' understanding of a previous proposition or section, not primarily to elicit questions but to elicit backchanneling or to point up the end of a section or important information. They focus the listeners' attention on the preceding information and mark it as important or potentially hard to understand. The speaker either assumes that the information that has been 'checked' is understood, and accepted, so that he or she can build on it by initiating a new section (as in the first English example below), or the speaker believes the listeners' need more information and initiates respecifying information (as in the second English example below). Usually no speaker switch occurs with progression checks.

English progression checks: <i>Okay?, alright?, right?, variable question tags</i>	German progression checks: <i>Ja?, ne/nich?, nicht wahr?</i>
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S1: ...this is probably the most important one in distinguishing liver atrophy and muscle atrophy. **okay?** huge glycogen stores, what else is the liver involved in? why what? why not be be, okay think of what you end up with after meiosis, one. you end up with, haploids. <WRITING ON BOARD> but they're duplicated already **right?** they're still duplicated because the centromere has not divided.

also es ging zunächst mal darum, die Frage zu stellen, wie läßt sich Welt gestalterisch abbilden? Dann ein zweiter Schwerpunkt. Wie läßt sich schönes gestalten? **ja?** Also der Bereich der Schönheit ist auch noch wichtig. und ähm der Bereich ähm,... der Wahrnehmung. [so first of all this was about posing the question of how the world can be represented? Then a second issue. How can beauty be represented? **Right?** So the field of beauty is also very important, and uhm the field of ... perception.]

Modal question tags request information or confirmation. They are usually followed by speaker switch, as in the examples below in which S1 represents the instructor and S with any other number represents a student.

English modal question tags:  
*Right?, variable question tags*

German modal question tags:  
*Ja?, ne/nich?, nicht wahr?, oder?*

S1: we're talking the, the very original parent. [S2: (mhm) ] so, how does the original parent start out? in meiosis? what's its ploidy?

S1: Die Zahlen sind schon älter **ne?**

S10: meiosis is, haploid. **right?** <LAUGH> (xx)

S2: Nein, die sind relativ neu. Zwei Jahre glaub ich.

[The numbers are already quite old, **aren't they?**

S1: anyone wanna help her out? meiosis has to start out diploid why?

S2: No, they're relatively new. Two years I believe.]

Facilitative question tags on the other hand do not ask for confirmation or information but are a turn offer to another speaker. According to Cameron et al. (1988: 82), they indicate "a positive interest in or solidarity with the addressee, and ... offer her or him a way into the discourse, signaling in effect, ok, your turn now."

English facilitative question tags:  
*Right?, variable question tags*

German facilitative question tags: *Ja?, ne/nich?, nicht wahr?, oder?*

S2: I hope it's nice out.

S1: Schauen Sie doch mal. Das sind aber doch sehr grosse Unterschiede, **ne?**

S3: I know you can't tell in here **can you?**

S2: Ja. da wollt ich gleich noch was zu sagen. [S1: But look. Those are pretty large differences, **aren't they?**

S2: I know it is the weirdest thing...

S2: **Yes I meant** to say something about this in a **minute.**]

Finally, common ground tags create common ground, appeal to solidarity, or solicit agreement without necessarily giving up the turn. The speaker is not checking for progression, asking for confirmation or trying to be facilitative, but is merely making a statement of which it can be assumed that both parties know what the speaker is talking about. The question tag signals this information as shared knowledge as in the examples below.

English common ground question tags: <i>Right?, variable question tags</i>	German common ground question tags: <i>Ja?, ne/nich?, nicht wahr?, oder?</i>
---	--

S1: ...exam Friday ten to twelve your last exam. that's cause for celebration alone **isn't it?** and you might think that's why the bagels are in here today, but they're not.

S1: Ich schau gleich noch mal nach. Das müssen se ja wissen **ne?** Vorher will ich aber noch was zu den Folien sagen.  
[I'll check in a second. You'll have to know that after all **won't you?** Before I do that though, I'd like to say a few words about the transparencies.]

#### 4. Use of structures by instructors in the lecture context

Since modal, facilitative, and common ground question tags are so rare in lecture discourse that reliable links to social and contextual categories cannot be made, I only discuss progression checks and structural markers used in the lecture by instructors. Statistical analysis revealed no correlation of any of the American or German structures discussed here with gender. Thus, in each language, female and male instructors use the structures in about the same amount in the lecture context.

Figure 1 shows the results for the American data and Figure 2 shows the German data. For reasons explained below, the American data is shown separating lexical items that can be used as structural markers and progression checks. For the German data, only the total use of structures has been given, since a greater variety of lexical elements can be used as structural markers and progression checks that could not be listed in all detail.

Although the numbers for German progression check use might suggest a differential use of these structures by gender, this result is not statistically significant. There is considerable individual variation for this feature; one male Natural Sciences instructor in particular uses almost as many progression checks in a single lecture as all other German instructors together.

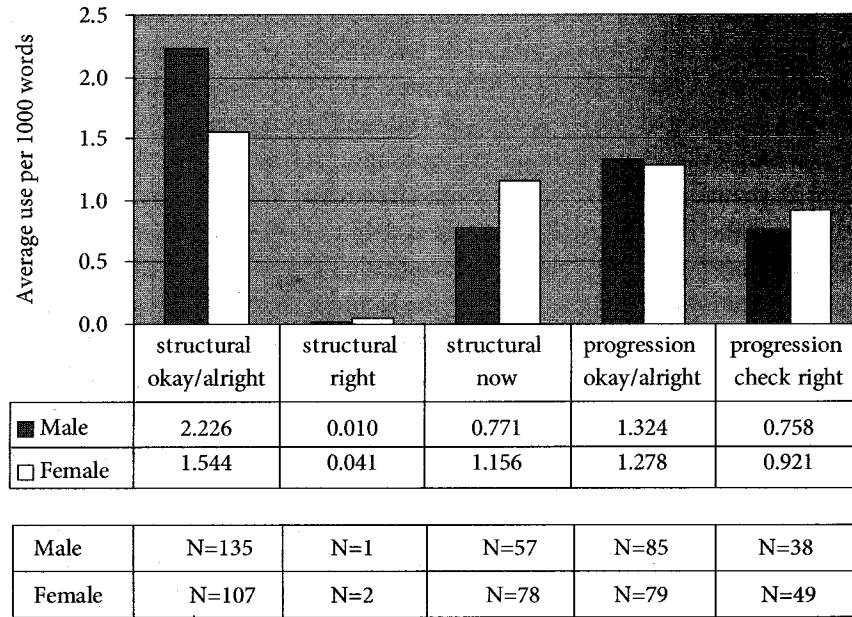


Figure 1. Sex and structural markers and progression checks in American lectures

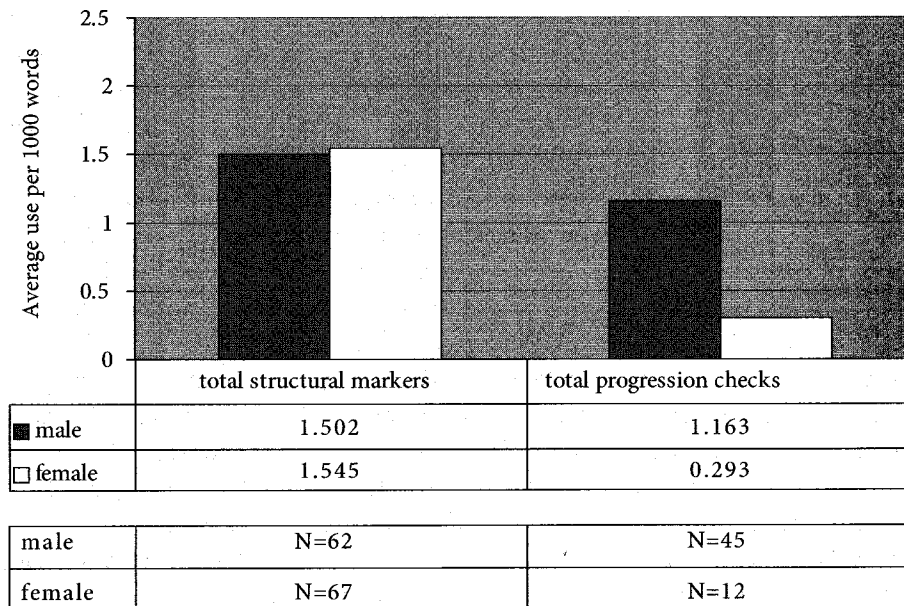


Figure 2. Sex and structural markers and progression checks in German lectures

While there does not seem to be a link to gender in the use of structural markers and progression checks, Figures 3 and 4 reveal that academic division is in fact very influential in the use of these structures. Different disciplinary traditions of knowledge building and contents in the Humanities and Natural Sciences influence the use of discourse markers and question particles. In the American data (Figure 3), structural *okay / alright* are used frequently in the Natural Sciences, but much less in the Humanities (significant at .048 in the lecture context). Progression check *okay / alright* are also used frequently in the Natural Sciences, but less in the Humanities (significant at .022 in the lecture context). Interestingly this division difference does not concern *right* and *now*, or even invariant question tags. The latter are not listed in Figure 3 as there is only one instance of an invariant question tag used as a progression check.

Concerning structural markers and progression checks, the findings for the German data are very similar to the findings in the American data. German structural markers and progression checks are used more frequently in the Natural Sciences than in the Humanities. The difference in the use of the total of structural markers is statistically significant at .026 and that of progression checks is significant at .048.

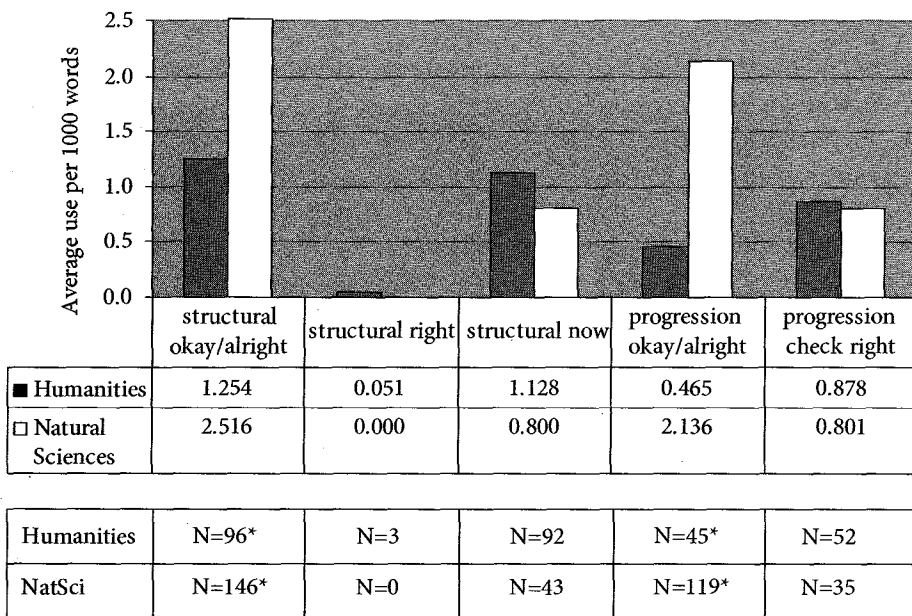


Figure 3. Academic division and structural markers and progression checks in American lectures

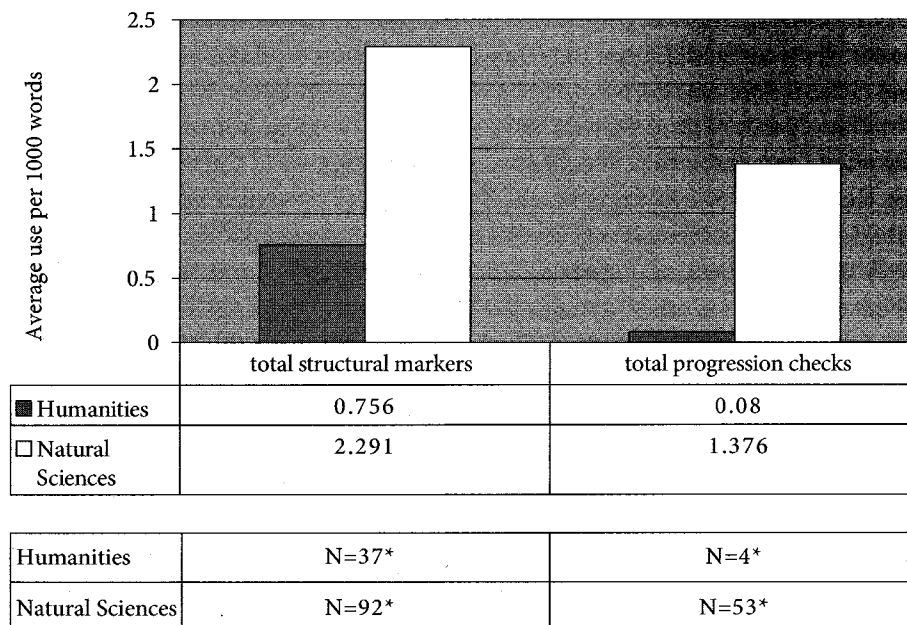


Figure 4. Academic division and structural markers and progression checks in German lectures

While in the American data it was only structural and progression *okay* and *alright* that were used differently in the two academic divisions, in the German data it is only the total use of structural markers and progression checks that is statistically significant, as individual German speakers prefer different structural markers and progression checks. Thus, there is a larger degree of idiosyncratic variation in the choice of lexical items in the German data than there is in the American data. This explains why it is imperative to consider the total of structures used in the German lectures, while in the American data a consideration of individual lexical items is more insightful.

In conclusion, when comparing gender and discipline figures, it becomes obvious that, rather than a gender trend, there is a very distinct discipline trend in the use of structural markers and progression checks. Figures 3 and 4 indicate that most structural markers and progression checks were actually used by Natural Scientists, both male and female. Thus, progression checks and structural markers play a much more important role in the teaching style of a Natural Scientist, not just in Germany but in the US as well.

This brings up the question of why structural markers and progression checks are used differently. It is argued here that different disciplinary traditions of knowledge building and content in the Humanities and Natural Sciences influence the use of discourse markers and progression checks. There are at least two reasons

for the differing use of structural and progression check structures in the two academic divisions: restrictions on shared knowledge and pedagogical progression and classroom procedures.

First, Natural Science instructors are aware that many students struggle with the often more fact-oriented subject matter as compared to the subject matter in the Humanities, which is more easily accessible from everyday knowledge. Natural Science instructors can rely less on general and commonly shared knowledge. They therefore check on understanding more often than Humanities instructors. There are of course other strategies to do that, such as asking “is that clear?” or “questions?”, a strategy which is indeed more widespread in the Natural Sciences. For example in the American data, there are 19 (0.4 in 1000 words) such structures in the Natural Science lectures as opposed to only 4 (0.0625 in 1000 words) in the Humanities lectures.

Second, topic progression seems much faster in the Natural Sciences. Lectures are frequently centered on exercises, experiments, or problem solving. These involve more frequent section changes, sometimes extensive board work, longer pauses, and question-answer exchanges that then require structural devices to take up the discourse again. Moreover, board work and complicated visuals – both more frequent in the Natural Sciences – also privilege progression checks, since they are a way to highlight important visual material lexically.

This difference in what kind of information is presented and how it is presented require the instructor to use more structural markers and progression checks to make sure students follow the lecture. Thus, both structural markers and progression checks are associated with knowledge building and progression by either seemingly checking for it or by marking it; they both highlight informational structure and make assumptions about student knowledge, so it is not surprising that their socio-functional distribution is similar.

##### **5. Use of structures in the interactional class format: speech mode and conversational role**

The structures under investigation vary significantly depending on whether they are used in lectures or in an interactional class format. Humanities instructors use structural markers and progression checks more frequently in interactional classes than in lectures. Interactional discourse requires the conversational facilitator to make transitions transparent for the interaction to work smoothly. It is furthermore important to check understanding as well, not just understanding of facts, but also understanding of opinions and standpoints that evolve in the discussion. This explains the much higher usage rate of progression check *okay* and *right* in

Humanities seminars as compared to Humanities lectures. Thus, academic context and interactional mode play an important role in the choice of discourse markers and a switch from monologic to interactional discourse makes a difference.

Although Natural Sciences instructors also use slightly more structural markers and progression checks in the interactional than in the lecture format, so that their overall use exceeds that of the Humanities instructors, the difference in use between the Humanities and the Natural Sciences is no longer statistically significant. There is also no difference in use according to gender in this context. Thus when it comes to structural markers and progression checks, male and female instructors use these two structures in an equally cooperative way in regards to the listener. Apart from an increase in the use of structural markers and progression checks in interactional discourse, various kinds of question tags (other than the progression check), backchannel signals, and receipt markers (of a previous turn) are also more frequent structures in interactional discourse.

Besides speech mode, the discourse role restricts what structures can be used in a particular context. When comparing Figures 5 and 6 for American and 7 and 8 for German interactional speech below, it becomes obvious that instructors and students use different structures, because they fulfill different conversational tasks.

Instructors are the presenters of information or facilitators of discussions; they use structural markers and progression checks much more frequently than students do. Students are the audience, discussants, or askers of questions; they are the ones who use modal question tags more frequently while they are at the same time not in a position to use progression checks or structural markers. In both languages, this student-instructor difference is statistically significant only for structural markers and progression checks (both languages at  $p=.000$ ), as the general student behavior is too variable when it comes to other question tags. However, the figures below also indicate that modal, facilitative, and 'common ground' question tags are used more frequently by students per number of words spoken.

Thus, the social role that participants occupy in the academic context constrains the speech functions they have access to when interacting with specific others. While the functions fulfilled are strikingly similar in English and German, Figures 1 and 2 indicate that structural markers and progression checks are used less frequently in the German lecture ( $p=.000$  for structural markers and  $p=.001$  for progression checks). This is the only cross-cultural difference this investigation could uncover in the use of these structures, and this difference is restricted to the lecture context and does not occur in the interactional class format. Thus, in the presentation of the German lecture much less speech management effort is put into making sure students understand and follow the subject matter presented.

## 6. Use of structures in the interactional class format: the effects of gender and academic division

The structures under investigation do not vary by academic discipline among students in the same way they vary among instructors. Structural markers and progression checks by which natural scientists differentiate themselves from humanists in the lecture context, are intrinsically linked to a powerful discourse role, and thereby to the role of instructor. I discussed above that among instructors there is no statistically significant differential use of structural markers and progression checks between the two academic divisions in interactional discourse – although obvious trends are still visible – and that students use these structures infrequently, so for the remainder of this paper I discuss the use of question tags other than progression checks.

Previous research (Cameron et al. 1988) suggests that students (who are in a less powerful position than the instructors) would use few facilitative question tags. While this is certainly the case for progression checks, for which a similar argument of power could be made, the use of facilitative question tags is in fact quite inconclusive, as they are used by instructors and students in about the same amount in both languages. Furthermore, total numbers are very low, which shows that facilitative question tags are not a very frequent technique to induce speaker change in academic discourse.

There is also no convincing gender difference in the use of facilitative question tags and common ground tags. One might expect more frequent use by women, as they could be used for a more facilitative and cooperative interactional style. However, male and female instructors and students use these two types of question tags in about the same amount. Figures 5 to 8 show the structures under investigation used in the interactional class format plotted by sex of speaker.

Previous research (Cameron et al. 1988) would also suggest that the less powerful would use more modal question tags, which is indeed the case as the figures above indicate. American instructors use .002 modal question tags per 10 words, American students use .024. German instructors use .005 modal question tags per 10 words, German students use .041. It was further assumed that males would use more than females do, as a means to control the conversational content, however, there is no evidence for a statistically significant differential use of modal question tags between the sexes in either language. Instead, this comparison shows once again a statistically significant discipline difference in both languages when it comes to the use of modal question tags among students ( $p=.021$  for English;  $p=.025$  for German). Natural Science students use modal question tags (males as well as females) to elicit and confirm information. Figures 10 and 12 show the use of the structures under investigation by students and Figures 9 and 11 show the use of the structures by instructors.



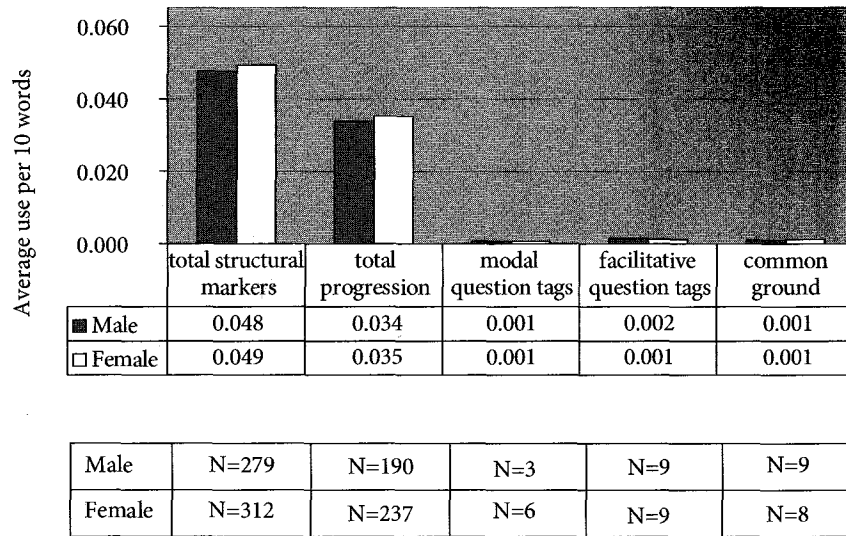


Figure 5. American instructors, structural markers and question tags by sex

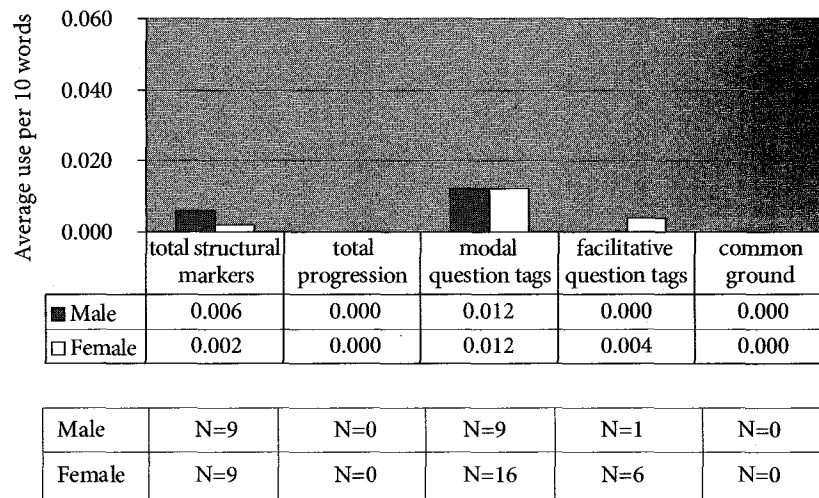
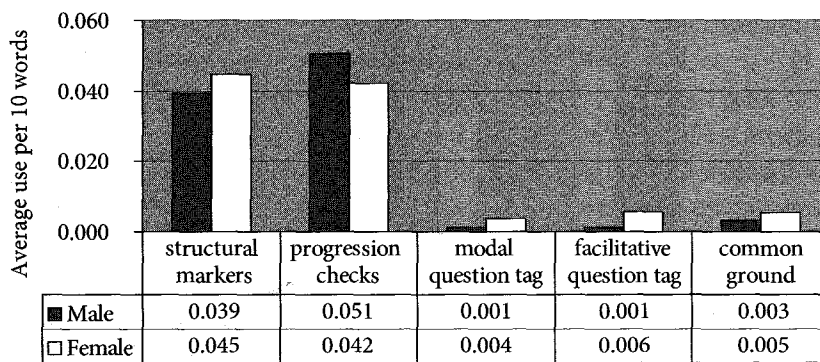
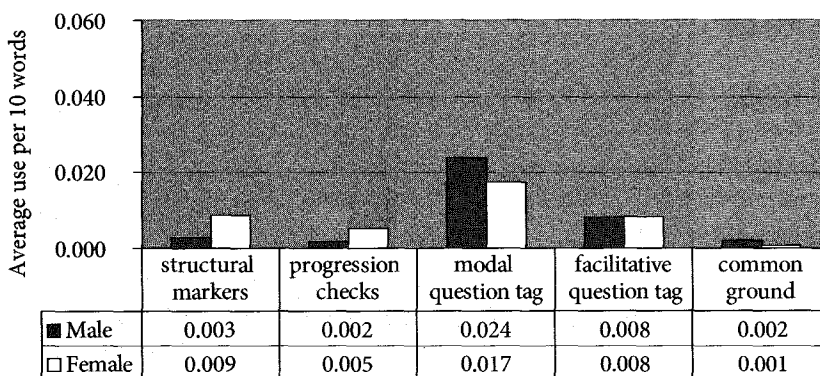


Figure 6. American students, structural markers and question tags by sex



Male	N=120	N=160	N=5	N=4	N=9
Female	N=133	N=121	N=8	N=13	N=11

Figure 7. German instructors, structural markers and question tags by sex



Male	N=4	N=9	N=8	N=7	N=5
Female	N=8	N=4	N=20	N=9	N=3

Figure 8. German students, structural markers and question tags by sex

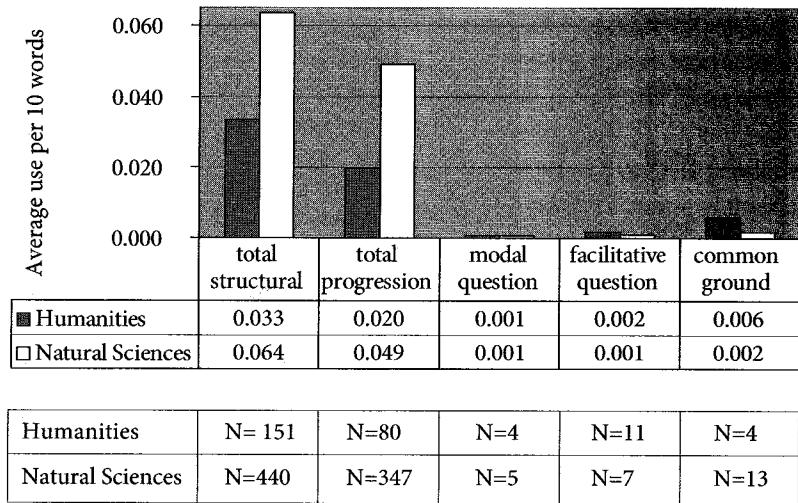


Figure 9. American instructors, structural markers and question tags by academic division

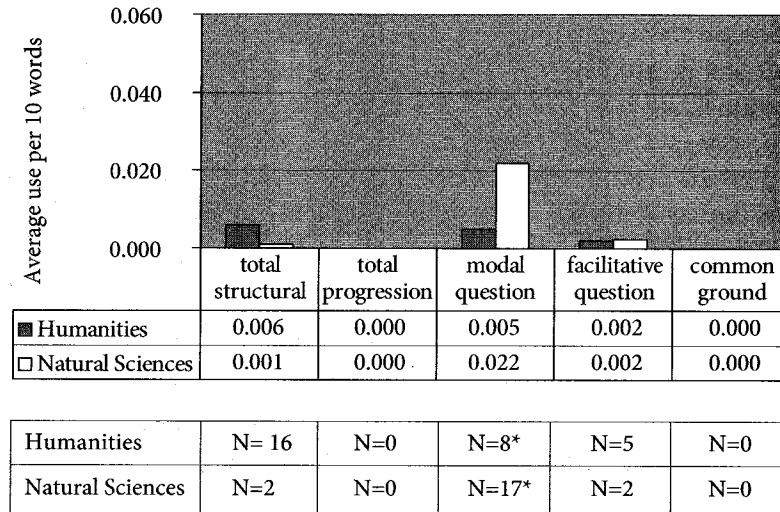


Figure 10. American students, structural markers and question tags by academic division

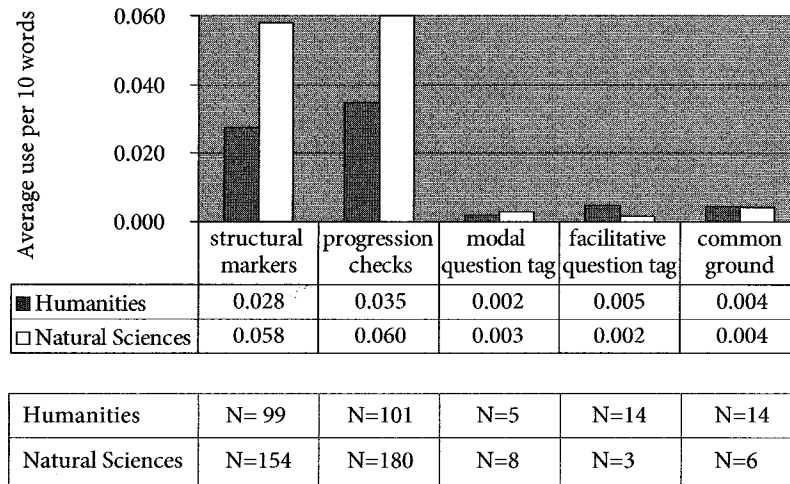


Figure 11. German instructors, structural markers and question tags by academic division

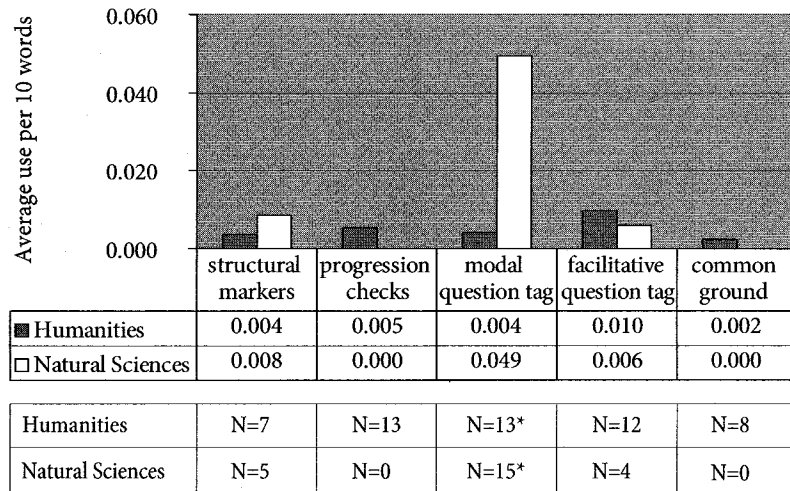


Figure 12. German students, structural markers and question tags by academic division

This also coincides with the more frequent use of questions by Natural Sciences students (not shown in figures). The question behavior shows a statistically significant difference. In both languages, students in the Natural Sciences ask about twice as many questions as students in the Humanities do ( $p=.005$  for English;  $p=.038$  for German). Besides questions, the use of modal question tags by students is the only statistically significant difference in the use of the structures under

investigation in interactional discourse. No gender or discipline differences could be uncovered for instructors, so that one has to conclude that in interactional discourse the structures under investigation are used in about the same amount by male and female instructors in the two academic divisions.

While some of the columns in the figures above might suggest gender differences in the use of some of the structures under investigation, none of these trends are statistically significant, as there is too much intra-group variation to conclude that true gender differences exist in the use of the structures investigated. Furthermore, it seems that the effects of academic division are more important in the use of the structures under investigation, so that gender effects do not seem to surface. Thus, a sociolinguistic comparison in academia that only looks at gender is destined to produce inaccurate or confusing results as interactions with other factors seem to affect structures that have been frequently linked to gender.

## 7. Conclusions

It appears that academic discourse is produced under particular social constraints that make students and instructors alter their linguistic behavior depending on discipline, context, and discourse role in both languages: English and German. Both languages are strikingly similar in the sociofunctional distribution of the structures under investigation, which means that – with the exception of usage frequency of structural markers and progression checks – there are very similar conversational restrictions in the academic discourse of both languages concerning the structures investigated.

There is, however, very little correlation between the use of structural markers and question tags on the one side and gender on the other. Thus, even assuming that women tend to be more facilitative and cooperative in other contexts and that men tend to provide more information and do less conversational work, classroom-based academic discourse heavily restricts such speech styles in respect to the structures investigated through discourse mode requirements of the lecture, turn-type pre-allocation, and demands on knowledge building and smooth and efficient classroom discourse. These restrict speech length and rights (and therefore the use of structural markers) and give preference to questions instead of a more frequent use of question tags to initiate speaker change, since questions are more direct, efficient and perfectly appropriate to the situation. Furthermore, conversational conventions of academic speech lead to stylistic differences in different disciplines, which has repercussions for the use of structural markers, progression checks and modal question tags.

Thus, the attempt to link the structures under investigation to gender produced contradictory results in previous research, since data elicited in the academic context is subject to variations in academic styles, which results in quantitative differences according to academic division, context, and discourse role. Future research on gender-preferential language will therefore have to keep the contextual constraints on these structures in academic discourse in mind and design research projects accordingly.

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