The explicit signaling of premise-conclusion sequences in research articles: A contrastive framework*

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Abstract

The aim of the present paper is to propose a contrastive framework for the comparison of the explicit signaling of premise-conclusion sequences between English and Spanish. It is argued that in order for contrastive analyses of these kind of phenomena to be valid and useful for applied fields, greater levels of precision are needed than those found in some previous studies. The model first defines the constants of the comparison: explicit premise-conclusion intersentential relations (PQISRs). Then it seeks to determine the variables of the study in the search for differences or similarities. Both the textual plane and the interpersonal plane of the explicit signaling of PQISRs are considered. The model is then applied to two parallel corpora of research articles (RAs) on business and economics, 36 RAs being in English and 36 in Spanish. The results show that both language groups seem to make PQISRs explicit with similar frequency. In addition, they use similar textual realizations for expressing PQISRs. Moreover, those textual strategies appear to be similarly distributed, except for anaphoric integrated signals. On the interpersonal level, however, some interesting differences are found in the distribution of use of the various hedging strategies available in both languages. Some implications are discussed.

Keywords: contrastive analysis; cohesive devices; hedging; premise-conclusion sequences; academic discourse.

1. Introduction

The idea that the rhetorical structures of texts in different languages might vary greatly, and that such variation should be taken into account in language-teaching programs, has received considerable attention since it was first proposed by Kaplan (1966). The two principal questions raised
by the Kaplan hypothesis concern whether the imputed differences actually exist, and whether the difficulties with discourse structure experienced by second-language learners are attributable to interference (or negative transfer) from the first language. Kaplan's approach consisted in examining the English writing of non-native English-speaking students to detect systematic textual differences in their written English style and that of native speakers. However, assuming that L1 writing skills are transferable and are transferred to L2 writing tasks, studies of this kind face the problem that what is being identified as non-English is, in fact, merely non-skilled, developmental writing.

The recent research approaches taken to contrastive rhetoric have been varied, making comparison of the findings across the analysis difficult. As Leki (1991) points out, some researches have continued to focus on L2 student writing, but more recent studies have focused primarily on textual analysis of L1 writing. In this approach, researchers target certain features of discourse and then analyze L1 texts written in a variety of cultures to see how those languages compare on those features. Some of these studies focus on students' L1 writing, but a second strand of studies focuses on published L1 texts written by professionals for consumption by native-speaker readers.

To give but a few examples of the first strand, Santana-Seda (1974) analyzes the organization of English and Spanish paragraphs written by native speakers of each language. She finds differences in aspects such as sentence length, number of sentences per paragraph, occurrence of patterns of sentence interrelationship in the English and Spanish paragraphs, number of non-sequential sentences and number of digressive sentences. She finds similarities in conventions of rhetoric concerning the occurrence of logical categories, but finds differences in the occurrence of the additive category, which was notably higher in Spanish than in English. Connor (1987) focuses on cultural differences in patterns of argumentative writing between essays written in L1 on an argumentative task by students from England, Finland, Germany, and the United States. She discovered some cross-cultural variation in the fact that the situation + problem + solution + evaluation structure was not used as consistently in the Finnish and German student compositions as it was in the English and American ones.

An example of the second strand is López (1982) who, using Swales' (1981) Four Move Model, suggests that an important number of Spanish research articles lack one of the moves in the four-move structure or have them in different sequence. Hinds (1987) focuses on reader versus writer responsibility for successful communication. He proposes to categorize the rhetorics of various cultures according to the degree to which the reader is required to make inferential bridges between propositions and to deduce meaning from a text, as opposed to the degree of the writer's duty to explicitly provide explanations of propositions. Thus, he analyzes Japanese as using a reader-responsible rhetoric, English as using a writer-responsible rhetoric, and Chinese as being in transition from a reader- to a writer-responsible rhetoric. A more recent study, Golebiowski (1998), analyzes the discourse of article introductions written by Polish scholars in English and introductions of articles written in Polish. She concludes that discoursal organization and informational structure of research-paper introductions in the field of psychology employed by Polish authors differs from that utilized by Anglo-American scholars.

The present study takes the second of these approaches since it compares L1 academic published texts from the Spanish and the Anglo-American cultures written by native speakers. It departs from the hypothesis that an important area of rhetoric that might be subject to variation as a function of cultural factors is the explicit signaling of coherence relations at above-sentence levels. In particular, the present study will—for methodological and practical reasons—narrow its focus down to the explicit signaling of premise-conclusion sequences. This includes all kinds of textual resources that are used to signal the presence of a premise-conclusion intersentential relation, i.e., a premise-conclusion coherence relation established between fragments of text that are equal to or greater than the independent sentence. Typical signals of this kind of coherence relation are the connective therefore and expressions such as these results indicate that. These features play an important role in text cohesion.

There are various studies which recognize that cohesion is a difficult area for foreign learners of English, who often use cohesive devices (especially connectives) inadequately, overuse them or simply avoid them in their writing assignments (cf. Morrow 1989). In another study, Crismore et al. (1993) acknowledge that proficiency in the area of metadiscourse—which includes cohesive devices—is notoriously difficult to attain in a foreign language (cf. Clyne 1981). In principle, there is no reason to assume that this difficulty is due to interference. However, exploring whether differences actually exist between languages in this area of rhetoric might usefully narrow the range of pedagogical options to be explored.

Borrowing Vande Kopple's (1985) system as a basis for classifying metadiscourse, Crismore et al. (1993) divided metadiscourse into textual metadiscourse (text markers and interpretative markers) and interpersonal metadiscourse (hedges, certainty markers, attributors, attitude markers, and commentary). The term metadiscourse is used to refer to 'the linguistic
material in texts, whether spoken or written, that does not add anything to the propositional content but that is intended to help the listener or reader organize, interpret, and evaluate the information given' (Crismore et al. 1993: 40).

As they argue, metadiscourse can also serve what Halliday calls the textual and interpersonal functions of language, as opposed to the ideational (the meaning or the content) function. Halliday (1973) defined the textual function by saying that it is 'an enabling function, that of creating a text' and that 'it is this component that enables the speaker to organize what he is saying in such a way that it makes sense in the context and fulfills its functions as a message' (1973: 66). Of the interpersonal function Halliday said that it includes 'all that may be understood by the expression of our own personalities and personal feelings on the one hand, and forms of interaction and social interplay with other participants in the communication situation on the other hand' (1973: 66). Thus in written texts, metadiscourse allows writers to show how different parts of the text are related with one another and how they should be interpreted. Metadiscourse also permits writers to express their attitudes toward the propositional content of the text and toward their readers.

Crismore et al.'s (1993) purpose was to investigate cultural and gender variations in the use of metadiscourse in the United States and Finland by asking whether U.S. and Finnish L1 writers use the same amounts and types and whether gender makes any difference. Their analysis revealed that students in both countries used all categories and subcategories, but that there were some cultural and gender differences in the amounts and types used.

The concept of metadiscourse has sometimes been referred to by terms such as metatext, signaling devices or gambits, comprising not always exactly the same type of phenomena. For example, Muraanen (1993a) limits the notion of metatext to its text-organizing role, which roughly corresponds to Halliday's (1973) textual function. She leaves aside those interactive elements such as expressions of the author's attitudes and certainty, which would correspond more closely to Halliday's interpersonal function, thereby focusing on features of the textual function of metatext. In other words, she explores those metatextual elements which primarily serve the purpose of textual organization such as connectors (as a result), reviews (so far we have assumed that...), previews (we show below that...) and action markers (the explanation is) (Muraanen 1993a: 9).

In her study, Muraanen explored cultural differences between texts written in English by Finnish and Anglo-American writers with respect to the use of metatext in papers from economic journals. Her results indicated that Anglo-American writers use more metatext, or text about text, than Finnish authors do. From these results Muraanen demonstrates that Anglo-American writers show more interest in guiding and orienting readers in the process of interpretation and make their presence felt in the text more explicitly than Finnish authors do when writing in English. This is taken to reflect a more reader-oriented attitude, a more positive notion of politeness, and a generally more explicit textual rhetoric. According to her interpretation, Finnish writers show a more negative kind of politeness and a greater tendency towards implicitness in their writing. She concludes that, although both rhetorical strategies can be perceived as polite and persuasive in appropriate cultural contexts, such differences may result in unintentionally inefficient rhetoric when the target audience does not share the same attitudes and assumptions as the writer.

In a further study, Muraanen (1993b) also identifies cultural differences in texts written by Finnish and Anglo-American academics with respect to text structuring around presenting a claim and textual reflexivity. She suggests that Finns may unintentionally seem less convincing to their foreign, especially Anglo-American, colleagues than they might if their rhetorical practices were more similar to Anglo-American expectations. That is, they may sound more incoherent or illogical than they need to be. This reduces their control over their own communicative output, and their rhetorical intentions may fall short of the target despite their best efforts. (Muraanen 1993b: 171).

The contrastive study of Muraanen (1993a) is clearly applied and unidirectional in nature (cf. Fisiak 1981: 2) since it starts out from the assumption that the rhetorical habits of the Finnish written culture interfere in the use of English as L2, even when the authors have an excellent knowledge of English. Here we have an important contribution to the fields of application since the study suggests the possible causes of unintentional rhetorical effects. With respect to Spanish and English, however, no applied contrastive study centred on the explicit signaling of premise-conclusion sequences has been conducted. In any case, even if such research had been addressed, there would have been no firm descriptive theoretical base with which to contrast the results obtained from the applied study. In other words, if there is no exact knowledge about the extent to which the rhetorical habits of Spanish writers differ from, or resemble, those of English writers, then little can be done to verify where the possible areas of interference lie in the rhetorical habits of Spanish writers when they write in, or are translated into, English or vice versa. It will therefore be difficult to find any type of remedy, pedagogical or otherwise. Thus, following Moreno (1995), before attempting to solve
the applied problem the corresponding previous theoretical-descriptive problem must be solved.  

Furthermore, it is argued that in order for contrastive analyses of metatext to be valid and useful for applied fields, greater levels of precision are needed than those found in some previous studies such as Mauranen (1993a) and Crismore et al. (1993). In my view, the problem in this area of language does not simply amount to using more or less connectives than a native speaker of the target language would have used. The problem is more complex, partly because of the fact that connectives are not the only means of signaling a coherence relation at textual levels.

There are previous studies that already indicate the need to distinguish between various means of signaling the same kind of coherence relation on the basis of certain semantico-pragmatic criteria that are of crucial importance in the rhetorical strategies of writers (cf. Hyde 1990; Moreno 1995). For instance, the type of textual material used to signal premise-conclusion sequences is not only realized lexico-grammatically by adverbial phrases that function grammatically as adverbial links, i.e., connectives (e.g., therefore; por tanto ‘therefore’; 4 on the basis of these considerations…; a partir de estos resultados… ‘from these results…’). They may also be realized by other devices, ranging from nominal signals integrated in the expression of either one of the related semantic units, which function as the head of the subject (e.g., the conclusion of the model is that…; si alguna conclusión puede aparecer como evidente es que… ‘if any conclusion may be seen as evident, it is that…’), to nominal signals integrated in independent sentences (e.g., conclusions; conclusiones ‘conclusions’) or other integrated verbal signals that function as the head of the predicate (e.g., our results suggest that… de todo esto se deduce que… ‘from all this it is inferred that…’), and other possibilities.

Another problem is the fact that the textual material that may be classified as text connectives is used to signal a great variety of coherence relations (e.g., causal, adversative and additive). Therefore, broad generalizations like the fact that more or less connectives, or text markers, are used in a language in comparison with another (cf. Mauranen 1993a; Crismore et al. 1993) though interesting at an exploratory level, are of little help in fields such as teaching or translation. To what extent, for example, might it be of interest to know that English is more explicit than Spanish in the field of connectives? The question rapidly arises as to whether the same would be true for all the coherence relations susceptible to being expressed by a connective. The point here is whether it is practically useful to put all the relational categories susceptible to being expressed by some signaling device to establish a comparison among languages ‘in the same bag’.

My own view is that if this type of study is ever to have some kind of real validity and application, an even greater level of precision is needed. One should reach the levels where it may be said that two given signaling devices are equivalent to each other, i.e., they express the same coherence relation. In this way, the results obtained should be more useful for possible applied studies since they would indicate how and with what frequency a single comparable category is expressed in the two languages. This is the reason why the scope of the comparison is limited to only the explicit signaling of premise-conclusion sequences.

The aim of the present paper is then to propose a suitable contrastive framework for comparing the explicit signaling of premise-conclusion sequences between Spanish and English. The various devices involved in the realization of this aspect of rhetoric will be considered from two complementary perspectives that frequently interplay in text. First, premise-conclusion signaling devices will be considered in their textual function, that is, in their text-organizing role. Secondly, these devices will be explored in their interpersonal role, looking at the various ways in which the writer expresses his/her personal feelings and attitudes about the conclusions he/she draws, interacting with the reader. Finally, I would like to suggest that the model presented here could then be applied to the analysis of the signaling of other types of inter-sentential coherence relations such as additive or adversative.

2. Methodology

Any attempt to determine whether the signaling of premise-conclusion sequences in English is similar to or different from its use in Spanish must begin by comparing this text-rhetorical variable as it is used by competent native speakers of each language. As Reid (1988) put it, texts written by non-native speakers do not constitute ‘a sufficient data sample for valid analysis because they use second language texts to investigate first language rhetorical patterns’ (Reid 1988: 19). We should therefore attempt to describe differences or similarities in rhetorical patterns across cultures on the basis of parallel corpora of texts written by native speakers of each particular language.

Now, one of the greatest difficulties arising from the comparison of texts across cultures is the selection of appropriate texts for comparison. For example, could we make generalizations on the use of premise-conclusion signaling devices irrespective of the context in which they are used? Should we not at least distinguish between the written and oral modes, or should we perhaps go even further and reach more delicate levels of precision? The next question to arise here is what the ideal level of
precision for this area of language use would be. Might it be the text type (cf. Werlich 1976), therefore distinguishing between narrative, descriptive, expository and argumentative texts? Or might it be the genre or sub-genre (cf. Swales 1990), therefore distinguishing, for instance, between the editorial, the academic paper and the sermon, all of them considered as argumentative?

In this respect, Grabe (1987) warns that researchers examining or comparing expository text, for example, must be sure that they are comparing the same type of text across cultures. In his examination of texts in English, Grabe found that the single category of expository writing covered several sub-genres. He was able to identify as text types within the category of expository writing: humanities, general information, and two different types of natural science texts. He suggests that if clear and objectively defined linguistic features of texts can distinguish between text types in English, presumably these same features might be defined for other languages, contributing to the descriptive characterization of text types across languages.

It is then expected that the use of premise-conclusion signaling devices may vary not only as a function of cultural factors but also of contextual ones. Therefore, in order to control as many contextual variables as possible (cf. Hymes 1964: 31), the comparison should be established between two independent corpora, one in Spanish and another in English, or parallel texts that may be related to each other by some principle of sufficiently unifying homogeneity. The present study assumes that such homogeneity is provided by the hypothesized universality of the research article sub-genre. According to Widdowson (1979), there is a universal rhetoric of scientific exposition which is structured according to a certain discourse pattern which "with some tolerance for individual stylistic variation, imposes a conformity on members of the scientific community no matter what language they happen to use" (Widdowson 1979: 61).

Thus, following this claim, 36 research articles were chosen in each language following conventional sampling procedures. In order to control the subject-matter variable, since this might also affect the use of the phenomenon under study, it was decided that the two subsamples of research articles should be balanced in terms of topic. Accordingly, the resulting sample in each language consisted of 18 research articles about marketing-management and 18 research articles about finance-economy.

Since not all sections of the research articles may be considered as homogeneous in terms of text type, it was also decided that each subcorpus should be balanced in terms of superstructure (van Dijk and Kintsch 1983: 54). This is another important contextual variable that might affect the frequency of occurrence of the phenomena under study.

Thus 11 research articles in each language followed the overall pattern of Introduction–Procedure–Discussion and 25 research articles in each language showed more variable superstructures: Problem–Analysis–Solution; Situation Explanation; Situation–Analysis–Forecast and Problem–Solution Evaluation.

All research articles were taken to be written in Standard Spanish or English since they had been published by some of the most widely read academic journals on business and economics in the main Spanish university libraries.  

3. Contrastive framework

Before starting a contrastive analysis between two or more languages or between certain particular aspects of such languages, we must be sure that we are really comparing elements that can in fact be compared. That is, although both entities might differ in some sense, they do have some characteristics in common. This requirement is essential when one wishes to make contrasts—that is, when one is searching for differences—since differences are only significant with respect to some factor of equality.

The first step is then to define the contrastive principles that will allow us to establish the constants of the comparison between English and Spanish: namely, the tertia comparationes.

3.1. The study constants: the tertia comparationes

3.1.1. Qualitative equivalence

The present study starts out with the theoretically-based notion that coherence relations can be represented in general conceptual terms (Hobbs 1979; Mann and Thompson 1986). The main characteristic of these conceptual categories is that they refer to the functional-relational meaning of the segments of the discourse. In particular, they refer to the informational surplus, e.g., premise and conclusion, that coherence relations afford the interpretation of the related discourse segments above and beyond the semantic interpretation that they would receive if they were isolated. This informational surplus is functional or pragmadoiscoursive since it is defined contextually and is independent of concrete textual realizations. It is assumed that both Spanish and English readers use these conceptual categories in interpreting coherence relations.

According to Sanders et al. (1992, 1993), readers use their knowledge of primary concepts, or primitives, to infer the relations. The four cognitive primitives are the following: basic operation (additive and causal relations); source of coherence (semantic and pragmatic relations);
order of the segments (basic and non-basic order); polarity (positive and negative relations). These primitives are properties of the coherence relations and consequently they are the criteria for identifying the coherence relations’ (Sanders et al. 1993: 98).

Thus, a premise-conclusion coherence relation (or argument-claim, in Sanders et al. terminology) is identified if the relation satisfies the following criteria: basic operation (causal); source of coherence (pragmatic); order of the segments (basic); polarity (positive). In addition, following one descriptive parameter from Mann and Thompson (1986, 1988), it is established that the event or observation expressed by the second discourse segment, the conclusion, should be of a non-volitive character. Furthermore, the event(s) or observation(s) expressed by the first discourse segment should not be of a conditional character. The location of a PQISR through a combination of such criteria can be ratified intuitively by the affirmative response to the following interactive question: What is the non-volitive logical conclusion of what has been said before? Let us now look at some examples of these criteria:

**Basic operation (causal)**

According to Sanders et al. (1993), a causal operation exists if an implication relation (P → Q) can be deduced between the two discourse segments (1993: 99). Let us consider the following example taken from the corpus analyzed, in which the ‘ – > ’ symbol represents the boundary between the two propositions or discourse segments.

(1) Many American companies have embraced a form of decentralization that involves highly autonomous business units and limited information flows both vertically and horizontally. – As a consequence, top management has become distanced from the details of the business.

(Porter 1992: 71)

As may be seen, (1) is a case of a causal relation, since an implication relation is deduced, that is, the situation expressed by the second proposition is interpreted as the result of the process expressed by the first proposition.

**Source of coherence (pragmatic)**

The second primitive is called source of coherence. The two values of this primitive are semantic and pragmatic. The distinction between these two subclasses within coherence relations has been pointed out by various authors (e.g., Halliday and Hasan 1976: 240; van Dijk 1977: 208; Mann and Thompson 1988: 257; Redeker 1990: 369). According to Sanders et al. (1993: 99) a relation is semantic if the discourse segments are related because of their propositional content, i.e., the locutionary meaning of the segments. For instance, the sequence in (2) is coherent because it is part of our world knowledge that running causes fatigue. That is, the state of affairs in the second segment is interpreted as the cause of the state of affairs in the first segment.

(2) Theo was exhausted because he had run to the university.

(Constructed example from Sanders et al. 1993: 99)

According to the same authors, a relation is pragmatic if the discourse segments are related because of the illocutionary meaning of one or both of the segments. In pragmatic relations the coherence relation concerns the speech act status of the segments. For instance, in the pragmatic relation (3) the state of affairs in the second segment is not the cause of the state of affairs in the first segment, but the justification for making that utterance.

(3) Theo was exhausted, because he was gasping for breath.

(Constructed example from Sanders et al. 1993: 99)

Taking examples from the corpus analyzed in the present work, (4) is a case of a semantic causal relation and (5) is an example of a pragmatic causal relation.

(4) Boards, which have come to be dominated by outside directors with no other links to the company, exert only limited influence on corporate goals. The presence of knowledgeable major owners, bankers, customers, and suppliers on corporate boards has diminished. An estimated 74% of the directors of the largest U.S. corporations are now outsiders, and 50% are CEOs of other companies. The move to outside directors arose out of calls for greater board objectivity. But the cost of objectivity has been directors who lack ties to the company and whose own companies are in unrelated businesses. – As a consequence, they often lack the time or ability to absorb the vast amounts of information required to understand a company’s internal operations.

(Porter 1992: 71)

(5) The average profitability of U.S. industry is higher than that in Japan and Germany, yet American shareholders have consistently achieved no better or lower returns than Japanese (and recently Germany shareholders). – There is thus no simple connection
between average corporate returns on investment and long-term shareholder returns, as much conventional wisdom about shareholder value seems to suggest.

(Porter 1992: 68)

Order of the segments (ordinary)

The third primitive is the order of the segments. Given a causal basic operation, two discourse segments can be connected in the ordinary or the reversed order. In (5) the first segment refers to the antecedent of the causal basic operation and the second segment refers to the consequent. Another example is the following since the premise is expressed before the conclusion:

(6) Second, we model explicitly the dynamic pricing behavior of the first entrant when this firm recognizes the possibility of later entrants. This is not a simple dynamic programming problem. Indeed, we assume that the first entrant knows that its first period price will affect the structure of the second period price game that it plays with the new entrant firm. Consequently, the first entrant’s pricing problem in the second period is not a simple optimization problem but rather a game theoretic one.

(Gabszewicz et al. 1992: 399)

Polarity (positive)

The fourth primitive with respect to which coherence relations can differ is polarity, which can be positive or negative. A relation is positive if the two discourse segments function directly in the basic operation. A relation is negative if not the discourse segments themselves but their negative counterparts function in the basic operation. The coherence relations in (1–6) are of a positive nature and (7) is the negative counterpart of (1).

(7) Many American companies have embraced a form of decentralization that involves highly autonomous business units and limited information flows both vertically and horizontally. In spite of this fact, top management has not become distanced from the details of the business.

(Adapted from Porter 1992: 77).

Character of the consequent (non-volitive)

A fifth distinguishing feature of causal coherence relations, that of volitive character of the consequent, has been taken from Mann and Thompson. According to them, “a relationship of “reason”… can be distinguished from one of “justification” (similar to premise-conclusion8) … in the following way: While “justification” arises in a text where one part justifies the speech act performed in the other part, “reason” arises in a text where one part provides a rationale for the volitional action expressed in the other part.” (Mann and Thompson 1986: 62). They give the following examples where this contrast can be noted:

(8) I am the moderator of this meeting. Your motion is out of order.

(9) I’m not going to start learning Dutch. You can’t teach an old dog new tricks.

(Mann and Thompson 1986: 62).

In (8) the relationship is one of justification since the first segment attempts to establish the appropriateness or acceptability of the speech act performed by the following segment of text. In (9), by contrast, the relationship is one of reason since the second segment attempts to provide the rationale for the volitional action expressed in the first part. Let us now take some examples from our corpus:

(10) We find that the IBST and STGL earnings components are priced differently by bank investors. In addition, we document cross-sectional differences in the STGL earnings/security price relation that are consistent with tax planning and inconsistent with earnings-management incentives for realizing STGL. Thus, the information conveyed by the STGL earnings component varies, depending on the economic conditions faced by the firm.

(Warfield and Linsmeier 1992: 561)

(11) The loan loss provision (LLP) possesses three properties relative to STGL that make it especially appropriate for purposes of earnings management. First, its magnitude is typically much larger than the reported level of STGL. For example, in our sample, the average LLP is 7.2 times (greater10) than the average absolute value of STGL. Second, there is a large discretionary component to LLPs (Beaver et al. 1989; Moyer 1990), just as there is for STGL. Third, a change in the LLP accrual adjustment has no direct effect on future bank cash flows, whereas a sale of investment securities may result in foregone future investment returns (Moyer 1990). Given these reasons, banks may be more likely to use LLPs to smooth earnings throughout the fiscal year and to use STGL only for marginal adjustments near the fiscal year-end.

(Warfield and Linsmeier 1992: 556)

In (10) it may be seen that the proposition expressed in the first segment of the relation justifies the speech act, that is, the conclusion performed in
of data on which the measuring instruments that will allow us to perform
the comparison systematically can be used, in turn allowing us to obtain
quantitative conclusions. We must therefore define exactly what is meant
by premise-conclusion signaling device.

3.2.1. Defining premise-conclusion signaling device
Let us consider the following example taken from the corpus analyzed,
in which the '¬' symbol represents the boundary between the two
propositions linked by a PQISR, P being the premise, and Q, the
conclusion:

(12) P [Second, we model explicitly the dynamic pricing behavior of the
first entrant when this firm recognizes the possibility of later
entrants. This is not a simple dynamic programming problem.
Indeed, we assume that the first entrant knows that its first period
price will affect the structure of the second period price game that it
plays with the new entrant.¬] ¬ Consequently, Q [the first
entrant’s pricing problem in the second period is not a simple
optimization problem but rather a game theoretic one.]

(Gabrewicz et al. 1992: 399).

In (12), the two semantic units of the premise-conclusion relation are
linked by the expression consequently. Since this expression does not add
anything to the propositional content of either one of the related semantic
units, it can be considered as an example of signaling device. Its only
function is to help the reader recognize that the previous discourse
segment is functioning as a premise for the following segment, which will
be interpreted as the conclusion. In other words, its only function is to
indicate that a PQISR should be interpreted between the two related
semantic units. However, premise-conclusion signaling devices can be
textually realized by other types of expressions that are not necessarily
text connectives, or, in Hyde’s (1990) terminology, peripheral signals. Let
us consider the following example:

(13) The purpose of this section of the questionnaire was to determine
more objectively the students’ beliefs and views concerning the
international accounting firms. As shown in the Appendix, the first
question in the questionnaire asked students to rank their top three
preferences for a position upon graduation from the university. The
responses are shown in Table 1. P [The students indicated a
substantial preference for a public accounting career with an
international firm, i.e., 45.0%, consistent with the information
gathered from interviews and classroom polls. Industrial accounting

the second segment, which is a generalization about a non-volitional
action. By contrast, in (11) the first segment provides the rationale, that is,
the reasons, for the volitional action expressed in the second segment (i.e.,
the fact that ‘banks may be more likely to use LLPs to … near the fiscal
year-end’).

In summary, if one can locate the cases in which two discourse
segments—equal to or greater than the independent sentence—appear
related by an explicit premise-conclusion relation, the constant of
the study, identified by using the five above-mentioned criteria, in English
and in Spanish, then one is dealing with cases that can be compared.
Pragmadiscursive equivalence can then be said to be the qualitative
tertium comparationis of this study.

Thus, premise-conclusion signaling devices can be compared between
English and Spanish for two main reasons. Firstly, because they fulfill a
common function: that of helping the reader to recognize how the
different parts of the discourse are pragmatically connected with one
another. Additionally, they can be compared because they express a
broadly similar coherence relation: that of premise-conclusion.

3.1.2. Quantitative equivalence
According to Kresszowski (1981), in practice qualitative contrastive
analyses alone are unable to produce useful results. To be able to do so,
they must be reinforced with quantitative contrastive analyses that
investigate the relative frequencies of equivalent phenomena.

Statistical equivalence was originally proposed by Becka (1978) for
stylistic contrastive analyses, such that this notion appears to be highly
appropriate for the present study. It was therefore decided to use statistical
equivalence as a quantitative tertium comparationis of the study, defining it
as the principle that allows us to determine the equivalence of two groups
of phenomena belonging to the same qualitative category if, additionally,
their relative frequencies do not display statistically significant differences.

3.2. The study variables
Once the constants of the study have been defined, the next question
arising is the following. Given two sets of equivalent phenomena from a
qualitative and quantitative point of view, with which criteria can the best
comparison be made in the search for differences? That is, the variables
of the study must now be defined.

Since we are now attempting to identify explicit, tangible elements in
the text, the analysis must be situated not at the discourse, or cognitive
level, but rather at the levels of text realization. This is the primary source

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(22.1%) and positions with smaller public accounting firms (14.5%) were a distant second and third respectively. The researchers expected, however, that students with a higher GPA would express greater preference than the general accounting student body. To examine for this possibility, an honors section requiring a 3.5 GPA or above was polled. Out of a possible 35 students, 32 (91.4%) stated a preference for a position with an international accounting firm. \(\Rightarrow\) These results would appear to indicate Q (the expected strong socialisation of all students toward the international accounting firms and the overwhelming attraction and socialisation of the best students toward these firms.)

(Blank, Siegel and Rigsby 1991: 287)

In (13) the PQISR expression is the whole of the italicized segment: that is, these results would appear to indicate. This segment is equally considered to be a premise- conclusion signaling device since it adds no propositional content to any of the related semantic units, P and Q. Its only function is to help the reader to appreciate how the two segments of the discourse are connected to one another. In this case, the preceding text (encapsulated by the noun phrase these results in the signaling expression) is interpreted as the premise for the conclusion expressed in the second segment, where the PQISR expression is to be found.

In cases like this one, the term PQISR signal is reserved to refer more precisely to the element of the whole signaling expression that plausibly has the most responsibility in the generation of the inferential relation. In example (12), the signal will be the actual expression consequently. In example (13), the most plausible signal will be the verb indicate, its meaning being modalised by would appear to. This study will compare the frequency and use of all kinds of lexico-grammatical devices used by writers to render premise- conclusion interential relations explicit.

3.2.2. A taxonomy of premise-conclusion signaling devices

3.2.2.1. The textual level. The above examples illustrate two possibilities of PQISR expression. However, it is possible to distinguish several types of premise-conclusion signaling devices. Such distinctions in principle arise when taking into account different semantico-pragmatic criteria at different levels of analysis, which may be crucial in the rhetorical strategies of writers. Nonetheless, since these semantico-pragmatic aspects are inevitably realized through text and depend on the signals and expressions themselves, the distinctions among types of signaling will be realized as a function of the status of the signal, or of the expression, in its linguistic environment.

The textual criteria for making such distinctions, which will be briefly explained below, have been combined in a taxonomy so that we can appreciate all the possibilities they may give rise to. The taxonomy of premise-conclusion signaling devices shown below is illustrated with examples taken from the corpus analyzed, which are presented schematically. P represents a proposition, or semantic unit, where a premise is expressed. Q represents a proposition, or semantic unit, where a conclusion is expressed. \(\Rightarrow\) represents the boundary between the two propositions or the two semantic units. The fragment of text in each schematic example is a case of premise-conclusion signaling device. Underlining is used to highlight the PQISR signals. The words in italics are means of modifying the meaning of the logical relation. The phrases in double quotes either encapsulate explicitly the semantic content of P or make an explicit prospection about the next fragment of discourse, Q. Single quotes are used for translations into English of the Spanish expressions.

**Premise-conclusion signaling devices**

**Intrinsic**

Peripheral (anaphoric)

[1a] P. \(\Rightarrow\) Thus, Q.
[1b] P. \(\Rightarrow\) Por tanto, Q.
(\(\Rightarrow\) Therefore, Q.)

[2a] P. \(\Rightarrow\) On the basis of “these considerations”, Q.
[2b] P. \(\Rightarrow\) Como se desprende del “análisis realizado”, Q.
(\(\Rightarrow\) As the analysis carried out suggests, Q)

Integrated

Anaphoric

Nominal

[3a] P. \(\Rightarrow\) The conclusion of “the model” is that Q.
[3b] P. \(\Rightarrow\) Una consecuencia de “la proposición l” es que Q.
(\(\Rightarrow\) A consequence of proposition l is that Q.)

[4a] P. \(\Rightarrow\) An important corollary is that Q.
[4b] P. \(\Rightarrow\) Quizá la conclusión más destacable de “la encuesta realizada” es que Q.
(\(\Rightarrow\) Perhaps the most remarkable conclusion of the survey carried out is that Q.)

Verbal

[5a] P. \(\Rightarrow\) We conclude that Q.
[5b] P. \(\Rightarrow\) De “todo esto” se deduce que Q.
(\(\Rightarrow\) From all this it is deduced that Q.)

[6a] P. \(\Rightarrow\) We can only conclude that Q.
or retrospection, is the basic mechanism of coherence by default, use of the prospective strategy—which will be a marked feature—has pragmatic repercussions in the rhetorical strategy of the writer. This type of criterion will be called the phoric direction of the inference and from its application will emerge three large groups of signaling devices: anaphoric (see examples [1a]–[7b]), cataphoric (see examples [8a]–[8b]) (cf. Crombie 1985: 74) and anaphoric-cum-cataphoric (see examples [9a]–[10b]). Notice that anaphoric signals are contained within the domain of the second conjoin, forming part of the same sentence (or block of sentences) that expresses the conclusion (cf. Hyde 1990: 212). Notice also how in some cases the signaling expression contains a nominal phrase, double quoted in the schematic examples above (e.g., these considerations in [2a], el análisis realizado in [2b], the model in [3a], etc.), that encapsulates the semantic content of the previous relevant fragment of text, which is functioning as the premise of the relation.

Cataphoric signals, on the other hand, are contained within the domain of the first conjoin, forming part of the same sentence (or block of sentences) that expresses the premise (cf. Hyde 1990: 212). Notice also how in some cases the signaling expression contains a nominal phrase, double quoted in the schematic examples above (e.g., what in [8a]), that makes an explicit prospection about the next conjoin (i.e., leads the reader to expect something specific in the next fragment of text). When the PQISR signals are nominal elements they have a prospecting function by themselves. For instance, in (8a) the reader will expect implications in the following fragment of discourse, and in (8b) s/he will expect a balance.

Thirdly, anaphoric-cum-cataphoric signals are not contained within the domain either of the first conjoin or of the second conjoin, but form part of an independent sentence. These cases of metatext may also include an encapsulating noun phrase (e.g., this in example [10a]) or/and a prospecting phrase (e.g., this in example [9a] or what conclusions in example [10a]).

It is important to realize that both the encapsulating and the prospecting phrases are considered as part of the signaling expression because they do not add anything to the propositional content of either of the semantic units related by the premise-conclusion relation, but only summarize its content, without developing it.

A third criterion focuses on the possibility that the causal relation may or may not be modified semantically and pragmatically. Because of the status of cases of metatext with respect to the sentence where they appear, this criterion has been given the name of sentential status of the signal. According to this criterion, there are two groups of signaling devices: peripheral and integrated. In the first case, the metatextual expression is
The explicit signaling of premise-conclusion sequences

signaling located in each subcorpus. But let us first explore more in detail how the textual and interpersonal planes interplay in this area of rhetoric and see how the contrastive model might be expanded to include the interpersonal plane of the explicit signaling of premise-conclusion sequences.

3.2.2.2. The interpersonal plane. To better understand the interplay between the textual and the interpersonal plane in the restricted area of premise-conclusion sequences, it is important to consider the social context in which they occur in the present study. They occur in a particular genre, the research article, where writers try to present their research findings to their peers—other researchers in the same field. In order to be successful, academics need to make a clear distinction between propositions already shared by the discourse community, which have the status of facts, and propositions to be evaluated or/and negotiated by the discourse community, which only have the status of claims. Two ways by which claims may be distinguished from facts is through evaluation and tentative language, or modalisation. As Myers (1989: 13) argues, 'a sentence that looks like a claim but has no hedging is probably not a statement of new knowledge.'

A reasonable explanation for why hedging might be used in academic writing is given by Myers (1989). He argues, drawing on Brown and Levinson's (1987) anthropological model of politeness, that any academic knowledge claim is a threat, or Face Threatening Act, to other researchers in the field because it infringes on their freedom to act. However, researchers need to advance claims and, out of politeness, which in this context means deference to the discourse community, may not commit themselves to these claims, by means of hedging devices.

Thus, hedging may be considered from two different perspectives. First, hedging may be considered as the usage of features that somehow modalise the meaning of the proposition they accompany, since they are used to display the degree of confidence writers have in their propositions. Second, their use may be analyzed in terms of its pragmatic and rhetorical effect on the reader, because using hedges will show how much confidence writers feel it is appropriate to display.

Hyland's (1998) study of hedges and boosters in academic writing is a useful one for two reasons. First, because it acknowledges two ways in which a statement may be modalised, its force being reduced or increased. Second, because the two above-mentioned perspectives are considered. In the words of Hyland (1998: 350):

Hedges and boosters are communicative strategies for increasing or reducing the force of statements. Their importance in academic discourse lies in their

peripheral to the rest of the structure of the sentence in which it appears and it does not usually contain any modification of the basic meaning of the premise-conclusion relation (see examples [1a]-[2b]). In this sense, peripheral signals may be considered as monolithic in the expression of relational meaning. In cases of integrated expressions, the signals are integrated in the structure of the sentence in which they appear, or, in the words of Hyde (1990: 211), 'they are expressed by elements which constitute the central categories of sentence structure, namely nominal and verbal elements.' All extrinsic signals in the corpora examined in the present study are integrated. Integrated signals do permit such modification (see examples [3a]-[10b]), although only some of these show some kind of modification (see examples [4a], [4b], [6a], [6b], [7a], [8b], [9b]).

The fourth criterion has to do with the type of modification that the relation may undergo, mainly through use of integrated signals. This is a crucial semantico-pragmatic aspect in the rhetorical strategy of the writer. Since the type of modification depends on the grammatical status of the signal, this criterion has been given precisely that name: **grammatical status of the signal**. On applying this criterion, three large groups of premise-conclusion signaling devices arise, which are realized by: **nominal elements** (see examples [3a]-[4b], [8a]-[8b], [9a]-[9b]), **verbal elements** (see examples [5a]-[5b], [10a]-[10b]) or **adjectival elements** (see examples [7a]-[7b]). The principal ways in which the meaning of the PQISR may be modified are epistemic modality and the evaluation. For example, the modal can in (6a), parce in (6b), and the adverbial only in (6a) are used to modalise the meaning of the PQISR, expressed by a verbal signal. On the other hand, evaluation through descriptive attribution of the nominal signal, as expressed by the adjective important in (4a), and the adjective key in (9a), is used to comment on the nature of the PQISR.

Thus, this criterion is of great importance since it attempts to reflect how the interpersonal plane interplays with the textual function in the rhetorical strategy of the writer (cf. Halliday 1973). Modalisation and evaluation in the case of integrated signals are two ways that allow the writer to introduce her/himself into the text by expressing feelings and personal attitudes about the actual meaning and nature of the coherence relation. For example, in (7a) the expression the result showing ... might be indicative of ... is not only used to help the reader interpret a premise-conclusion coherence relation between the two related fragments of text (textual function). It is also used by the author to express his/her attitude towards the premise-conclusion relation itself, since she/he does not entirely commit herself/himself to the claim following (interpersonal function).

With the taxonomy developed here, the second part of the contrastive model involves the classification of each of the cases of premise-conclusion
contribution to an appropriate rhetorical and interactive tenor, conveying both epistemic and affective meanings. That is, they not only carry the writer’s degree of confidence in the truth of a proposition, but also an attitude.

Hyland’s (1998) study reveals that there are differences in the use of hedges and boosters between the soft and the hard sciences. He suggests that these differences in rhetorical practices are related to the fact that academics construct knowledge as members of particular disciplinary communities and that their discoursal decisions are influenced by, and embedded in, the epistemological and interactional conventions of their disciplines. For instance, as Hyland (1998: 361) argues, writers in the soft fields can generally take less for granted and, while a paper must carry conviction, it must also appeal to the reader’s willingness to follow the writer’s reasoning. Research cannot be reported with the same confidence of shared assumptions and so has to be expressed more cautiously, using more hedges. Writers must rely far more on focusing readers on the claim-making negotiations of the discourse community, the arguments themselves, rather than relatively unmediated real-world phenomena.

In this line, the most relevant questions in the context of the present contrastive framework are the following: What is an appropriate rhetorical and interactive tenor for Spanish and English writers of research articles in the disciplines of business and economics when they want to assert a claim? Is this appropriateness realized textually in similar ways? Do Spanish and English academics writing research articles on business and economics follow similar conventions in this area of text rhetoric, since they presumably belong the same disciplinary community? In other words, do they tend to increase or reduce the force of their statements, or claims, in similar ways and with similar frequency? If differences in this area of rhetoric were found, then pointing to cultural differences, Spanish L2 writers of research articles on business and economics should be made aware of them in order to be successful in their negotiation of knowledge with their English-speaking peers.

The contrastive framework proposed so far has provided us with an ideal basis for the comparison of hedging and boosting, for we shall be comparing not only equivalent phenomena from a pragmadiscoursive point of view (explicit PQISR)—and in comparable texts—but also equivalent phenomena from a textual point of view. That is, our tertia comparisones will now be the various textual realizations of PQISR signaling obtained in our taxonomy. The next step then is to find operational definitions for hedging and boosting in order to identify comparable phenomena in each language. Let us first consider the phenomenon of hedging.

**Hedging**

The first problem encountered is that there is a lack of a satisfactory definition of hedging, as Crompton (1997) acknowledges in his review of this phenomenon in academic writing (cf. Skelton 1988; Myers 1989; Hyland 1994; Salager-Meyer 1994). Crompton realizes that the term hedge designates a ‘rag-bag’ category of items noticed in academic/scientific writing, understood by different researchers in different ways. As it seems, part of the problem derives from the fact that the epistemic and the pragmatic perspective have sometimes been intermingled. For example, some politeness strategies like impersonality and passivization are considered as hedges without any statement of a guiding principle (cf. Hyland 1994). But although hedges may be considered as realizations of politeness strategies, not all politeness strategies can be regarded as hedges.

I agree with Crompton (1997) that a functionally-based definition of hedging is desirable—even more so if we need to make comparisons between pairs of languages, and that such a definition should be tied in the first place to the notion of epistemic modality. This cognitive rationale behind hedging is emphasized by Hyland (1994: 240), who argues that ‘academics are crucially concerned with varieties of cognition, and cognition is inevitably hedged’. He identifies hedging with epistemic modality as defined by Lyons (1977: 797). ‘Any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he utters ... is an epistemically modal or modalised sentence.’ Borrowing this definition, Crompton (1997) proposes a simple definition of hedge which will be adopted in the present framework:

A hedge is an item of language which a speaker uses to explicitly qualify his/her (lack of) commitment to the truth of a proposition he/she utters.

He proposes various characterizations of hedged propositions, which, after a preliminary analysis of the present corpora, seem very appropriate for characterizing the explicit signaling of premise-conclusion sequences, and is therefore adopted as the starting point (Crompton 1997: 284). Each category of hedged conclusion, or claim, will be exemplified, where possible, with real examples in schematic form taken from my corpora.

1. Sentences with copulas other than *be*. These would include semi-auxiliaries such as *seem* and *appear*.

   [1.1] P. ← It *seems* the perfect evidence to support Q.

   [1.2] P. ← De ello *parece* deducirse Q.

   ‘P. ← From this, Q seems to be deduced.’
2. Sentences with modals used epistemically. These would include modals such as may, might, can, could and would.

[2.1] P. ← One can conclude that Q.
[2.2] P. ← Se puede concluir que Q.
‘P. ← Q may be concluded.’

3. Sentences with clauses relating to the probability of the subsequent proposition being true. The following is an example given by Crompton (1997: 284) because this does not seem to be a common feature in PQISR signaling devices.

[3.1] It is likely that the moon is made of cheese.

4. Sentences containing sentence adverbials which relate to the probability of the proposition being true.

[4.1] P. ← Quizá la enseñanza fundamental a extraer es que Q.
‘P. ← Perhaps the fundamental lesson to be learned is that Q.’

5. Sentences containing reported propositions where the author(s) can be taken to be responsible for any tentativeness in the verbal group, or non-use of factive reporting verbs such as show, demonstrate or prove. This is usually expressed by epistemic verbs (cf. Salager-Meyer 1994), that is, verbs that express less than absolute commitment, such as suggest, indicate or imply. In Crompton’s taxonomy, these fall into sub-types, and then he adds a further type that is closely related to type 5. However, I would like to embrace the sixth type within the fifth one and distinguish three subtypes under type 5. The difference between them would lie in who takes the responsibility for any tentativeness in stating the conclusion: the authors themselves, an impersonal agent, or a research entity.

5a. Where authors explicitly designate themselves as responsible for the proposition being reported, and take the role of subject in the sentence expressing the conclusion.

[5a.1] P. ← I interpret this evidence as Q.
[5a.2] P. ← Podemos interpretar este hecho como Q.
‘P. ← We can interpret this fact as Q.’

5b. Where authors use an impersonal subject, a research entity, but the agent is intended to be understood as themselves. The authors usually take the role of an implicit passive agent in a passive construction.

[5b.1] P. ← These findings could be interpreted as Q.
[5b.2] P. ← Ello pudiera interpretarse como Q.
‘P. ← This could be interpreted as Q.’

5c. Where a research entity takes responsibility for the asserted proposition, taking the role of subject in the sentence expressing the conclusion.

[5c.1] P. ← These results indicate that Q.
[5c.2] P. ← Estos resultados indican que Q.
‘P. ← These results indicate that Q.’

Type [5b], but especially type [5c], have the rhetorical effect of minimizing the interpretative role of the researcher. As Hyland (1998) argues, there are different reasons why writers may seek to distance themselves from their interpretations of data, but the net effect is the suppression of the author’s voice and the creation of a discourse where the research appears to speak for itself.

In this pragmatic sense, two types of peripheral signals could also be distinguished:

(a) Connectives such as therefore where the author’s voice is clear in the interpretation of data.

(b) Other peripheral signals which explicitly encapsulate the research entity from which the conclusions are drawn, making the research speak for itself as in the following example:

[6.1] P. ← From these results, Q.
[6.2] P. ← As illustrated in Table 1, Q.
[6.3] P. ← Because of this lack of statistical significance, Q.

However, it is important to realize that for this distinction we are not using epistemic criteria, since the force of the conclusion is neither increased or diminished, but the pragmatic criteria of responsibility for the claim being stated.

Lastly, as the examples clearly show, it is also common to find compounding of hedges, where various types co-occur, indicating even lower commitment to the conclusions drawn in the premise-conclusion sequence. This makes the analysis more difficult. For this reason, further categories are proposed, as illustrated by the following examples.

[7.1] P. ← They (the results), too, seem to indicate that Q.
(A compounding of types 1 and 5)
[7.2] P. ← Esto indicaría que Q.
‘P. ← This would indicate that Q.’
(A compounding of types 2 and 5).

[7.3] P. « These results would appear to indicate Q. 
(A compounding of types 1, 2 and 5)

To sum up, hedges represent a weakening of a claim through an explicit qualification of the writer's commitment. Affectively—and here comes the pragmatic interpretation—this may be to show doubt and indicate that the information is presented as opinion rather than accredited fact, or it may be to convey deference, humility, and respect for colleagues' views (Hyland 1998). One important rhetorical effect is that, since these forms imply that statements contain personal beliefs based on plausible reasoning, rather than certain knowledge, they allow the reader the freedom to dispute it. Such tentativeness thus avoids personal accountability for statements, reducing the author's degree of liability (cf. Hyland 1994: 240).

Boosting

The phenomenon of boosting seems at first glance to contradict the conciliatory and defensive tactics represented by hedging. Boosters emphasize the force of propositions and display commitment to statements, thereby asserting the writer's conviction and restricting the negotiating space available to the reader. For their definition I shall draw on Hyland (1998: 350).

Boosters, such as clearly, obviously and of course, allow writers to express conviction and assert a proposition with confidence, representing a strong claim about a state of affairs. Affectively they also mark involvement and solidarity with an audience, stressing shared information, group membership, and direct engagement with readers.

In the following schematic examples taken from my corpora, the writers employ a booster to underline the conviction they wish to attach to their logic.

[1] P. « The results strongly support Q.
[2] P. « The findings do indicate that Q.
P. « The empirical findings obtained in this paper clearly show that Q.'
[4] P. « De lo que venimos diciendo, ..., no se debe deducir Q.
P. « From what we have been saying, ..., Q must not be deduced.'

As can be seen in examples [2] and [4], the modal auxiliary debe ('must'), and the emphatic operator do are considered as boosters in the present study since they are used to assert the premise-conclusion relation with confidence.

Finally, it seems clear that a functional definition of hedging and boosting is necessary for an adequate comparison between languages, because various devices may be used and the frequency of appearance of each type may also vary from one language to another. However, such a definition makes it difficult for the researcher to benefit from the advantages of computer-assisted corpus analysis. For one thing, hedges and boosters are not closed sets of items that may be automatically searched by the computer. Moreover, some of the forms that have been identified as hedges, for instance, have other functions, too (e.g., modal verbs, cf. Crompton 1997). Furthermore, the compounding of hedges and boosters in the same expression of PQISR makes the quantitative comparison between languages difficult.

The advantage of the present framework is that it will only be considering hedging and boosting in the explicit signaling of premise-conclusion sequences and this will reduce the language to be analyzed to a manually manageable size. However, this approach will face the important drawback that the lower we are in the taxonomy the fewer cases we shall be able to compare. So trying to be statistically conclusive about the interpersonal plane will probably imply the analysis of much larger text corpora than the ones analyzed here. Needless, empirical results will be given wherever possible.

4. Empirical application of the model

In order to test the model empirically, the contrastive analysis designed above was applied to two parallel corpora of comparable authentic texts: 36 research articles in Spanish and 36 in English. This involved more than 433,000 words of core text (over 192,000 words in Spanish and over 241,000 words in English). In terms of number of sentences, close to 6,000 sentences in Spanish and more than 10,300 in English were analyzed. To compare the results from each subcorpus, the Chi-square test of homogeneity in a contingency table was used.

As may be seen in Table 1 the first interesting finding is that the frequency of appearance of explicit PQISRs is very similar in the two corpora. The difference obtained (0.59) is not statistically significant for p < 0.05. Thus, it may be accepted that there is homogeneity in the frequency of appearance of the relational category analyzed. We are therefore comparing categories that are not only equivalent from the qualitative but also from the quantitative point of view. These results may be taken to support the fact that we are dealing with texts taken from a common disciplinary community.
The question now arises as to whether Spanish academics would have the same or different preferences of use of the rhetorical means available to express PQISRs. Let us consider Table 2.

As may be seen in Table 2, both subcorpora reveal in fact a highly similar range of signaling devices for expressing PQISRs. A comparative classification between Spanish and English of these devices according to textual criteria is given in the Appendix.14 The differences obtained in most categories are not statistically significant either for $p < 0.05$. The only existing difference ($p = 0.018$) is found in the relative distribution of anaphoric devices. Spanish academics seem to have a stronger preference for verbal anaphoric integrated signals, whereas in academic English this preference is not so extreme and the choice of adjectival signals is made more frequently than in Spanish. However, except at this disaggregated level of the taxonomy, overall we have not been able to demonstrate that Spanish and English academics use the various signaling devices for expressing PQISRs in different distributions ($p = 0.18$).

If we now compare the various options available on the interpersonal plane, it should be clear from Table 2 that it will not be possible to give a reliable account of their relative distribution in quantitative comparative terms owing to a lack of sufficient data at the lowest levels of the taxonomy. However, let us explore the largest group within anaphoric integrated signals, that is, verbal signals, to find out differences in the frequency of use of the various modalising means and their relative distribution. This is shown in Table 3.

Overall, the explicit signaling of PQISRs is more hedged in English than in Spanish, showing statistically significant differences ($p = 0.000$). Moreover, the distribution of devices varies as a function of the language ($p = 0.000$). English academics show a clearer tendency towards using epistemic verbs, the only real alternative being modals used epistemically. By contrast, Spanish academics distribute their preferences among other devices such as semi-auxiliaries, as well as epistemic verbs and modals used epistemically. Use of compounding devices is also greater in Spanish.

This lower frequency for Spanish academics to hedge their conclusions might be interpreted as a greater tendency to take more for granted than English academics (cf. Hyland 1998). Thus Spanish academics could be interpreted as being less cautious in reporting their research, assuming that the reader will share the necessary knowledge to arrive at the same conclusions as they do. This might have the pragmatic effect of infringing on the reader's freedom to dispute these conclusions or negotiate their claims (cf. Myers 1989: 12).

In a context where the participants in the communicative interaction share the same assumptions, a non-hedged strategy might be considered

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Table 1. Sentences containing an explicit PQISR

<table>
<thead>
<tr>
<th>Spanish</th>
<th>English</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>n 330</td>
<td>5.4%</td>
<td>699 6.8%</td>
</tr>
</tbody>
</table>

Note. The percentage is calculated from the total number of sentences in each subcorpus.

Table 2. Relative frequency of use of PQISRs signaling devices

<table>
<thead>
<tr>
<th>Category</th>
<th>Spanish</th>
<th>English</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>291</td>
<td>628</td>
<td>88.2%</td>
</tr>
<tr>
<td>Peripheral</td>
<td>176</td>
<td>386</td>
<td>60.5%</td>
</tr>
<tr>
<td>Integrated</td>
<td>115</td>
<td>242</td>
<td>39.5%</td>
</tr>
<tr>
<td>Anaphoric</td>
<td>114</td>
<td>240</td>
<td>99.1%</td>
</tr>
<tr>
<td>Noun</td>
<td>5</td>
<td>14</td>
<td>4.4%</td>
</tr>
<tr>
<td>Verb</td>
<td>106</td>
<td>199</td>
<td>93.0%</td>
</tr>
<tr>
<td>Adjective</td>
<td>3</td>
<td>27</td>
<td>2.6%</td>
</tr>
<tr>
<td>Cataphoric noun</td>
<td>1</td>
<td>2</td>
<td>0.9%</td>
</tr>
<tr>
<td>Extrinsic</td>
<td>39</td>
<td>71</td>
<td>11.8%</td>
</tr>
<tr>
<td>Noun</td>
<td>29</td>
<td>52</td>
<td>74.4%</td>
</tr>
<tr>
<td>Verb</td>
<td>10</td>
<td>19</td>
<td>25.6%</td>
</tr>
<tr>
<td>Total PQISRs</td>
<td>330</td>
<td>699</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. The percentages within each subcategory are relative to the total of the category immediately above.

Table 3. Distribution of hedging devices within PQISR anaphoric verbal signals

<table>
<thead>
<tr>
<th>Category</th>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1: With semi-auxiliaries</td>
<td>2 3.3%</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Type 2: With modals used epistemically</td>
<td>10 16.4%</td>
<td>4 2.6%</td>
</tr>
<tr>
<td>Type 5: With epistemic verbs</td>
<td>39 63.9%</td>
<td>146 94.8%</td>
</tr>
<tr>
<td>A compounding of Type 1 and 5</td>
<td>6 9.8%</td>
<td>2 1.3%</td>
</tr>
<tr>
<td>A compounding of Type 2 and 5</td>
<td>4 6.6%</td>
<td>1 0.6%</td>
</tr>
<tr>
<td>A compounding of Type 1, 2 and 5</td>
<td>0 0.0%</td>
<td>1 0.6%</td>
</tr>
<tr>
<td>Total of hedged PQISR verbal signals</td>
<td>61 57.5%</td>
<td>154 77.4%</td>
</tr>
<tr>
<td>Total of non-hedged PQISR verbal signals</td>
<td>45 42.5%</td>
<td>45 22.6%</td>
</tr>
<tr>
<td>Total of PQISR verbal signals</td>
<td>106 100%</td>
<td>199 100%</td>
</tr>
</tbody>
</table>

Note. The percentages within each of the first six categories is calculated from the total number of hedged PQISR verbal signals.
as persuasive since it would mark involvement and solidarity with the
audience, stressing shared knowledge (cf. Hyland 1998: 5). But when the
interlocutor does not share the same assumptions, this kind of strategy
might be taken as an imposition and might convey a lack of humility
So, in spite of their best efforts to be convincing, Spanish writers
might be perceived as more impositive and less persuasive by their
English-speaking colleagues.

Let us now consider the pragmatic factor of who takes the responsibility
for stating the conclusion in anaphoric verbal signals and in peripheral
signals. A distinction will be made between hedged and non-hedged
signals.

As shown in Table 4, there are no statistically significant differences in
who takes the responsibility when the verbal signals is hedged. This
responsibility is usually placed on the research entity in both languages,
with the effect of suppressing the author’s voice and the creation of a
discourse where the research speaks for itself (Hyland 1998). However, in
non-hedged anaphoric verbal signals, that is, verbs such as demonstrate
and show the relative distribution of the three possibilities does show
statistically significant differences. English-speaking academics show a
much greater tendency to place the responsibility for asserting a claim on
a research entity. So, not only do English-speaking academics tend to
qualify their commitment to their claims more than Spanish writers, but in
addition, even when they show commitment, they clearly try to distance
themselves much more from their interpretations of data than their
Spanish peers, leaving the research to speak for itself. The most common
strategy for Spanish writers in this respect is the use of a passive
construction where the passive agent is intended to be understood as the
author, as in the following schematic example:

P. ⊢ De esto se concluye que Q.
‘P. ⊢ From this it is concluded that Q.’

Within peripheral signals, statistically significant differences can also be
found, although they point in the opposite direction. English academics
show a clear preference for conjuncts, whereas Spanish academics use
relatively more peripheral signals that explicitly encapsulate the research
entity from which the conclusions are drawn. This result, which seems to
contradict the previous one, might be interpreted in the following way.
Although English-speaking academics tend to hedge their claims more,
and for doing so they choose mainly integrated verbal signals, which allow
this kind of qualification, once they have decided to fully commit
themselves by means of peripheral signals, they tend to do so with all the
consequences, assuming all their responsibility for their claims. By
contrast, Spanish academics, as well as using conjuncts, also make
considerable use of peripheral signals that encapsulate the research entity,
i.e., the premise, from which the conclusions are drawn. This is their most
preferred way to distance themselves from their interpretation of data
without qualifying their commitment to their claims.

With respect to boosting in the explicit signaling of PQISRs by means of
verbal signals, the proportion of use of these devices is so small that it is
impossible to draw reliable conclusions. Only seven cases of boosters
appeared in Spanish: the adverbial elements claramente (‘clearly’), which
occurred on two occasions; ni mucho menos (‘far from it’); evidentemente
(‘obviously’) and por supuesto (‘of course’), which occurred once each, and
the modals debe and habremos de (‘must’). In English only four boosters
occurred: the adverbial elements clearly, strongly and only, and the
auxiliary do. If these proportions were maintained in a larger corpus,
pointing to statistically significant differences, we would be able to infer
conclusions such as the following. Spanish academics would show a greater
tendency towards the use of boosters, which would be consistent with their
tendency to express greater conviction and confidence in expressing their
claims. However, the present data do not allow such a conclusion.

5. Conclusions and implications

A contrastive framework for the comparison of premise-conclusion
signaling devices has been proposed. The model has aimed to determine

<table>
<thead>
<tr>
<th>Category</th>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>In hedged anaphoric verbal signals</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Author responsibility</td>
<td>2</td>
<td>3.3%</td>
</tr>
<tr>
<td>Impersonal agent responsibility</td>
<td>10</td>
<td>16.4%</td>
</tr>
<tr>
<td>Research entity responsibility</td>
<td>49</td>
<td>80.3%</td>
</tr>
<tr>
<td>Total of hedged PQISR verbal signals</td>
<td>61</td>
<td>100.0%</td>
</tr>
<tr>
<td>In non-hedged anaphoric verbal signals</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Author responsibility</td>
<td>3</td>
<td>6.7%</td>
</tr>
<tr>
<td>Impersonal agent responsibility</td>
<td>34</td>
<td>75.5%</td>
</tr>
<tr>
<td>Research entity responsibility</td>
<td>8</td>
<td>17.8%</td>
</tr>
<tr>
<td>Total of non-hedged PQISR verbal signals</td>
<td>45</td>
<td>100.0%</td>
</tr>
<tr>
<td>In peripheral signals</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Author responsibility</td>
<td>128</td>
<td>72.7%</td>
</tr>
<tr>
<td>Research entity responsibility</td>
<td>48</td>
<td>27.3%</td>
</tr>
<tr>
<td>Total of PQISR peripheral signals</td>
<td>176</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
whether the relationship between function and form in academic Spanish and academic English is similar or different with reference to a text-rhetorical feature: the explicit signaling of premise-conclusion intersentential coherence relations (i.e., one type of metadiscourse). It consists of two parts.

First, it seeks the determination of the tertia comparationes, i.e., the constants of the comparison. For this its assumes that both Spanish and English speakers use the conceptual category of premise-conclusion in interpreting coherence relations. Next, it defines the criteria used for identifying a premise-conclusion coherence relation. Then it proposes that if one can locate the cases in which two discourse segments—equal to or greater than the independent sentence—appear related by a premise-conclusion relation signaled by means of textual realization, then one is dealing with equivalent linguistic phenomena that can therefore be compared.

Once the constants of the study are defined, the model seeks to determine the variables of the study in the search for differences or similarities. The analysis is then situated not at the discourse, or cognitive level, but rather at the levels of text realization. On the textual role of signaling devices, the model proposes various distinctions, a combination of which gives rise to a taxonomy of PQISRs signaling devices. The model proposes to use this taxonomy to classify every case of premise-conclusion signaling device identified in two parallel corpora. This provides the contrastivist with the ideal basis for the comparison of features on the interpersonal plane. In the present study, owing to a lack of sufficient data at disaggregated levels of the taxonomy, the model only focuses on the various strategies used by writers to modulate their conclusions and to distance themselves from their interpretation of data.

The main value of this framework is that it proposes the comparison of functionally and textually equivalent phenomena occurring in two comparable corpora in the search for quantitative similarities or differences. Furthermore, it arrives at an ideal tertia comparationes to explore differences or similarities on the interpersonal plane. It shows how this plane interplays with the textual plane in the explicit signaling of PQISRs by means of verbal signals in the academic discourse of Spanish and Anglo-American research articles writers.

The comparative framework proposed is then applied empirically to two corpora, one in Spanish and one in English, of 36 RAs on business and economics which guarantees the homogeneity of the samples in as many contextual and rhetorical factors as possible. Its application has led to the determination of one area of great similarity between the two writing cultures compared. Contrary to our initial expectations, the use of signaling devices to express PQISRs in the particular rhetorical context of the research article has proved to be very similar in both languages on the textual plane. Both language groups—again, in this particular rhetorical context—seem to make PQISRs explicit with similar frequency. So the phenomena under study display not only qualitative but also statistical equivalence. In addition, the two writing cultures use similar strategies for expressing PQISRs. Moreover, those strategies appear to be similarly distributed, showing no statistically significant differences except in the distribution of use of anaphoric integrated signals.

A possible explanation for these similarities might rest in the extent to which Spanish business education is influenced by English-speaking academia. For instance, it is a fact that a large number of graduate-level business texts and materials in Spanish business schools are translations from the English. Moreover, many Spanish academics in the business and economics fields have more or less frequently had to use English-language sources for their research and teaching purposes, and some of these materials are research articles.

Where differences do exist is on the interpersonal plane, pointing to different conceptions of what is an appropriate rhetorical attitude and interactive tenor for offering a claim to the academic community. Overall, Spanish academics seem to hedge their conclusions less frequently than English academics. These results suggest their greater tendency to show conviction and confidence in expressing their claims. The exploratory results obtained with reference to the use of boosting seem to be consistent with this interpretation.

If Spanish academics transferred these L1 rhetorical strategies of expressing claims to their texts in English, their English-speaking readers might feel threatened that the Spanish writers intend to infringe on their freedom to accept or negotiate their claims. This might cause some kind of rejection from the English-speaking community. Hyland (1998) offers a useful recommendation in this respect that might be applicable to Spanish academics wishing to publish in international journals: ‘writers may ... find it easier to satisfy disciplinary gatekeepers when negotiating peer review procedures by observing community expectations concerning collegial deference and limits on self-assurance’ (Hyland 1998: 353).

With respect to what is considered as an appropriate interactive tenor when presenting claims, there also seem to be differences between these two groups of academics. The differences in establishing distance seem to be somehow related to the hedging factor. In particular, differences are found in non-hedged anaphoric verbal signals, that is, in signaling expressions where the signal is a verb such as demonstrate or show. In those cases, English-speaking academics show a much greater tendency to
place the responsibility for asserting the conclusion on a research entity, leaving the research to speak for itself. Furthermore, in those cases, when Spanish writers want to distance themselves from their interpretations of data they use a different strategy. They prefer to use an impersonal subject, where the agent is still intended to be understood as the author. So, in anaphoric verbal signals overall Spanish writers tend to show more responsibility in asserting their conclusions, helping to create a closer social distance between the participants.

Within peripheral signals, which are typically non-hedged signals, the results seem to contradict the previous one, since English academics tend to take entire responsibility for their claims by using conjunctions more frequently than Spanish writers. This would appear to indicate that when English-speaking academics decide to commit themselves by means of peripheral signals, they do so with all the consequences, assuming all their responsibility for their claims, for which they use conjunctions.

By applying this model, the idea is corroborated that, in order for contrastive analyses of this type of metadiscourse to be valid, greater levels of precision are needed. As has been done in the present study, these kind of analyses should reach the levels where it may be said that we are comparing equal with equal from a pragmadiscourse point of view. For the present study only the relational category of premise-conclusion was chosen to show how the model might be applied empirically. In the same line, Moreno (1995, 1997) deals with other relational categories such as cause-effect. If we went on comparing other categories such as concession, enumeration, opposition, etc., until we had covered all possible explicit coherence relations, we would then be contributing to the descriptive characterization of genres across languages in this area of text realization. Similarly, other subgenres could have been chosen for comparison such as the political speech or the sermon.

Another implication for further contrastive analyses in this area of rhetoric is that their tertia comparationes should be based on functional rather than formal criteria. For example, if I had restricted the comparison of premise-conclusion metatext to only connectives—a formal criterion—I would have left out of the analysis almost 50 percent of the resources available in each language to express a broadly similar functional-relational category. What would have happened if the distribution of use of the various devices had differed importantly between these two languages? I could have found differences in the area of connectives, but the analysis would have been incomplete and not very useful. For instance, I would not have been able to infer implications such that Anglo-American writers show more interest in guiding and orienting readers in the process of interpretation and make their presence known in

the text more explicitly than the Spanish writers. The Spanish could have shown similar interest in guiding readers as Anglo-American writers, the only difference being that they might have preferred other means, apart from connectives, of doing so.

With the model proposed here, I have gone no further than calculating the values of similarity or disparity which characterize the linguistic performance of native speakers of Spanish and English within the particular rhetorical context of the research article with respect to the signaling of premise-conclusion sequences. However, the way is now open for applied contrastive studies that wish, for example, to explore the origins of the phenomenon of linguistic transfer, if this proved to be the case at this level of rhetoric through quantitative methods.

Two other possible uses of the results obtained by applying this model are found in fields such as English for academic purposes and translation. For example, if Spanish academics wishing to publish in English were aware of the great similarities on the textual plane and the differences on the interpersonal plane in the expression of their claims, we would be placing them at a great advantage. It would only be a matter of providing exposure to and practice with equivalent expressions available in English to the expressions they would have used to signal a particular premise-conclusion sequence in their own language, paying special attention to how the conclusions are modalized in each language. In the field of translation, the results obtained in the present study could be useful in a similar way. They could help translators to predict, given an expression of premise-conclusion relation with certain textual and interpersonal nuances in the source language, the type of expression that would have plausibly been used in the target language.
Appendix

List of PQISR signals ordered by textual categories and relative frequency of use

<table>
<thead>
<tr>
<th>Spanish</th>
<th>English</th>
<th>Signal</th>
<th>n</th>
<th>%</th>
<th>Signal</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsically peripheral anaphoric PQISR signals realized by an adverbial Phrase (IPANAP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Por tanto</td>
<td>Thus</td>
<td>51</td>
<td>28.9%</td>
<td></td>
<td>155</td>
<td>40.2%</td>
<td></td>
</tr>
<tr>
<td>Como...apreciar/observar/detectar/ver/ratejar</td>
<td>Therefore</td>
<td>15</td>
<td>8.5%</td>
<td></td>
<td>71</td>
<td>18.4%</td>
<td></td>
</tr>
<tr>
<td>En consecuencia</td>
<td>Hence</td>
<td>9</td>
<td>5.1%</td>
<td></td>
<td>27</td>
<td>7.0%</td>
<td></td>
</tr>
<tr>
<td>En suma</td>
<td>Then</td>
<td>9</td>
<td>5.1%</td>
<td></td>
<td>23</td>
<td>6.0%</td>
<td></td>
</tr>
<tr>
<td>Por consiguiente</td>
<td>As...show/illustrate</td>
<td>9</td>
<td>5.1%</td>
<td></td>
<td>16</td>
<td>4.1%</td>
<td></td>
</tr>
<tr>
<td>Como...desprender/poner de manifiesto/esperar/</td>
<td>Consequently</td>
<td>9</td>
<td>5.1%</td>
<td></td>
<td>13</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>demostrar</td>
<td>So</td>
<td>12</td>
<td>3.1%</td>
<td></td>
<td>10</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>Por lo tanto</td>
<td>To summarize</td>
<td>9</td>
<td>2.3%</td>
<td></td>
<td>9</td>
<td>2.3%</td>
<td></td>
</tr>
<tr>
<td>Asi</td>
<td>In sum</td>
<td>8</td>
<td>2.1%</td>
<td></td>
<td>8</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Por ello/todo ello</td>
<td>In summary</td>
<td>8</td>
<td>2.1%</td>
<td></td>
<td>8</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>En resumen</td>
<td>As...see</td>
<td>6</td>
<td>1.6%</td>
<td></td>
<td>6</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>A partir de...</td>
<td>In short</td>
<td>6</td>
<td>1.6%</td>
<td></td>
<td>5</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Asi pues</td>
<td>As...indicate/suggest</td>
<td>5</td>
<td>1.0%</td>
<td></td>
<td>4</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>Dicho/visto/sabido esto</td>
<td>Accordingly</td>
<td>5</td>
<td>1.0%</td>
<td></td>
<td>5</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Pues</td>
<td>From...</td>
<td>4</td>
<td>0.8%</td>
<td></td>
<td>3</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>Consiguientemente</td>
<td>Based on...</td>
<td>3</td>
<td>0.8%</td>
<td></td>
<td>3</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>Segun...comprobar/</td>
<td>Because of...</td>
<td>3</td>
<td>0.8%</td>
<td></td>
<td>2</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>desprender/poner de</td>
<td>All in all</td>
<td>3</td>
<td>0.8%</td>
<td></td>
<td>2</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>manifiesto</td>
<td>As a consequence</td>
<td>1</td>
<td>0.3%</td>
<td></td>
<td>1</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Por lo que...</td>
<td>By...argument</td>
<td>1</td>
<td>0.3%</td>
<td></td>
<td>1</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Como conclusion</td>
<td>For...reason</td>
<td>1</td>
<td>0.3%</td>
<td></td>
<td>1</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Segun...ver/apreciar</td>
<td>On the basis of...</td>
<td>1</td>
<td>0.3%</td>
<td></td>
<td>1</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Como corolario de...</td>
<td>Total</td>
<td>386</td>
<td>100%</td>
<td></td>
<td>386</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Intrinsic integrated anaphoric PQISR signals realized by a verb (IIANV)

<table>
<thead>
<tr>
<th>Signal</th>
<th>n</th>
<th>%</th>
<th>Signal</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicar</td>
<td>12</td>
<td>11.3%</td>
<td>Suggest</td>
<td>48</td>
<td>24.1%</td>
</tr>
<tr>
<td>Dedicar</td>
<td>11</td>
<td>10.4%</td>
<td>Indicate</td>
<td>45</td>
<td>22.6%</td>
</tr>
<tr>
<td>Significar</td>
<td>10</td>
<td>9.4%</td>
<td>Show</td>
<td>25</td>
<td>12.6%</td>
</tr>
<tr>
<td>Observar</td>
<td>10</td>
<td>9.4%</td>
<td>Support</td>
<td>23</td>
<td>11.6%</td>
</tr>
<tr>
<td>Implicar</td>
<td>8</td>
<td>7.5%</td>
<td>Mean</td>
<td>18</td>
<td>9.0%</td>
</tr>
<tr>
<td>Desprender (la conclusion)</td>
<td>7</td>
<td>6.6%</td>
<td>Implies</td>
<td>10</td>
<td>5.0%</td>
</tr>
<tr>
<td>Concluir</td>
<td>6</td>
<td>5.7%</td>
<td>Provide (evidence)</td>
<td>5</td>
<td>2.5%</td>
</tr>
<tr>
<td>Demostrar</td>
<td>6</td>
<td>5.7%</td>
<td>Conclude</td>
<td>5</td>
<td>2.5%</td>
</tr>
<tr>
<td>Poner de manifiesto</td>
<td>5</td>
<td>4.7%</td>
<td>Reveal</td>
<td>4</td>
<td>2.0%</td>
</tr>
<tr>
<td>Querer decir</td>
<td>4</td>
<td>3.8%</td>
<td>Demonstrate</td>
<td>4</td>
<td>2.0%</td>
</tr>
<tr>
<td>Confirmar</td>
<td>4</td>
<td>3.8%</td>
<td>Interpret as</td>
<td>4</td>
<td>2.0%</td>
</tr>
<tr>
<td>Extraer (la conclusion/la consecuencia)</td>
<td>4</td>
<td>3.8%</td>
<td>Follow</td>
<td>3</td>
<td>1.5%</td>
</tr>
<tr>
<td>Suponer</td>
<td>3</td>
<td>2.8%</td>
<td>Provide (support/justification)</td>
<td>2</td>
<td>1.0%</td>
</tr>
<tr>
<td>Inferir</td>
<td>2</td>
<td>1.9%</td>
<td>Corroborate</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>Justicar</td>
<td>2</td>
<td>1.9%</td>
<td>Confirm</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>Interpretar como</td>
<td>2</td>
<td>1.9%</td>
<td>Yield</td>
<td>1</td>
<td>0.5%</td>
</tr>
<tr>
<td>Sugerir</td>
<td>2</td>
<td>1.9%</td>
<td>Total</td>
<td>199</td>
<td>100%</td>
</tr>
<tr>
<td>Sacar (la conclusion)</td>
<td>1</td>
<td>0.9%</td>
<td>Recede</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Evidenciar</td>
<td>1</td>
<td>0.9%</td>
<td>Answer</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Resultar</td>
<td>1</td>
<td>0.9%</td>
<td>Offered (evidence)</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Exponer</td>
<td>1</td>
<td>0.9%</td>
<td>Expondre</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Llegar (a la conclusion)</td>
<td>1</td>
<td>0.9%</td>
<td>Induce</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intrinsic integrated anaphoric PQISR signals realized by an adjective (IIANAD)

<table>
<thead>
<tr>
<th>Signal</th>
<th>n</th>
<th>%</th>
<th>Signal</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicativo de</td>
<td>2</td>
<td>66.7%</td>
<td>Consistent with</td>
<td>24</td>
<td>88.9%</td>
</tr>
<tr>
<td>Deducible de</td>
<td>1</td>
<td>33.3%</td>
<td>Indicative of</td>
<td>1</td>
<td>3.7%</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>100%</td>
<td>Logical</td>
<td>3</td>
<td>3.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Supportive of</td>
<td>1</td>
<td>3.7%</td>
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Intrinsic integrated cataphoric PQISR signals realized by a noun (IIANN)

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<tr>
<th>Signal</th>
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</thead>
<tbody>
<tr>
<td>Balance</td>
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<td>100%</td>
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Extrinsic integrated anaphoric-cum-cataphoric PQISR signals realized by a noun (EIA-CN)

<table>
<thead>
<tr>
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<tr>
<td>Conclusion</td>
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<td>6.9%</td>
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<tr>
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<td>Interpretacion</td>
<td>1</td>
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</tr>
<tr>
<td>Moraleja</td>
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<td>3.4%</td>
</tr>
<tr>
<td>Resultado</td>
<td>1</td>
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<td>Resumen</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100%</td>
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Extrinsic integrated anaphoric-cum-cataphoric PQISR signals realized by a verb (EIA-CV)

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<td>Concluir</td>
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<td>Indicar</td>
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<tr>
<td>Inducir</td>
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<tr>
<td>Obtener (conclusion)</td>
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</tr>
<tr>
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<tr>
<td>Suponer</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100%</td>
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</tbody>
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Notes

1. I would like to thank John Hyde, Juacqui Deverell, Srikant Sarangi and two anonymous Text reviewers for their careful readings and insightful comments on previous versions of the present paper. Any absurdities which remain are, of course, my own.
2. Section 3.1.1. will provide the analytical tools used for identifying explicit PQISRs in the present study.
3. Henceforth we shall use the term *explicit signaling*, following Hyde (1990), in the way defined in section 3.2.1.
4. According to Fisiak theoretical contrastive analyses "do not investigate how a given category present in Language A is represented in Language B. Instead they look for the realisation of a universal category X in both A and B" (Fisiak 1981: 2).
5. Spanish expressions will be translated into English as literally as possible on the basis of formal equivalence so that the reader is able to appreciate the Spanish formal means used, without implying that this would be the best alternative.

References


