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**Matching theoretical descriptions of discourse and practical applications to teaching:
the case of causal metatext.**

Ana I. Moreno

Universidad de León (Spain)

Abstract

Many recent task-based textbooks on academic writing include at least one unit which aims at teaching how to write a cause-and/or-effect analytical essay. Most of these units introduce tasks which focus on how to express causal relations. The present paper claims that, for these focus-on-form tasks to be useful for upper-intermediate to advanced EAP learners and adequate from a descriptive point of view, they should be based on comprehensive descriptions of this aspect of discourse as it behaves in the genre intended to be learned. The aim of the study is to show how adequate the language descriptions used in recent textbooks of this kind are to illustrate causal metatext in view of recent theoretical perspectives. The study compares the accounts of causal metatext given by a sample of 11 textbooks on academic writing to the results obtained from analysing the actual expression of 283 causal coherence relations drawn from a sample of 30 cause-and/or-effect essays. The results reveal that the textbook accounts examined often provide a narrow picture of how this area of language works in this specific subgenre. The paper suggests how these applied descriptions could be improved to offer a more adequate and presumably more helpful illustration of causal metatext in this subgenre. It also offers some clues as to how causal metatext could be introduced to the targeted students through an awareness-raising process.

Keywords: EAP, task-based teaching, academic writing, discourse analysis, causal metatext, causal metadiscourse, cause-effect, causal relations, academic essays, student writing, academic textbooks, awareness-raising, coherence relations, language descriptions, academic genres

Introduction

The aim of the present paper is to demonstrate the need to bridge the gap between recent theoretical descriptions of discourse and the type of language description that should be used in the EAP classroom in accordance with recent approaches to teaching a second or foreign language (henceforward L2), such as task-based teaching (cf. Long & Crookes 1991, 1993).

Such approaches to teaching emphasise learning through doing. A task-based unit will attempt to teach the students how to carry out one or several particular tasks, rather than teach them particular language points or structures. Thus, task-based instruction takes a fairly strong view of communicative language teaching. However, to avoid associated risks like fossilisation, some authors claim that it is necessary to introduce tasks which focus on form (Skehan 1996: 23). The present paper claims that for focus-on-form tasks to be useful for upper-intermediate to advanced learners of EAP and adequate from a descriptive point of view they should be based on recent theoretical descriptions of discourse as it behaves in the genre intended to be learned (Swales, J. 1990). In other words, if we intend our students to be able to use a given targeted feature appropriately in carrying out a proposed task, it seems reasonable to suggest that this will be more likely to happen if we provide them with samples of the targeted feature as they occur in texts of the type and genre students are about to produce as the outcome of the given task.

Although this claim may not seem to be original since it is logically derived from one of the tenets of ESP instruction, the way in which some EAP courses have incorporated language descriptions leads us to reconsider whether the basic principle of ESP instruction has really been taken to its last logical consequences. The idea which gave rise to this tenet was simple. In the words of Hutchinson and Waters (1987: 7), "if language varies from one situation of use to another, it should be possible to determine features of specific situations

and then make these features the basis of the learner's course". As a matter of fact, many course developers understood and started catering for this theoretical and practical demand very rapidly with the result that ESP/EAP courses have flourished over the last few decades. At first, many were oriented to the product of communication and, more recently, there has been a shift to the process of language learning or a combination of both approaches. However, not always have their focus-on-form tasks been based on what might be considered as adequate descriptions of the language phenomena intended to be learned, at least in some areas of discourse. The main problem here is that learners may feel frustrated if they find out that the descriptions do not help them to produce appropriate language.

In order to explore how adequate the accounts given in recent task-based textbooks targeted at intermediate to advanced EAP undergraduates are in illustrating certain discourse phenomena, the present paper focuses on a given task and a given discourse feature which recurs in the genre generated by the task. The chosen task is *writing a cause-and-effect analytical essay* whose outcome is the written subgenre known as *the cause-and-effect analytical essay*. The targeted feature is what shall be referred to as *causal metatext*, or the explicit signalling of causal relations, which is usually the centre of attention of the *focus-on-form tasks* and/or *focus on language sections* included in the units designed to teach how to carry out the chosen communicative task in the examined academic textbooks.

The concept of *metadiscourse* (*metatext*, or text about text) was described by Vande Kopple (1985: 83) as the linguistic material of texts that does not add propositional content but rather signals the presence of the author (see also Mauranen 1993: 9). According to Halliday's (1973) definition, metadiscourse fulfils the textual and interpersonal functions of the language. In other words, metadiscourse allows the writer to introduce her/himself into the text in two ways: a) by organising what has been said (textual function) and b) by expressing personal feelings and attitudes and by interacting with the reader (interpersonal function).

Let us consider the following two examples of metatext in the area of causal relations:

(1)¹ {Bowes recalls that she was much more comfortable talking to people through a computer screen.} C. $\diamond$ *So* $\rightarrow$ E {instead of hanging out at parties, she made friends playing computer fantasy games and talking in on-line "chat" rooms for up to eight hours at a time.} (10)²

(2) {Some college students spend as much as half of every day on-line.} E. $\diamond$ *This may be in part because* $\leftarrow$ C {access to the Internet, e-mail and other computer activities is free and easily available at most schools.} (10)

In these two examples, the $\diamond$ symbol represents the boundary between two propositions linked by a causal relation, C being the cause, E, the effect. In (1) the cause is stated before the effect, whereas in (2) the effect is expressed before the cause. The arrows $\rightarrow$ and $\leftarrow$ represent the direction of the causal inference generated in the process of reading. In both cases, the segments in italics, i.e. *so* in (1) and *this may be in part because* in (2), are considered as cases of causal metatext because they cannot be said to add anything to the propositional content of either one of the related semantic units. In their textual role, their sole function is to help the reader recognise that in (1) the previous discourse segment is functioning as the cause of the following segment, which will be interpreted as the effect, and vice versa in (2).

Types of causal metatext like the one illustrated by (1) are commonly known as *connectives*, or *connectors*. However, as example (2) shows, causal metatext can be textually realised by other rhetorical strategies that are not necessarily connectives (see Moreno 1997, 1998). Notice too that in (2) the subordinator *because* is the element of the causal expression (or metatext) that plausibly has more responsibility in the generation of the causal inference. This is the kind of element which will more specifically receive the term *causal signal* to differentiate it from the whole causal expression, or *metatext*. In (1) the causal signal and the causal expression, or metatext, coincide in one word: *so*.

¹ This type of bracketing, (), will be used to number examples taken from texts in the academic writing textbooks not included in the tables.

² The figure in brackets at the end of the example indicates the source textbook from which it has been drawn.

The task of *writing a cause-and-effect analytical essay* was chosen for its relevance to a large number of students in a GE/EGAP³ learning context. According to the results obtained from a questionnaire completed by 103 undergraduate students of English Philology at the University of León (Spain) in 1999, around 90% of the students considered discussing the causes and effects of a given phenomenon as very important (Moreno 1999)⁴. This is not surprising. As human beings, we constantly wonder about the causes of events that take place in our daily life. Likewise, we often ponder the effect of certain events. For this form of analysis, we use a thinking process called causal analysis.

In addition, about 95% of the students surveyed considered being able to write assignments for lecturers the most important task they had to perform. And they may at some time or another have to deal with cause-and/or-effect concerns to prepare these assignments. Since causal analysis is a process that every student must be able to use effectively, learning to carry out this task in the GE/EGAP language class about topics of general interest⁵ would also be fostering the acquisition of a study skill which is so necessary for the students' academic development.

Now, as Macdonald & Macdonald (1996: 318) point out, the cause-effect pattern can be very versatile. It may be used in formal and informal situations: in a science paper, a business letter, a conversation with friends; it can be expressed in a narrative (for example, a case study of a business failure); it can be hypothetical; it can occur within other developmental patterns (comparison, argumentation, description, etc). One reason for focussing exclusively on the *cause-and/or-effect essay subgenre* has to do with assuring the intralinguistic homogeneity of the language forms presented to the students. This means teaching students a variety of causal metatext which is typical of this particular subgenre, but

³ EGAP stands for English for General Academic Purposes.

⁴ The aim of such a questionnaire was to carry out a needs analysis to aid in the syllabus design of four consecutive English language courses in the degree.

which may not be typical of other subgenres or may not behave in exactly the same way. The underlying hypothesis is that if students use some of these forms in writing this kind of essay, they will be more likely to use appropriate language than if taught causal metatext in general or in relation to other genres.

Although there may be limitations to genre theory and it may not always be possible to draw a clear line from language form to generic type, not least because in many texts there is embedding and boundary diffusion, it seems reasonable to expect some variation in the expression of cause-effect relations according to social, textual and contextual factors (Moreno 1994, 1997). Therefore, it might be worthwhile to help the students learn the conventions for expressing these relations in the particular genre required or generated by the given task, which may be different to those used in other genres.

Thus, to explore my original question on the descriptive adequacy of applied accounts of the expression of causal relations, this study first examines the descriptions of this language feature given by a sample of textbooks on academic writing which include a task-based unit that aims to train the students in writing a cause-effect analytical essay. It then tries these accounts out on actual data drawn from a corpus of cause-and/or-effect analytical essays taken from these textbooks. The corpora used for this comparison will be described in the following section.

Description of the corpora and design of the empirical research

⁵ See the last section of this paper for an illustration of the types of topics of general interest that may be suggested to the students for writing effect analytical essays.

A sample of 11 recent textbooks on academic writing was selected⁶. The major criterion for selecting the academic textbooks was that they should include a unit specifically oriented towards teaching how to write a cause-and/or-effect analytical essay. Such units should also necessarily have some section(s) illustrating the various means for expressing causal relations.

From these textbooks, a sample of cause-effect analytical essays was drawn in order to compile a corpus. It was decided to select only those essays contained in the textbooks, and not others, in order to examine the closeness-of-fit between the textbook accounts of causal metatext and the actual causal metatext found in the textbook models. The major criterion for selecting the sample was that the texts should in fact be authentic cause-and/or-effect analytical essays. A sample of 40 texts was originally drawn.

As with all types of academic essays, the cause-and/or-effect analytical essay should have an introduction, a body and a conclusion. Judging from the information contained in the academic writing textbooks, the purpose of the introduction is to get the reader to focus upon the controlling idea of the essay, stated in the thesis. The thesis statement in this type of essay is based on cause and effect reasoning and should say that A is the cause of B, B is the result of A, or that there is a chain of causes and effects leading from A to B to C. The information presented in the body must adequately support the thesis statement. The main ideas a writer intends to use as support for his/her thesis statement should become the topic sentences of the paragraphs that form the body of the paper. The conclusion of an essay of cause and effect should briefly pull together the main points of the essay and reinforce the controlling idea.

Although this was the type of organisational style most of the academic writing textbooks were trying to teach, not always did the model texts follow this generic pattern verbatim. Indeed, as research into the nature of the academic essay would seem to show, the

⁶ The sample of textbooks on Academic Writing and their targeted level of proficiency is specified in

genre of the academic essay is less predictable than the genres of the academic article. And, as Dudley-Evans and Jo St John (1998: 90) note, "there appears to be relatively little consensus about what exactly constitutes a good essay". Thus, the decision was taken that those texts which were presented as *essays* by the textbook authors should be included in the corpus, even though they did not match the above-mentioned organisational scheme exactly.

The major problem encountered in the selection was that not all the sample texts included in the textbooks were intended as models of the *essay genre*. Instead, other types of genre were provided, such as extracts from books and textbooks, and journal, newspaper and magazine articles. These were presented as background reading texts or as source texts for carrying out some kind of causal analysis. Some of these texts were automatically excluded from the sample. Another group resembled the *academic essay genre* very closely. However, it was finally decided to exclude them from the sample as well because, since they had been written for other purposes, they did not, in fact, exactly represent the subgenre the students were learning to write. This reduced the original sample of essays to 30 texts. In spite of this, the sample of causal metatext accounts drawn from the eleven academic textbooks was kept, since it was still their aim to provide students with language resources for expressing causal relations in academic essays.

Another problem was that some of the model texts were in fact extended paragraphs of the essay genre. Although they were not complete texts, given that the study was going to be qualitative rather than quantitative, it was decided to maintain them as part of the sample because they provided relevant language material to illustrate the type of phenomenon under study.

Having selected the texts according to these criteria, the assumption was made that they would represent a sample of *stereotypical* cause-and/or-effect analytical

essays/paragraphs. Therefore, the findings and implications of the study in relation to causal metatext could be generalised to the subgenre these essays/paragraphs were intended to represent but not to any other subgenre.

Method of analysis

The present study considered as its object of analysis all kinds of lexico-grammatical devices, or textual realisations, used by writers to render *cause-effect* and *effect-cause* relations explicit. Causal metatext was classified into various categories mainly according to semantico-pragmatic criteria, both textual and interpersonal, at different levels of analysis which were considered crucial in the rhetorical strategies of writers. Since these semantico-pragmatic aspects are inevitably realised through text and depend on the status of the causal signal in its linguistic environment, the various distinctions among different types of causal metatext were made as a function of that status. However, although causal metatextual expressions were classified according to their status at different levels of analysis (text, sentence, and clause), the major focus of the present study was the semantico-pragmatic features which each type allows.

Some of the criteria for making such semantico-pragmatic distinctions have been proposed in previous studies of causal relations, such as Hyde (1990) and Moreno (1995a, 1995b, 1997, 1998) and other studies on the structure of written discourse, such as Sinclair (1993). Such studies take into account a variety of factors which have proved to be vital for an adequate understanding of the explicit signalling of coherence relations, but which had hardly been considered in previous theoretical accounts. The present study has refined the taxonomies proposed in previous studies, such as Moreno (1997, 1998), by adding further criteria which will be discussed below.

A combination of all these criteria has given rise to a series of categories which make up the taxonomies shown in tables 1 and 2. These summarise the various types of *cause-effect* and *effect-cause metatext* found in the sample of cause-effect analytical essays⁷. The resulting taxonomies are illustrated with actual examples from the corpus analysed, though they are presented in schematic form. These categories will be exemplified in the results section in full form.

Table 1. Taxonomy of cause-effect metatext in cause-and/or-effect essays⁸

Intrinsic

Peripheral anaphoric

Conjunctive

Intersentential

[1] C. $\diamond$ *As a result* $\rightarrow$ E.

[2] C. $\diamond$ *Thus* $\rightarrow$ E.

[3] C. $\diamond$ *For this reason* $\rightarrow$ E.

Intrasentential (coordinating)

[4] C, $\diamond$ *so* $\rightarrow$ E.

[5] E3. $\diamond$ *After* RPE3, E4. $\diamond$ Now E5 $\diamond$ and, *as a result* (ELPE5)⁹, $\rightarrow$ E6¹⁰.

Prepositional¹¹

[6] CE. $\diamond$... $\diamond$ *Because of* RPC $\rightarrow$, SPE.

[7] CE. $\diamond$ *Due to* RPC $\rightarrow$, SPE.

Subordinating

[8] C. $\diamond$ *Since* SPC $\rightarrow$, SPE.

[9] C. $\diamond$ *As* RPC $\rightarrow$, SPE.

[10] C. $\diamond$ *If* RPC $\rightarrow$, E.

[11] C $\diamond$ *When* RPC $\rightarrow$, E.

Integrated

Anaphoric

Nominal

Intersentential

[12] CE $\diamond$... $\diamond$ Even though ..., a *positive effect of* RPC is $\rightarrow$ SPE.

Intrasentential (by means of coordination)

[13] E3 $\diamond$ As RPE3, $\rightarrow$ E4, $\diamond$ and the *end result of* RPE4 is $\rightarrow$ E5.

⁷ The coding used in the schematic examples of these taxonomies is explained in table 5.

⁸ See table 5 (appendix) for an explanation of the symbols and coding used in the schematic examples.

⁹ This may be interpreted as “as a result of PE”, where the encapsulating element is ellipted (ELPE5).

¹⁰ In this case, the causal relation is part of a chain of causes and effects. In such cases a previously-mentioned effect sometimes becomes the cause of a subsequent effect, as can also be seen in [13]. To show this fact, the number of the original cause or effect in the text is maintained.

¹¹ Note that prepositional and subordinating signals have been analysed as peripheral when the phrase or clause they serve to introduce is in first position and is separated by commas from the rest of the sentence.

Verbal

Intersentential

- [14] C. $\diamond$ |*It has been found that*| RPC *causes* $\rightarrow$ SPE.
- [15] C. $\diamond$ RPC “*can*” *also cause* $\rightarrow$ E.
- [16] C. $\diamond$ In addition, RPC *has consequently caused* $\rightarrow$ SPE.
- [17] C. $\diamond$ This (REFPC) *forces* $\rightarrow$ E, and in turn SPE.
- [18] C. $\diamond$ This (REFPC) RPC *results in* $\rightarrow$ E.

Intrasentential by means of...

Coordination

- [19] E2, $\diamond$ and RPE2 “*can*” *create* $\rightarrow$ ***serious domino effects*** in X.

Sentential relative clause

- [20] C, $\diamond$ a condition (RPC) which *eventually leads to* $\rightarrow$ SPE.

Participial clause

- [21] C1. $\langle \rangle$ In addition C2, $\langle \rangle$ *resulting in* $\rightarrow$ SPE.

Adjectival

- [22] CE $\diamond$... $\diamond$ ICPC *will also be responsible for* $\rightarrow$ SPE.

Clause structure

- [23] C. $\diamond$ I felt so RPC *that* $\rightarrow$ E.
- [24] C. $\diamond$ REPPC *has grown so serious that* $\rightarrow$ E.
- [25] C. $\diamond$... $\diamond$ The force (ELPC) *was strong enough to* $\rightarrow$ E.

Cataphoric

Nominal

- [26] *The effects of C are devastating to X* $\rightarrow$. $\diamond$ E1

Verbal

- [27] ..., but a **sudden** C *resulted in* changes *that* X $\rightarrow$. $\diamond$ E
- [28] *AA warn that* C *will cause* **dramatic** changes *in* X $\rightarrow$. $\diamond$ E1

Extrinsic anaphoric-cum-cataphoric*Nominal*

- [29] C. < < A force that strong (RPC) had **tremendous effects** on X →. < E.¹²
 [30] C. < < Finally, the effects (ELPC¹³) on X were **tragic** →. < E.
 [31] E6. < ... < < The E8 created by REPPPE6 also present another problem →: < E9.

Verbal

- [32] CE. < < Both the direct and the indirect effects of REPPC result in RPE →. < SPE.
 [33] E2. < ... Besides RPE2, RPC “can” also cause **real physical problems** (E3) →. < SPE3

Other

- [34] C. < < How “can” you tell RPC? →. < E
 (= What are the likely effects of RPC?)

Table 2. Taxonomy of effect-cause metatext in cause-and/or-effect essays**Intrinsic****Integrated***Anaphoric**Nominal*

- [1] E. < ... < < Another reason that RPE is that ← C.
 [2] E. < < RPE are the **direct** result of ← C.

Verbal

- [3] E. < < RPE “can” be caused by ← C.
 [4] E. < < RPE stems from ← C.

Subordinating

- [5] E. < < RPE because ← C.
 [6] E. < < Now it (REFPE) is not for ← C1. < < Rather, RPE because ← C2.

Prepositional

- [7] E. < < Now it (REFPE) is not for ← C1.
 [8] E. < < RPE for ← C1 and C2

*Cataphoric**Prepositional*

- [9] E for many reasons ←. < C.

¹² Note how in anaphoric-cum-cataphoric metatext, there is usually one encapsulating and one prospecting element.

¹³ This may be interpreted as “the effects of PC”, where the encapsulating element is ellipted (ELPC).

Other

[10] Why is it that E $\leftarrow$? $\diamond$ C.

[11] Why E $\leftarrow$? $\diamond$ C.

Extrinsic anaphoric-cum-cataphoric

Nominal

[12] E. $\diamond$ |AA suggests that| there is a basis for RPE $\leftarrow$. $\diamond$ C

[13] EC1 $\diamond$... I believe that (REFPEC1), but the reason SPE has more to do with C2 than with C1 $\leftarrow$. $\diamond$ SPC2

[14] E. $\diamond$ There is **no single** cause of RPE, but |researchers have uncovered| several causes, some of which are **preventable** $\leftarrow$. $\diamond$ C.

The criteria used for classifying causal metatext in this way are the following. To facilitate their presentation, they have been divided into two groups: criteria on the textual plane and criteria on the interpersonal plane.

Criteria on the textual plane

- a) Whether the causal relation is *explicit* or *implicit*. By definition, the study of causal metatext focuses on explicit relations and leaves out *implicit* causal coherence relations.
- b) The *order* of the relation. This criterion gives rise to two major groups: *cause-effect metatext* (table 1) and *effect-cause metatext* (table 2)
- c) The *role of the causal relation in the perception of overall text structure*. Two groups of metatext emerge: *intersentential* (the majority of cases) and *intrasentential*. This distinction is crucial because explicit causal relations seem to play a more important role in the appreciation of text structure when they are used to link autonomous text units from the point of view of coherence. As Sinclair (1993) points out, the most likely unit of text modelling is the orthographic sentence. In fact, his theory proves that the orthographic sentence can be usually taken as an adequate superficial indicator

of coherence unit. However, there are a few exceptions, such as cases of coordinated clauses (example [19] ¹⁴ in table 1), sentential relative clauses (example [20] in table 1) and clausal complexes which seem to be functioning quite independently from the point of view of coherence (example [21] in table 1). Although these cases are intrasentential from a syntactic point of view, they may be considered as truly textual from the point of view of coherence. Since there are no fixed set of rules to follow in this respect, each case must be considered individually.

- d) Pragmatic aspects of causal metatext, such as the *emphasis* of the causal relation. One of the most tangible ways in which this phenomenon is textually manifested is through the *textual status of the causal expression*. In some cases, the signals are contained within the domain of either one of the two semantic units related: *intrinsic signalling devices*, as in examples [1-28] in table 1 and [1-11] in table 2. In other cases, the signals are part of an expression that, by itself, constitutes an independent sentence: *extrinsic signalling devices*, as in examples [29-34] in table 1 and [12-14] in table 2. As Hyde (1990) points out, "the main pragmatic ingredient of these extrinsic signals would seem to be the especially marked emphasis or prominence that is conferred by full sentence status and its associated informational and intonational features" (1990: 457).
- e) The *basic mechanism* used for maintaining the *coherence* of the discourse in the realisation of text. This criterion is important because it attempts to capture the ways in which the expression of causal relations contributes to the perception of the text coherence. According to Sinclair (1993), the two basic mechanisms of coherence are *encapsulation* -or anaphoric reference- and *prospection* -or cataphoric reference-. This aspect is intimately linked to the direction of the causal inference, be it retrospective or

¹⁴ This type of bracketing, [], will be used for referring to examples taken from tables 1 and 2.

prospective. This distinction is relevant because, since encapsulation 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 three large groups of signalling causal devices will emerge: *anaphoric* (examples [1-25] in table 1 and examples [1-8] in table 2), *cataphoric* (see examples [26-28] in table 1 and examples [9-11] in table 2) and *anaphoric-cum-cataphoric* (examples [29-34] in table 1 and examples [12-14] in table 2).

It is interesting to notice that anaphoric signals are contained within the domain of the second semantic unit, forming part of the same sentence -or block of sentences- that expresses it. This type of causal metatext usually contains a cohesive device - usually reference, ellipsis or/and lexical cohesion- that encapsulates the semantic content of the previous relevant fragment of text. Thus it helps readers to perceive the link between the two related text segments.

Cataphoric signals, on the other hand, are contained within the domain of the first semantic unit, forming part of the same sentence that expresses it. It is also important to notice how in some cases the metatextual expression contains a cohesive device that makes an explicit prospection about the next semantic unit. This cohesive device is sometimes quantified or modified by means of a *quantifier* (such as *many*, *several*, or the plural inflection). Modifying the causal relation in this way shows how causal metatext is intimately intermingled with questions related to the macrostructuring of discourse (examples [26, 29, 30] in table 1 and [9, 14] in table 2). In cataphoric, or prospective metatext, the connection between the two related fragments is perceived because the prospecting element leads the reader to expect something specific in the next fragment of text.

Lastly, anaphoric-*cum*-cataphoric signals are not contained within the domain either of the first or of the second semantic unit, but form part of an independent sentence. These cases of metatext usually include an encapsulating and a prospecting device.

It is also important to notice that both encapsulating and prospecting devices are considered as part of the metatextual expression because they do not add anything to the propositional content of either one of the semantic units related by the causal relation, but only refer to it, without developing it further.

- f) The possibility that the causal relation may or may not be modified semantically and pragmatically. This criterion has been given the name of *sentential status of the signal* because the distinction is made in relation to the status of the causal expression with respect to the sentence where it appears. According to this criterion, two groups of signals emerge: *peripheral* and *integrated*. In the first case, the metatextual expression is peripheral to the lexico-grammatical structure which expresses one of the causal semantic units. It is usually separated by commas from the rest of the sentence and it does not usually contain modifications of the basic meaning of the causal relation (examples [1-11] in table 1). Thus, peripheral signals may be considered as invariable language chunks/blocks in the expression of causal relational meaning.

Integrated signals, on the other hand, are integrated in the lexico-grammatical structure which expresses one of the causal semantic units (examples [12-28] in table 1 and examples [1-11] in table 2). Or, in the words of Hyde (1990: 211), "they are expressed by elements which constitute the central categories of sentence structure, mainly nominal, verbal and adjectival elements." Use of these signals allows the modification of the causal relation (see point i) below).

- g) As has been shown, peripheral causal metatext is not usually modified. However, various categories have been distinguished on the basis of their *formal-functional status*. The major types are the following: *conjunctive* (examples [1-5] in table 1), *prepositional* (examples [6-7] in table 1) and *subordinating* (examples [8-11] in table 1). This distinction is important because each type of signal will be followed by a different type of *encapsulating structure*.
- h) On the textual plane the study has also focussed on *other metatextual devices co-occurring with causal metatext*. These are sometimes used to: 1) make other coherence relations explicit; or 2) reinforce the causal relation. In some cases, both devices can co-occur as in example [16] in table 1 (*in addition* and *consequently*).

Criteria on the interpersonal plane

- i) The *type of modification* that the causal relation may undergo. Modifications may occur when the causal relation is expressed by integrated signals. One major type of modification is *modalisation* (or *hedging*, cf. Crompton 1997; Hyland 1994, 1998) whereby the writer explicitly qualifies his commitment to the truth of the causal relational proposition expressed. In other words, by using hedges, the force of the causal relation is diminished (see examples [15, 19, 33, 34] in table 1 and [3] in table 2). Another type of modification is *evaluation*, or commentary, whereby the causal relation is evaluated by the writer (see examples [12, 13, 24, 25, 26, 27, 28, 29, 30, 33] in table 1 and example [14] in table 2). These two semantico-pragmatic features are of great importance since they attempt to reflect how the interpersonal plane interplays with the textual function in the rhetorical strategy of the writer.

Since these modifications depend on the formal-functional status of the signal in relation to the grammatical structure where it occurs, the criterion in this case has

been given precisely that name: *formal-functional status of the signal*. Here, various categories of causal metatext arise. The most common are nominal elements (examples [12-13, 26, 29-31] in table 1 and examples [1-2, 12-14] in table 2), verbal elements (examples [14-21, 27-28, 32-33] in table 1 and examples [3-4] in table 2), adjectival elements (example [22] in table 1), clause structures (examples [23-25] in table 1), subordinating elements (examples [5-6] in table 2) and prepositional elements (see examples [7-9] in table 2).

- j) The *agent* the author makes *responsible for stating the causal relation*, as can be seen in example [14] in table 1. Use of expressions such as *it has been found that* makes it possible for writers to distance themselves from their interpretation of data (cf. Hyland 1994, 1998). Thus, this pragmatic strategy has the rhetorical effect of suppressing the author's voice.

All in all, 283 explicit cause-effect relations were identified in the corpus of cause-and/or-effect analytical essays and classified into the categories shown above. This made it possible to confirm the presence of the semantico-pragmatic and textual features which were considered so essential for an adequate description of the explicit signalling of causal relations in this type of essay. These empirical results were then compared to the ways in which causal metatext was described in the sample of academic writing textbooks. The study mainly sought to check whether the above-mentioned features were acknowledged by these textbook accounts or not.

The major problem found to make the comparison possible was that none of the textbooks accounts was complete in itself. Therefore, it was decided to assemble all the pieces from the different textbooks together in two different tables. These summarise the ways in

which the various means of expressing cause-effect relations and effect-cause relations (tables 3 and 4 respectively) were accounted for by these textbooks as a whole.

Where examples of usage of a causal signal type were not provided by the textbooks, the summary tables provide them in a style similar to the one used by most of them. The terminology used for the categories in these two tables (in bold) corresponds to the one most frequently used by the textbooks, although for some categories no terminology was used in the textbooks whatsoever. In both cases, to appreciate the comparison better, my own terminology has been added or provided in brackets (in italics).

Table 3. Cause-effect metatext accounted for by the sample textbooks

<i>cause</i>	<i>effect</i>
Sentence connectors (<i>Peripheral anaphoric conjunctive intersentential metatext</i>)	
The demand has increased.	Therefore, So, As a result, As a consequence, Accordingly, Consequently, Because of this, Thus, Hence, For this reason, *Now,
	the prices are higher.
Coordinating conjunctions (<i>Peripheral anaphoric conjunctive intrasentential metatext</i>)	
The demand has increased,	and so
	the prices are higher.
Phrase structures (<i>Peripheral anaphoric prepositional metatext</i>)	
Due to	an increase in demand,
Because of	
As a result of	
In view of	
	the prices are higher.
Subordinators (<i>Peripheral anaphoric subordinating metatext</i>)	
Because	the demand has increased,
As /Since	
*Now (that)	
When / If	there is an increase in demand,
Because of the fact that	rainfall patterns will change,
Due to the fact that	
	the prices are higher.
	(then) prices rise.
	water supplies will diminish.
Participial phrases (<i>Peripheral anaphoric participial clause metatext</i>)	
(Stating the cause)	
Having a great deal of technology in their lives,	many young people today often have poor cultural literacy levels.
(Integrated anaphoric nominal metatext)	
The	effect of an increase in demand is
	consequence
	result
An increase in demand is	one possible reason for the cause of
	higher prices.
	to raise/increase prices.
	higher prices.
Predicate structures (<i>Integrated anaphoric verbal metatext</i>)	
An increase in demand often	causes
	results in
	leads to
	produces
	contributes to
An increase in demand often	has an effect on
	prices.
Participial phrases (<i>Integrated anaphoric verbal signals in participial clauses</i>)	
(Stating the effect)	
Water levels will change,	causing
	leading to
	contributing to
	resulting in
	changes in living patterns.
Adjectival signals (<i>Integrated anaphoric adjectival metatext</i>)	
An increase in demand may be	responsible for
	higher prices.
Clause structures (<i>Integrated anaphoric clause structure metatext</i>)	
The rise in temperature will	be so great that
	agricultural patterns will change.
	cause such terrible damage that

Table 4. Effect-cause metatext accounted for by the sample textbooks

<i>effect</i>		<i>cause</i>
Coordinating conjunctions (<i>Peripheral anaphoric conjunctive intrasentential metatext</i>)		
The prices are higher,	<i>for</i>	the demand has increased.
(Integrated anaphoric nominal metatext)		
The	<i>cause of</i> <i>reason for</i>	higher prices was an increase in demand.
Drastic changes in living patterns will be	a <i>result of</i> changes in water levels. the <i>consequence of</i> <i>effect of</i>	
The prices are higher.	One <i>reason</i> The <i>reason</i> is that	is an increase in demand. there has been an increase in demand.
(Integrated anaphoric verbal metatext)		
Higher prices are (often)	<i>caused by</i> <i>due to</i>	an increase in demand.
Higher prices	<i>result from</i> <i>follow from</i>	an increase in demand.
Participial phrases (<i>Integrated anaphoric verbal signals in participial clauses</i>)		
Living patterns will change,	<i>resulting from</i> <i>following from</i>	(Stating the cause) changes in water levels.
Subordinators (<i>Integrated anaphoric subordinating metatext</i>)		
The prices are higher	<i>because</i> <i>since</i> <i>as</i> <i>because</i>	there is an increase in demand. the demand has increased.
Prepositional signals (<i>Integrated anaphoric prepositional metatext</i>)		
The prices are higher	<i>because of</i> <i>as a result of</i> <i>on account of</i> <i>owing to</i> <i>through</i>	an increase in demand.

Results and Discussion

To compare the results let us first consider metatext features on the textual plane, and then on the interpersonal plane.

Metatext features on the textual plane

Explicit/Implicit causal relations

Although the focus of the present study was on causal metatext, that is, explicit causal relations, the ability to recognise implicit causal relations is also crucial in text comprehension. In this respect, it should be noted that not many of the textbooks examined acknowledge the fact that causal relations are sometimes implicit, as in the following example, where the cause is followed by the effect.

(3) ... At this time, the Americans were trying to destroy the dense jungle vegetation to prevent the Viet Cong from making surprise attacks from behind trees and shrubbery. {To make matters worse, 20-ton bulldozers were used to knock trees out of the way in those same areas} C. → < E {By the end of the war, approximately 5.43 million acres of tropical forests were reduced to blackened stubble.} (5)

It is important to realise that verbs such as *reduce* in example (3), or others such as *destroy*, *disappear*, *multiply*, *kill*, and so on, are causative (Frawley 1992). However, since they add new propositional content to one of the related semantic units, in this case, the result, they cannot be considered as cases of causal metatext- they do not meet one of the defining requirements.

Order of the causal relation: cause-effect / effect-cause

Most of the textbooks examined give account of the fact that a causal relation may be expressed in the ordinary and the reversed order. Therefore, they may be considered adequate in this respect.

Intrasentential / intersentential causal relations

One problem to be noted in most textbook accounts is that most categories of causal expressions are illustrated by means of just one sentence. However, to be able to appreciate adequately the properties of causal metatext in its context of occurrence, a minimum of two sentences is usually required. Almost the only category of signals which is illustrated by means of two sentences is the category of connectives (see tables 3 and 4).

The great disadvantage of this form of presentation is that it does not facilitate the deduction of adequate hypotheses on how causal metatext works. For instance, some examples given in summary tables 3 and 4 might lead the students to believe that the causal connection expressed by certain signals, such as *because*, *lead to*, *responsible for*, always takes place intrasententially. In other words, that the connection is always used to link two clauses within the same sentence. The following is an example from one of the academic writing textbooks:

(4) The prices are higher *because* there is an increase in demand. (5)

Here is another parallel authentic example taken from one of the texts the students might have processed in a pre-reading task, where the signal *because* is used to link two structurally dependent clauses.

(5) Some athletes exercise to extremes *because* they mistakenly believe it is good for them or that it is the proper way to exercise. (10)

Obviously, if we look at each sentence in isolation, and only from a syntactic point of view, it seems clear that in both examples the connecting device is a subordinator linking a subordinate clause to the matrix clause. However, if we place the example in its original context, as in (6), and we look at it from a semantic point of view, we shall see that the causal connection is established with a part of the preceding text which has been encapsulated by the matrix clause *athletes exercise to extremes*.

(6) {According to James G. Garrick, M.D. director of the Center for Sports Medicine at Saint Francis Memorial Hospital in San Francisco, excessive exercisers are people who work out or run 2 to 3 hours a day and won't back off despite pain and injury.

Exercise extremists can also be identified by a lack of attention to family or work,... They may consider exercise to be more important than anything else in life, she adds.

When injured and forced to stop exercising extremists often become depressed. Agostini says some of her patients have reported sleeplessness, restlessness, and loss of appetite –symptoms similar to those seen with drugs withdrawal. These people may be addicted to the endorphins released by exercise –the so-called “runner’s high,” she says.} E

◇ “Some” athletes exercise to extremes (RPE) *because* → C {they mistakenly believe it is good for them or that it is the proper way to exercise.} (10)

In this case the topic (or given information) of the sentence in question, which is realised lexico-grammatically by the matrix clause *some athletes exercise to extremes*, is encapsulating by means of lexical cohesion the main topic developed in the previous paragraph(s). What the subordinator does then is to connect the subordinate clause (C in brackets) with the main topic of this section, i.e. *excessive exercisers*, and to develop it further, by giving an explanation.

Therefore, although this causal relation would at first sight seem to be operating intrasententially, it is in fact operating intersententially from a semantic viewpoint. Thus the inference of this particular causal relation has a more important role in the perception of text structure because it helps to perceive connections between chunks of text larger than the clause. So, to induce adequate hypothesis about the role of causal relations in the macrostructuring of texts it is necessary to illustrate causal metatext with larger fragments of text than the isolated sentence.

Emphasis of the causal relation: intrinsic/extrinsic metatext

As the data show, in many cases of causal metatext the causal signals are contained within the domain of either one of the two semantic units related. That is, they are expressed in the same sentence that expresses either the cause or the effect. This feature is best appreciated by looking at the schematic examples under the category *intrinsic signalling*

devices in tables 1 and 2. For instance, examples [1-28]¹⁵ in table 1 and [1-11] in table 2. By contrast, in some other cases, the signals are part of an expression that, by itself, constitutes an independent sentence, as in examples [29-34] in table 1 and [12-14] in table 2. This phenomenon is what has been termed as *extrinsic causal metatext*. See tables 1 and 2 and note that in extrinsic causal metatext there is always an encapsulating and a prospecting device (underlined text). Let us consider a clear example from the corpus:

[29] Mt. St. Helens is a volcano in the state of Washington in the western United States. On May 18, 1980, it erupted with the force of a nuclear bomb. According to scientists, there had been no volcanic eruption to equal this one in the last 4,000 years. When Mt. St. Helens exploded, it released energy that was greater than the bomb that destroyed Hiroshima, Japan, in 1945. {The force was strong enough to send 100 million tons of dust into the atmosphere.} C <> A force that strong *had tremendous effects* on the area around the volcano →. <> E. (3)

From a purely semantic point of view, *extrinsic causal metatext* plays a very little part in text development. If we consider example [29], on the one hand, the proposition *a force that strong had tremendous effects on the area around the volcano* by itself does not specify the effects of the volcano on the area around. Its only purpose in this respect is to announce that the following relevant fragment of text will specify such effects and the causal inference will not be resolved until the following fragment of text is processed. On the other hand, the noun phrase *a force that strong*, which expresses the cause, does not really add new propositional material. This noun phrase merely encapsulates the preceding proposition (*the force was strong enough to send ... atmosphere*), which in its turn encapsulates *energy that was greater than the bomb that destroyed Hiroshima, Japan, in 1945*. Thus the noun phrase is presented both as the cause of the following effects and as the result of the referent to *it*, which would seem to be *volcanic eruption*. Therefore, the independent sentence *a force that strong ... around the volcano* does not add real new propositional content as a whole.

However, from a textual relational point of view, this metatextual expression plays a very important role. It is used to establish a causal connection between the preceding

¹⁵ This type of bracketing, [], will be used for referring to examples taken from tables 1 and 2.

fragment of text, where the cause is fully determined, and the one which follows, where the effects will be specified. Although at that point it may be difficult to predict how many effects will be mentioned, the word *effects* in the plural leads the reader to expect two effects at least. In fact, in the original text three kinds of effects are mentioned, and each one constitutes the topic sentence which is developed in each of the following developmental paragraphs. Nevertheless, none of the textbook accounts examined make any reference to extrinsic metatext and its important role in the organisation of this type of essay.

Basic mechanism of coherence: encapsulation / prospection (anaphoric / cataphoric)

This takes us to examine in detail one feature of causal metatext which is also totally ignored by the examined textbooks: the means of encapsulating previous text and/or prospecting up-coming text. Example [29] shows how the phrase *a force that strong* is used as part of the causal metatextual expression to encapsulate preceding text. In this case, the encapsulation has been realised by means of lexical cohesion. Another example of encapsulation by means of lexical cohesion was (6) above, where the matrix clause *athletes exercise to extremes* encapsulates back by rephrasing the same idea, *excessive exercisers*, with different word classes, i.e., also through lexical cohesion. On other occasions the encapsulation takes place by means of ellipsis, as in example [30] in table 1, where the ellipted element recovered is the previously-mentioned cause (ELPC); or by means of reference items, such as the demonstrative *this*, as can be seen in example [17, 18] in table 1, or in example (2) shown again below:

(2) {Some college students spend as much as half of every day on-line.} E. $\diamond$ *This "may" be "in par"t because* $\leftarrow$ C {access to the Internet, e-mail and other computer activities is free and easily available at most schools.} (10)

A remarkable feature of the referent item *this* as a means of encapsulation is that it refers back to the meaning created by the whole of the preceding sentence. *This*, in (2), encapsulates the whole situation described, that *some college students spend as much as half*

of every day on-line. The demonstrative pronoun *this* can be considered as part of the metatextual expression because it does not really add any new propositional material to the semantic unit expressed by the sentence where it occurs. Its only function is to refer back to propositional material which has been previously stated in the text and needs to be recovered for further use, thus strengthening the connection between the two discourse segments related. This is why it may be said that in (2) the subordinator *because* is in fact used to establish a connection between the cause or explanation that it introduces: that *access to the Internet, e-mail and other computer activities is free and easily available at most schools* and the whole situation described in the previous sentence.

Encapsulation works not only with causal relations but with all kinds of connections between sentences -and larger fragments- in a text. In the words of Sinclair (1993: 33) "encapsulation is so well established that in cases where there is no explicit link between sentences the default interpretation is encapsulation". See tables 1 and 2 and note how in anaphoric, or encapsulating, intrinsic metatext the causal inference is resolved by processing the second semantic unit (E in table 1 and C in table 2) which is included in the same sentence as the causal signal is.

According to Sinclair (1993: 33), "in addition to encapsulating the preceding text, a sentence can make a prospection about the next sentence, thus establishing a need for the next sentence to fulfil the prospection if coherence is to be maintained." This principle has been well attested in the area of causal relations by Hyde (1990) and Moreno (1995a, 1995b, 1997) and various examples have been found in the corpus. However, none of the textbooks on academic writing examined represent the fact that causal expressions are sometimes used prospectively.

See tables 1 and 2 and note how in cataphoric, or prospecting, metatext the causal inference is not resolved until the forthcoming discourse fragment is processed. In other

words, to satisfy the prospection -usually created by means of general words such as *effects*, *changes*, *problems*, *causes* and *reasons*-, it is necessary to cross over sentence boundaries for further specification. And if the prospection is not fulfilled in what follows the reader will find the text incoherent, or at least, incomplete, at that point.

When the causal signal is a nominal element (such as *effects* in [26 and 29] in table 1), it has a prospecting function by itself, although the exact scope of the relation may be difficult to work out at that point. Sometimes, the scope of the prospection is easier to predict by means of quantifiers, as in the following example of prospecting effect-cause metatext (table 2), where the number of causes announced is quantified by means of an indefinite quantifier.

[9] E for many reasons →. < C.

This shows the important rhetorical effect that these kind of expressions have on the reader in helping him to predict what is to come and how the rest of the text might be organised.

Sentential status of the signal: peripheral / integrated

As examples [1-11] in table 1 show, peripheral signals are often followed by a comma. This fact is acknowledged by most of the textbook accounts of causal metatext when they describe sentence connectors or phrase structures in initial position (see table 3). However, the most noteworthy feature of peripheral signals is that they can be considered as monolithic elements in the sense that they do not usually allow modifications of the basic meaning of the causal relation. By contrast, as will be shown below (see *metatext features on the interpersonal plane*), integrated signals are expressed by elements which constitute the central categories of sentence structure, mainly nominal, verbal and adjectival elements and they do allow certain types of modifications which affect the causal relational meaning itself. This distinction is important because writers who wish to modify their causal relations in some

way will need to choose integrated signals instead of peripheral ones. However, this point is not made by any of the academic textbooks examined.

Formal-functional status

Important distinctions can also be made among peripheral signals regarding their formal-functional status on the basis of the type of encapsulating device that each type allows. For instance, conjunctive signals often encapsulate previous text by means of ellipsis, as in [1], or reference words in combination with general lexical elements, as in [3]. Prepositional signals usually encapsulate by means of nominal phrases as in [6-7] and subordinating signals generally encapsulate by means of clause structures, as in [8-11] (all these examples are from table 1). Although some textbooks, like Smalley & Rueten (1995) do note the fact that certain transitions such as *because of* must be followed by a noun, they do not even suggest the encapsulating role of such a noun (phrase).

Co-occurring metatextual elements

Another remarkable feature that could be highlighted is the fact that causal metatext sometimes co-occurs with other metatextual expressions intended to: a) make other coherent relations explicit; b) reinforce the causal relation. A combination of both types can be seen in the following example (table 1) by means of *in addition* and *consequently* respectively:

[16] CE. <> E <> Due to RPC, 1SPE. <> *In addition, RPC has consequently caused* → 2SPE and 3SPE. (2)

Other co-occurring signals appearing in the corpus of cause-effect essays are the following: *first of all, secondly, also, and, thus, another, finally, for example, besides, rather*. These signals play an important role in the macrostructuring of the essay. However, only two textbooks acknowledge this feature. Arnaudel & Barrett (1990) suggest that "in addition to listing signals (*First..., Second..., Finally...; the first cause-effect..., the second cause-effect...,*

the final cause-effect...) certain other basic structures are used commonly in writing cause-effect paragraphs" and they go on to list and explain different types of causal metatext. Ruetten (1997) accounts, in passing, for cause-effect metatext where the suggestion is made that it sometimes co-occurs with other transition signals of a listing type (such as *one reason ... is* and *another reason ... is*).

So far the textual plane of causal relations has been discussed. From the writer's point of view, this refers to the role of causal relations in organising what s/he is saying in such a way that it makes sense in the context and fulfils its function as a message (Halliday 1973: 66).

Metatext features on the interpersonal plane

Types of modification of the causal relation: modalisation (hedging)

If we now focus our attention on the interpersonal plane of causal metatext, it should also be noted that most of the textbook accounts practically ignore it. They treat causal relations as if writers were always certain about their interpretation of the phenomena they analyse. But this is not always so. For different reasons writers sometimes decide to qualify their commitment to the truth of the causal relational proposition they are expressing by means of hedges (Crompton 1997; Hyland 1994, 1998; Moreno 1998). A good example is *this may be in part because* (in (2) above), which contains the epistemic modal *may*. This modal auxiliary is considered as part of the metatextual expression because it does not add any propositional content to the semantic unit expressed by the sentence where it occurs. The hedge *may* simply modalises the causal relation itself by reducing its force. Example (2) also contains the adverbial *in part*. This is another hedge used to imply that the cause provided is not the only cause of the situation described. It only explains it partially (cf. *partly*, *partially* in Hyland 1998). Thus the hedge is also used to reduce the force of the causal relational

proposition. In this way the author expresses her/his personal attitude towards the force of the causal relational proposition s/he is stating. Let us consider another example:

[19] {During preparations for the Persian Gulf War in 1990-91, several camels were reportedly shelled by riflemen in the process of training. Out of 10,000 Kuwaiti camels, only 2,000 survived the war} C. $\langle \rangle$ *The shooting of too many animals* (RPC) *makes them* $\rightarrow$ E1 {endangered or extinct}, $\langle \rangle$ and *such extinction* (RPE1) "*can*" *create* $\rightarrow$ E2 {serious domino effects in their ecosystems.} (5)

In this example, the force of the causal relation has been reduced by the author by means of the epistemic modal *can*. This modal verb is used to show that the writer is not being categorical about the relational proposition s/he is expressing. The modal verb *can* indicates that the causal relation does not always necessarily happen but that there is a probability that it may happen.

In another academic writing textbook by Hamp-Lyons and Heasley (1987), which could not be part of the sample because it did not meet the requirements of the present study, the authors acknowledge and discuss what they call the *honesty principle* in academic writing (i.e., only say -or write- that for which you have evidence) and how it is reflected in the language used for expressing conclusions. They provide the following example where a conclusion is drawn about a cause-effect relation.

(7) But recent findings *suggest* that cassava *may be responsible* for birth defects.

As Hamp-Lyons and Heasley (1987: 90) explain, "the use of the expressions *suggest* and *may be responsible* show that the writer's evidence is not 100% certain and, quite rightly, he does not attempt to draw conclusions which he cannot support: he is being honest with his readers". Thus they acknowledge the presence of hedges in academic writing in general.

However, only three of the textbooks examined acknowledge this strategy, but they do so only in passing. For instance, when giving examples of causal expressions, or indicators, O'Donnell & Paiva (1993) and Smalley & Ruetten (1995) introduce some examples with a hedge (such as *lack of exercise "can" cause obesity* in the former textbook and *poor cultural literacy levels "may" be the result of too much technology* in the latter). Macdonald and

Macdonald (1996: 323), when discussing verb tense relationships give the following recommendation: "when you focus on potential effects, use future tenses (*will, shall, are going to*), or modals of advice (*should, ought to*), probability (*may, might, could*), or warning (*must, have to, need to*)." However, neither of these textbooks really reflect on the rhetorical effect of using hedges to modalise causal relations.

Types of modification of the causal relation: evaluation (commentary)

Another aspect of the expression of causal relations that is misrepresented in the examined textbooks is that writers sometimes express their attitudes toward the causal relation they are stating. This is frequently done by means of *evaluation*, or *commentary*, as is shown in example [29] in table 1.

[29] {The force was strong enough to send 100 million tons of dust into the atmosphere.} C < > A force that strong (RPC) *had tremendous effects* on the area around the volcano →. < > E. (3)

In this example, the effects of the volcano are evaluated as *tremendous* by means of an attributive adjective. The following is another example from one textbook reading text on computer addiction.

(8) For some, computer compulsion is simply a fresh form of the kinds of obsessive behavior that college students seem prone to. Spending all of one's free time in a computer lab is like going out drinking every night of the week, or eating enough dorm food to gain the "freshman 15" pounds of fat. {But for others, especially the introverted who have a hard time finding a place in the college scene, the computer can practically fill a life} C -with **large consequences**, both **good and bad** →. < > E. (10)

In this other example, the consequences of the phenomenon under analysis are evaluated as large, both good and bad, by means again of attributive adjectives. Other possible collocations for the nominal signal *effect* found in the corpus are, for instance, the following: *harmful, positive, awesome, staggering, tragic, tremendous, direct, indirect, devastating (effect(s))*; one collocation identified for *result* is *end (result)*; possible collocations found for the nominal signal *cause* are *dramatic, sudden, single (cause)*; and the

adjective *preventable* occurs predicatively as in “There is no single cause of E, but researchers have uncovered several *causes*, some of which are *preventable*”.

As can be seen, evaluation of causal phenomena is quite common in cause-effect analytical essays. However, only two of the textbooks explicitly acknowledge this fact very briefly. For instance, Blanton (1993) uses the following collocation in one of the illustrating structures: *immediate cause*, while Macdonald & Macdonald (1996) use the following collocations: *main cause*, *contributing cause*, *short-term effect* and *long-term effect* in their examples.

The agent the author makes responsible for stating the causal relation

Another interesting phenomenon has to do with whom the author makes responsible for stating the causal relational proposition. Let us consider the following example in table 1:

[20] For sometime now, *[medical scientists have noted]* {an alarming increase in diseases of the heart and circulation among people who smoke cigarettes} (EC). <> *[It has been found that]* the presence of nicotine in the bloodstream (ICPC) *causes* → E1 {blood vessels to contract,} <> *thus* → E2 {slowing circulation,} <> a condition (RPE2) *which eventually leads to* → E3 {hardening of the arteries}. (1)

As can be seen, the expression *medical scientists have noted* in the first sentence, and the expression *it has been found that* in the second sentence make it possible for the writer to state the causal relation confidently (through the present tense *causes*) on the basis of what other agents with authority have found about the same phenomenon. The effect is like saying: “I am not stating this causal relation because I can demonstrate that it exists but because other agents with authority have done so.” The focus of analysis in this case is not whether the force of the relational proposition is diminished or not by means of hedges but the means by which writers sometimes choose to distance themselves from their interpretation of data (cf. Hyland 1998: 364).

The present corpus study of causal metatext has revealed various degrees in which authors can distance themselves or show lack of commitment to the truth of the causal

relation by attributing the responsibility for stating it to various types of agents such as the following:

1. Agent with authority: “Some scientists warn that ...”
2. Impersonal subject but the agent is intended to be understood as an agent with authority: “It has been found that ...”
3. Research entity: “Studies show ...”
4. Official source of data: “Statistics suggest that ...”
5. Other people: “One man confessed to scientists that ...”

However, none of textbook accounts examined acknowledge these distancing strategies about the expression of causal relations.

In summary, as tables 3 and 4 show, what most of the textbook accounts do is classify causal signals either according to the formal patterns in which causal expressions take part (e.g. phrase structures, predicate structures, participial structures, clause structures) or to the grammatical function of the causal signal (e.g. sentence connectors, subordinators, prepositional signals). These are usually presented as lists of alternative resources for expressing causality. However, the textbook accounts do not provide any rationale for when to use one or another type. Furthermore, in some cases, exercises are proposed so that students practise how to express the same causal relation in various ways, without explaining which strategy would be more suitable for which purpose.

This would seem to point to great shortcomings in relation to what would be considered as an adequate description of how this area of language works in view of recent theoretical work. For they clearly misrepresent many of the features which seem to be crucial for an understanding of this aspect of discourse. However, since the textbook accounts were not meant to be theoretical descriptions but rather a provision of clue words and phrases to

help students be able to recognise or express causal relations, it would be unfair to judge them against an aim they most likely never attempted to achieve. That is why it was decided to broaden the scope of the present study so as to attempt to provide some clues as to how future descriptions of causal metatext in this genre might be improved.

Pedagogical Implications

The major objective of this section will then be to suggest ways in which the gap between a theoretical description of this aspect of discourse and the type of applied description that could be brought to the classroom in the area of causal relations might be bridged. This will be done within a task-based framework where the targeted students are upper-intermediate to advanced EGAP undergraduates trying to learn how to write a cause-and/or-effect analytical essay. The gap would be bridged in three ways: first, by providing a more faithful account of the targeted feature in view of recent theoretical descriptions; second, by illustrating the targeted feature as it behaves in the genre the targeted students are trying to acquire; and, finally, by suggesting how the behaviour of this language feature could be introduced to students through an awareness-raising process.

One way of accounting for causal metatext in a way that could be considered more adequate from a descriptive point of view would be by focusing on those semantico-pragmatic features that have been ignored so far, and do this along the lines suggested in the results section. The second suggestion simply means that on illustrating causal metatext in focus-on-form tasks, we should always provide students with authentic examples taken from texts of the type they are trying to learn. This might help students see the relevance and usefulness of the examples and they will probably feel more confident that, if they eventually acquire some of these discourse strategies and actually use them in their writing task, the language they will be producing will be appropriate.

For the third suggestion, that is, how to introduce causal-metatext to students through a consciousness-raising process, I will follow Willis & Willis (1996: 64). In their view, the purpose of awareness raising within a task-based framework would be to help the students draw their own conclusions or test their existing hypotheses about how a given area of language works. Thus, the consciousness-raising process proposed in the area of causal metatext would consist of three phases: 1) the attempt to *isolate* the specific linguistic feature: causal relations, 2) the provision of data which *illustrate* the targeted feature: causal metatext; and 3) the requirement that students utilise *intellectual effort*.

1) Isolating causal relations.

One possible way to *isolate* the specific linguistic features for focussed attention might be to ask the students to report the causes and effects they have identified in some reading texts -not necessarily of the *essay* type- and then draw the learners' attention specifically to these.

At this stage, it would be possible to make them aware of the fact that causal relations may appear in ordinary order, as in example (1) above, where the causal inference is represented as ($\rightarrow$), or in the reverse order, as in example (2) above, where the arrow representing the causal inference changes direction ($\leftarrow$). It is important to help the students not to take causes for effects and vice versa.

Once the students are clear about the type of logical connection they are dealing with, it would be useful to make them aware of the fact that causal relations are not always expressed explicitly in texts by means of words such as *cause*, *because*, and *so*. Sometimes the reader will need to infer the implicit causal relation, as we saw in example (8) above. Therefore, some practice might need to be done with the students on reconstructing the

writer's unstated assumptions at a given point in the text. This operation would allow students to interpret the two related discourse fragments as cause and effect respectively.

Students can also be made aware of the fact that causal relations may take place both intrasententially or intersententially. Focus should be directed to the important role of causal relations in text construction when they cross over sentence boundaries, i.e. when they are intersentential.

After this first consciousness-raising phase, the students would be in a better position to try the task of identifying causes and effects in sample texts of the *essay* genre and discuss them with their classmates. Next, it would be appropriate to ask the students to focus on the various textual realisations used to express causal connections in the *cause-and/or-effect analytical essay*. This might be the second phase of the consciousness-raising process.

2) Illustrating the targeted feature.

In this phase, examples could be provided from the sample texts which illustrate the different features characterising the expression of causal relations both at textual and interpersonal levels of analysis: the order of the causal relation, whether the signal is intrasentential or intersentential; whether the causal metatext is extrinsic or intrinsic, and the part of the generic structure of the text where it appears; whether it includes a quantifying element; whether it is encapsulating, prospecting or both; whether it is accompanied by any other class of metatext; whether it is peripheral or integrated; whether the relation is modified by means of any hedging element; whether the cause or effect is evaluated; and who takes the responsibility for stating the causal relational proposition.

In illustrating features we should be careful to include enough context to allow an appreciation of the properties of the feature we want to focus on. As has been shown, to be able to appreciate adequately the properties of causal metatext in its context of occurrence, a

minimum of two sentences is usually required. However, sometimes longer pieces of discourse will be required, from the paragraph to the whole essay. Should we need to give students schematic examples, perhaps a more faithful representation of the phenomenon would be something like this:

(2) E. $\Leftrightarrow$ This “may” be “in part” because $\rightarrow$ C.

3) Utilising intellectual effort.

Lastly, in the third phase of the consciousness-raising process proposed (Willis & Willis 1996: 64), students are required to utilise intellectual effort. This is a deliberate attempt to involve the students in hypothesising about the data and to encourage hypothesis testing in the hope they are able to use the focussed-on language at some point in the future.

An interesting task for students to carry out would be to analyse the texts given as models in an attempt to identify and classify the various expressions used to signal causal relations and to notice the various aspects commented on.

One important exploration to be carried out might consist of identifying the different means by which authors *encapsulate* previous text when expressing causal relations in order to create anaphoric cohesion and establish links between parts of the text. Students could also explore how writers make *prospection* about up-coming text in the area of causal relations, and whether the organisation of the following fragment of text is previewed by means of *quantifiers*. We should encourage students to notice the important role of these quantifiers in the macrostructuring of discourse by examining the sample texts provided to them.

Another exploration could focus on the *hedging* devices most frequently used in this type of essay for establishing an appropriate interactive tenor. Furthermore, in order to help students become confident and socially responsible language users, we should encourage them to examine critically the origins of the conventions for the use of hedges in this particular genre: the cause-effect analysis essay. One question which could be raised in class

might be something like “Why do writers sometimes modalise causal relations through hedges such as *in part*, *may* or *can*?”

It is important to make students realise that the relationship between events that they are trying to analyse in cause-effect analysis is not simply chronological; it is causal and it implies a lot of interpretation on their part. Such interpretation depends very much on their knowledge of a particular subject and this may not always be complete. As Macdonald & Macdonald (1996: 318) suggest, students also need to understand that, whatever the goal of their cause-effect argument is (to evaluate, to understand, to warn, to seek a solution or to advocate change), in an English academic writing culture at least, the writer will be more respected by his readership if he admits that there may be other possibilities worth considering that are not stated in her/his essay, especially if the topic is not a personal issue. As has been discussed, the use of hedges allows the writer to explicitly qualify her/his commitment to the truth of the causal relational proposition expressed. This has an important pragmatic effect on the reader because it shows how much confidence the writer feels it is appropriate to display.

It would also be interesting to help students notice the different strategies used by writers to *distance* themselves from their claims about causal relations. Students could also be encouraged to examine the types of collocations that take place with words such as *effect* and *consequence* (tremendous, awesome, staggering, tragic) or *cause* (dramatic, sudden). Choosing appropriate strategies in these areas would help them to write more effectively.

In my view, it would be helpful to make students aware of these facts about causal expressions because the conventions used by the students’ writing culture and the English one to modalise and evaluate propositions, as well as to use distancing strategies in academic writing, might be different. For instance, the conventions in relation to hedging have proved to be different at least in the area of premise-conclusion signalling which I have recently

explored in a contrastive study of Spanish and English (Moreno 1998). Spanish and English writers seem to have a slightly different idea of what an appropriate interactive tenor is in expressing their conclusions. Therefore, it might also be useful for students to compare the conventions used to express causal relations in this type of essay in English with their own L1 conventions. This comparison would also imply intellectual effort on their part.

The students should also be made sensitive to how these conventions and other conventions vary as a function of social factors, such as the audience and their previous knowledge about the subject. As Reid & Byrd (1998: 64) put it, some audiences will have considerable background knowledge, but others will know almost nothing about the subject. Students need to make their explanations fit their audience's needs. The purpose of the essay will also be a key factor. In many cases, it will be to inform and teach their audience about a particular subject. On most occasions, the students will have to write their essays for their English class, where the audience will either be the teacher or other students. In that case the purpose will be clearly specified in the task instructions. But, on some occasions, the students will have to write an explanation for an exam, where the purpose is to test their knowledge and understanding of a subject, as in a Literature class. In this case, even though their audience- their teacher- has considerable background knowledge, their explanations must be complete and detailed enough to show that they also understand the subject well.

Designing specific tasks by which all these suggestions might actually be implemented in the frame of a didactic unit is beyond the scope of the present paper. An appropriate design of such tasks would also require some research on how much cognitive load the targeted students would be able to cope with in utilising their intellectual effort.

Concluding remarks

The present paper has pointed out a number of ways in which current descriptions of the expression of causal relations found in a sample of textbooks on academic writing could be improved upon. It has demonstrated that there is a large number of features which are crucial for an adequate description of causal metatext but which have not been taken into consideration in most of the textbooks examined. Thus, these accounts have proved to have offered a very narrow view of the discourse feature under consideration. If we assume, as I do, that explicit knowledge about language can help learners to improve their writing skills, there follows the need for GE/EAP courses to incorporate accounts of this aspect of discourse that are as adequate as possible. This paper suggests how, in view of recent theoretical studies, causal metatext could be presented in a more comprehensive way.

Furthermore, the present paper has also emphasised the need to illustrate the targeted feature as it behaves in the genre students are trying to acquire. If applied descriptions are to be consistent with task-based teaching approaches where the aim is to teach students how to carry out one or several particular communicative tasks, the language samples provided to illustrate a targeted feature for focussed attention in focus-on-form tasks should be based on studies of corpora representing the genre generated by the targeted communicative task. That way students will be assured that the language input that they may eventually acquire is really appropriate to the type of communicative task they are learning to carry out and is not merely derived from general descriptions of language usage that will need further filtering by their own cognitive skills.

The present study has taken a step in the direction of providing a full account of causal metatext in cause-effect analytical essays. However, given the size of the corpus analysed, it is likely of course that other possible metatextual strategies have not been adequately represented. So it is important to emphasise the limitations that this methodological problem

may impose on the results. That is also the reason why only qualitative results have been offered, but further research on this issue should aim at providing quantitative results for each category of causal metatext as well. This would require a larger corpus of cause-and/or-effect analytical essays which could be made up of real-life student essays. The frequency criterion would be very useful for course designers in deciding whether or not focusing on a particular language feature is worthwhile. The quantitative results from such a study would also make it possible to establish comparisons with the results from other studies (e.g. Moreno 1997) to confirm whether there is, in fact, variation on the use of causal metatext as a function of *genre*.

In spite of the corpus size limitation, what this paper has aimed to do is to demonstrate the fact that there is still a big gap to be bridged between recent theoretical descriptions of discourse and the applied descriptions that are used in L2 task-based teaching materials, at least in what relates to causal metatext.

Finally, if other aspects of language description also prove to be inadequate in this respect, applied linguists should make an immediate effort to develop new genre-based studies of typical language features that are focussed on in task-based courses so that the resulting accounts incorporated into teaching materials might be more adequate from a descriptive point of view and the focus-on-form tasks based on those accounts might be more efficient and useful from a language learning perspective. This is what I at least understand as one way of taking the basic ESP tenet to its ultimate goal.

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References

- Crompton, P. (1997). Hedging in academic writing: Some theoretical problems. *English for Specific Purposes*, 16(4), 271-281.
- Dudley-Evans, T. and St John, M. J. (1998). *Developments in English for Specific Purposes*. Cambridge: Cambridge University press.
- Frawley, W. (1992). *Linguistic Semantics*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Halliday, M. A. K. (1973). *Explorations in the Functions of Language*. London: Edward Arnold.
- Hamp-Lyons, G., & Heasley, B. (1987). *Study Writing. A Course in Written English for Academic and Professional Purposes*. Cambridge: Cambridge University Press.
- Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes*. Cambridge: Cambridge University Press.
- Hyde, J. (1990). *Aspects of Discourse Analysis: The Explicit Signalling of Intersentential Relations in English. Tesis Doctoral*. Salamanca: Universidad de Salamanca.
- Hyland, K. (1994). Hedging in academic writing and EAP textbooks. *English for Specific Purposes*, 13(3), 239-256.
- Hyland, K. (1998). Boosting, hedging and the negotiation of academic knowledge. *Text*, 18(3), 349-382.
- Long, M., & Crookes, G. (1991). Three approaches to task-based syllabus design. *TESOL Quarterly*, 26, 27-55.
- Long, M., & Crookes, G. (1993). Units of analysis in syllabus design: the case for task. In G. Crookes, & S. Gass (eds.), *Tasks in Pedagogic Context: Integrating Theory and Practice* (pp. 9-54). London: Multilingual Matters.
- Mauranen, A. (1993). Contrastive ESP rhetoric: metatext in Finnish-English economic texts. *English for Specific Purposes*, 12, 3-22.
- Moreno, A. I. (1994). Estudio comparativo de enlaces interoracionales causales en dos corpus. *Estudios Ingleses de la Universidad Complutense*, 2, 123-138.
- Moreno, A. I. (1995a). Causal Intersentential relations: a discourse as process view. *Estudios Ingleses de la Universidad Complutense*, 3, 55-68.
- Moreno, A. I. (1995b). *Estudio Contrastivo Inglés-Español de la Expresión de las Relaciones de Coherencia Causal Interoracional: el Artículo Académico sobre Economía y Empresa*. Published doctoral dissertation, Universidad de León, León.
- Moreno, A. I. (1997). Genre constraints across languages: Causal metatext in Spanish and English. *ESP Journal*, 16(3), 161-179.
- Moreno, A. I. (1998). The explicit signalling of premise-conclusion sequences in research articles: A contrastive framework. *Text*, 18(4), 545-585.
- Moreno, A. I. (1999). *Proyecto Docente. Lengua Inglesa*. Unpublished manuscript. Universidad de León.
- Sinclair, J. M. (1993). Written discourse structure. In J.M. Sinclair, M. Hoey, & G. Fox (eds.), *Techniques of description: Spoken and Written Discourse, a Festschrift for Malcolm Coulthard* (pp. 6-31). London: Routledge.
- Skehan, P. (1996). Second language acquisition research and task-based instruction. In Willis, J., & D. Willis (eds.), *Challenge and Change in Language Teaching* (pp. 17-30). Oxford: Heinemann ELT.
- Swales, J. (1990). *Genre Analysis*. Cambridge: Cambridge University Press.
- Vande Kopple, W. J. (1985). Some exploratory discourse on metadiscourse. *College Composition and Communication*, 36, 82-93.

Willis, J., & Willis, D. (1996). Consciousness-raising activities. In Willis, J., & D. Willis (eds.), *Challenge and Change in Language Teaching* (pp. 63-76). Oxford: Heinemann.

Sample of textbooks on Academic Writing

1. Arnaudet, M. L., & Barrett, M. E. (1990). *Paragraph Development*. Englewood Cliffs, New Jersey: Prentice Hall Regents. High-Intermediate to Advanced. Cause and Effect, pp.95-115.
2. Averbach, B., & Snyder, B. (1983). *Paragraph Patterns*. New York: Harcourt Brace & Company. Intermediate. Cause and Effect, pp.93-105.
3. Blanton, L. L. (1993). *Composition Practice. Book 4*. Boston, MA: Heinle & Heinle Publishers. High Intermediate. Observing Cause and Effect, pp. 136-153.
4. Donahue Latulippe, L. (1992). *Writing as a Personal Product*. Englewood Cliffs, New Jersey: Prentice Hall Regents. High-Intermediate. Cause and Effect, pp.129-158.
5. Gillie, J. W., Ingle, S., & Mumford, H. (1997). *Read to Write*. New York: The McGraw-Hill Companies, Inc. Intermediate. Reading and Writing Cause and Effect, pp.217-256.
6. Jordan, R.R. (1990). *Academic Writing Course. Study Skills in English*. Harlow: Longman. High Intermediate and above. Cause and Effect, pp. 56-61.
7. Macdonald, A., & Macdonald, G. (1996). *Mastering Writing Essentials*. Upper Saddle River, New Jersey: Prentice Hall Regents. High-Intermediate to Advanced. Using cause-effect arguments, pp.317-343.
8. O'Donnell, T. D. & Paiva, J. L. (1993). *Independent Writing*. Boston, M.A. Heinle & Heinle Publishers. High-intermediate to Advanced. Cause and Effect Analysis, pp. 138-171.
9. Reid, J. M., & Byrd, P. (1998). *Looking Ahead. Developing Skills for Academic Writing*. Boston, M.A.: Heinle & Heinle Publishers. High-intermediate to Advanced. Explaining, pp. 63-89.
10. Ruetten, M. K. (1997). *Developing Composition Skills*. Boston, MA: Heinle & Heinle. Intermediate. Analyzing reasons, pp.69-94. Evaluating effects, pp.165-194.
11. Smalley, R. L., & Ruetten, M. K. (1995). *Refining Composition Skills*. Boston, MA: Heinle & Heinle. High-intermediate to Advanced. The Cause-and-Effect analysis essay, pp. 278-316.

Suggested topics for effect analytical essays

1. Analyse the effects of a change in your life. For instance, how has living away from home for the first time affected you? Or, if you have lived abroad for a substantial period of time, in what ways has it affected you?
2. Every family has problems. Perhaps a family member is unemployed, homesick, depressed, ill, angry, an alcoholic, or physically or mentally disabled. Problems like these affect the other family members. Discuss the effects of a family member's problem on your family.
3. Have you ever witnessed, or watched on TV, a disaster, such as an earthquake, a hurricane, a severe storm, an aeroplane crash, or a terrorist attack? What were some of the effects of that disaster?

4. Discuss the effects of a political, social or economic change in your country, e.g., the increasing number of young couples where both partners work, or the introduction of the *euro* as the European currency.
5. Discuss the possible effects of compulsive shopping.
6. Discuss the effects of watching too much television.
7. Discuss the effects of your parents' values on you.
8. What are the effects of exercising too much?
9. Discuss the possible effects of prejudice.
10. Discuss the effects of stress.

Appendix

Table 5. Symbols and coding

Symbol	Meaning
<>	boundary between the two related causal semantic units
Text in {}	causal semantic unit
C	cause
E	effect
→	cause-effect inference
←	effect-cause inference
Text in <i>italics</i>	causal metatext
Text in bold	commentary element
Text in “”	hedging element
Text in	distancing strategy
AA	agent with authority
<u>Underlined</u> text	encapsulating or prospecting text
Coding	Types of encapsulating text
ELPC	Ellipsis of previously-mentioned cause.
ELPE	Ellipsis of previously-mentioned effect.
ICPC	Inferred consequence of previously-mentioned cause.
RPC	Rephrasing of previously-mentioned cause.
RPE	Rephrasing of previously-mentioned effect.
REFPC	Reference to previously-mentioned cause.
REFPE	Reference to previously-mentioned effect.
REPPC	Repetition of previously-mentioned cause.
REPPE	Repetition of previously-mentioned effect.
	Other
SPC	Specification of previously-mentioned cause.
SPE	Specification of previously-mentioned effect.