



## **The Role of Cohesive Devices as Textual Constraints on Relevance: A Discourse-as-process View**

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### **ABSTRACT**

Drawing on Relevance Theory (Sperber and Wilson, 1986; Blakemore, 1987, 1992) and taking insights from Sinclair's (1993) model of written text structure, the purpose of this paper is to show how and which cohesive features play an important role in helping the reader perceive relevance and coherence when a text is approached in the process of reading. With this aim, a comment article from *Guardian Unlimited* consisting of 60 coherence units is analyzed by a group of 25 subjects. The study seeks to capture the coherence pattern perceived by a discourse community rather than by an individual researcher. The results show that in most cases the cohesive resources that contribute to the perception of the discourse relevance and coherence of this text at each juncture deal only with discourse meaning derived from whole sentences, larger fragments of text, or occasionally, certain simple clauses linked paratactically, and they do much more than effect a tenuous connection between isolated constituents of sentences.

**KEYWORDS:** discourse, text, reading process, coherence, relevance, cohesive devices, metadiscourse.

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## I. INTRODUCTION

The present paper focuses on a written act of communication considered from the point of view of interpretation. Before presenting the theoretical model within which it will be framed, a convenient distinction will be made and justified between the concepts of written text and written discourse. Written text will be conceived of as the written record of a potential **communicative event**, or one meaningful part of it, where the intended mode of communication between writer and reader is the written word. Thus, a written text can be anything from a single word written on a scrap of paper to an **entire** novel or an academic textbook through a comment article or an e-mail exchange. In this respect, a written text is **seen** as the tangible written record of a potential communicative event.

This definition adds three defining elements as compared to, for instance, Cook's (1989) general definition of text. On the one hand, the **feature of *potential*** to characterize a **communicative event** is used **because** a written text is not always eventually read by the intended reader(s). In the cases where the text is not read at all, it may be said that the **communicative event** is not fulfilled. In the cases where a non-intended reader reads the text, the **communicative event** is not fulfilled exactly as envisaged by the writer. Take, for example, a research article. It may suffer various kinds of **fate**. Though written with the intention that it should be read by a wide audience, the text may be published or not. If published, it may be noticed or not. If noticed, it may be found interesting to read. If so, it may be read either partially or in its entirety. In either case, it may be read by intended **and/or** by non-intended readers and the number of readers may be **very** variable. It should be noted that the potential remains with the written word throughout its legible life, no matter how many times it is read. The point is that until the potential act of communication made possible through the text is fulfilled, the text-as-product can only be considered as the written record of an act of verbal expression rather than the written record of a communicative event.

This definition **also** considers as written texts the written records of meaningful parts of potential communicative events. This is done to include, for instance, written exchanges of non face-to-face interaction where one or **several** written replies are expected. Take the case of certain types of letters or e-mail exchanges. In these cases, it may be possible to consider the first part of the exchange, that is, the initiating letter or message, as one meaningful part of the total potential communicative event. Finally, the definition excludes from the same set any written record of a potential communicative event conveyed through a mode other than the written word. An example of what would be excluded from this definition of written text is the notes for a paper to be presented orally at a conference, or the lyrics to a song. Although these texts may **have been** recorded in the written mode, the writer may not **have** conceived them to be decoded in this mode.

The notion of written discourse, on the other hand, is defined as the meaning perceived by a reader in the act of interpretation of a given written text at any moment of the interpretation process. For the last part of this definition **at any moment of the interpretation process**, I draw

on Sinclair's (1993: 6) suggestion that "the text at any moment is ... the sentence currently being interpreted". Just in the same way as **structure** is necessary in communicating meaning **because** we cannot say **everything** at once (cf. Winter, 1986: 88), when we interpret written discourse we cannot attend to the whole text at a time. We can only attend to one short stretch of the text at any time. If a text is **seen** as a sequence of sentences, the sentence being interpreted is 'the likeliest unit to **carry** the status of *text of the moment*' (Sinclair, 1993: 6). From this perspective, written discourse can be viewed as a complex unit of meaning constantly evolving in the reading process.

Now, as Sinclair (1993) goes on to mention, in communicating meaning there are two basic components: that involved in creating meaning and that involved in sharing meaning. Therefore, language in use "consists in part of **features** which organise the sharing of meaning, as well as **features** which **create** the meaning" (Sinclair, 1993: 7). This distinction has been acknowledged by authors such as Vande Kopple (1985), who, following Williarns' (1981: 47) suggestion that in the process of writing "we usually **have** to write on **two** levels", developed a very influential description of metadiscourse. According to Vande Kopple (1985: 83), on one level we expand propositional **content**. On the other level, the level of metadiscourse, we do not add propositional material but help our readers organize, **classify**, interpret, evaluate and react to such material.

The distinction also reminds us of what M.A.K. Halliday has shown repeatedly in his work, that when we use language, we **nearly** always work toward **fulfilling** the three **macro**-functions of language. That is, we try to give expression to our experience, to interact with our audience, and to organize our expression into a cohesive and coherent text. In other words, Halliday (1973) asserts that we try to convey what are essentially three different kinds of meaning, which he calls ideational, interpersonal, and textual. The ideational elements could also be called representational or informational. Interpersonal meanings would allow us to **reveal** our personalities, to evaluate and react to the ideational material, and would also include forms of interaction and social interplay with other participants in the communicative event. Textual elements would enable the speaker or writer to organize what he **is** saying in such a way that it makes sense in the context and **fulfils** its function as a message (cf. Vande Kopple, 1985: 86). Each text is an integrated expression of these three kinds of meanings.

Drawing on Sinclair (1993: 7), I would like to show how, both in their interpersonal and textual function, metadiscourse elements are part of the interactive apparatus of the language, that progressively determine the status of previous text in relation to the current sentence. They both **serve** to give independence to the sentence and help to perceive it **as** relevant. However, for obvious reasons of space limitation, the focus will be narrowed down to one set of elements within the textual component of metadiscourse: those approximately corresponding in function to the *cohesive devices* acknowledged by Halliday and Hasan (1976): **reference**, substitution, ellipsis, **conjunction** and lexical cohesion. This will **leave** aside metadiscourse elements of the interpersonal type.

A lot of attention has **been** paid to cohesive devices, especially since Halliday and Hasan (1976) described them in the most comprehensive and widely available account. Since then, most models of cohesion in English **have** attempted to account for the explicit linguistic devices used in texts to **signal** relations between sentences. Their main objective has **been** to explain the **principles** that govern the well formedness, the unity and connectivity of texts by looking at the different kinds of **ties** established within texts and the relations they express. However, stating that the **mere** repetition of items in texts, or the use of synonyms or superordinates, and so on, contribute to our perception of the text as coherent **does** not seem very convincing. **In** addition, in most of these models texts seem to **have been** approached as products rather than processes. In other words, analysts seem to **have** treated texts as objects of research, which could be read and reread as many times **as** necessary in order to **identify** the different **types** of cohesive tie.

The position that this paper takes, following Sinclair (1992, 1993), differs from the previously mentioned views of cohesive items in that, instead of emphasizing the role of these elements in a text analyzed by the researcher as a finished product, the focus will be on their role as elements of the interactive apparatus of the language in the process of interpretation of the text. The major reason for changing the perspective is that ordinary users of the language are more likely to approach texts as processes rather than as products. Although ordinary users of the language are likely to be unaware of the kind of analysis reported **here**, researching this other **side** of the coin could be more relevant for communicative participants other than linguists or would-be linguists.

The model proposed **here** advocates a study of the role of these elements in the perception of relevance and, therefore, coherence in the process of interpretation of discourse. Its **ultimate** purpose is to determine which textual **features** of a given text are more likely to help potential readers to **make** sense of a discourse-as-process. That is, the present study will try to **identify** those textual elements that help readers to achieve optimal relevance (cf. Sperber & Wilson, 1986) at each successive *text of the moment* in relation to the growing meaning derived from processing previous text. They will then be accounted for as textual constraints on relevance, that is, as **text** pointers that help readers to select relevant contextual assumptions brought to bear on the interpretation of **current** discourse. A sentence will be said to be relevant if it conveys relevant information and relevance will be defined, following Blakemore (1987: 111), in terms of a relationship between propositions.

This study will then attempt to contribute to answering the **intriguing** question of what helps readers to perceive a piece of text as coherent. If coherence at a given point in a text is understood as a relation between linguistic units (Blakemore, 1987: 111), then being able to perceive the relevance of a text segment at that point in the process of reading may contribute to perceiving the text as coherent at that point. In connection with this aim, **I** would like to **confirm** Sinclair's (1993) suggestion that only a relatively small number of the textual **features** normally accounted for in cohesion analyses play a **crucial** role in helping the reader both perceive the relevance of each successive sentence, or *text of the moment*, and **eventually**, the

coherence of the whole text. I believe that this may have important implications, for instance, for the design of reading and testing tasks that focus on this aspect of text comprehension (cf. Moreno 1998a). However, the type of research reported in the present paper will in principle differ from Sinclair's (1993) and Moreno's (1998a) in that the study will attempt to capture the coherence pattern perceived from a text by a group of individuals rather than by an individual reader/researcher.

## II. THEORETICAL FRAMEWORK

The model of text structure proposed by Sinclair (1993) is based on the assumption that when the reader moves on to processing the following sentence and focuses on its interpretation, the linguistic properties of the previous sentence are discarded and only what it expresses is retained. "It is no longer a linguistic entity, but a part of shared knowledge" (Sinclair, 1993: 9). Hence the present distinction between the text, the tangible linguistic object, and the discourse, the meaning generated from interpreting the text, seems to be consistent with Sinclair's view of the reading process.

If we agree that a text can be qualified as coherent when it is perceived as unified and meaningful to a particular reader, then it can be said that a written text achieves all its potential of unity and meaningfulness, that is, all its potential of being perceived as coherent, when the process of interpretation reaches its end, as envisaged by the writer. However, readers do not need to wait until they have finished reading the whole written product to try and make sense of the text. Competent readers will attempt to make sense of the discourse from the very moment the reading process begins, and —if motivation and interest endures— may continue doing so at every stage in the reading process. In other words, accomplished readers will attempt to retrieve discourse meaning as they come across subsequent textual units in their search for relevance.

The idea of relevance was first proposed by Grice (1975: 46) as one of the four maxims of the cooperative principle, a general principle of communication known and applied by all human beings. Although Grice used his theory mainly to account for the language of conversation, the basic tenet of his theory may be adapted to account for what happens in the process of interpretation of written language in such a way that we can assert that readers expect texts to be a co-operative effort and to progress in a rational manner. And if texts are to be rational, they must consist of sentences that are in some way connected to each other. What guarantees this connection is what he calls the *co-operative principle*, and one of the four maxims that comprise this principle is the maxim of relation: *be relevant*.

One problem with Grice's theory is that it gives no indication of how speakers may be relevant, that is, of how a given utterance is perceived as relevant by the hearer. Sperber and Wilson (1986) attempt to answer this question in a more detailed way. They argue that an explanation of utterance interpretation must be based on a general cognitive theory of

information processing. For the same reason, it should be possible to consider an explanation of sentence interpretation (the equivalent minimal unit of coherence in written language) from the same general theory. Thus I will be using the terms *reader*, *writer* and *sentence* in places where authors such as Sperber and Wilson (1986) and Blakemore (1992) would use *hearer*, *speaker*, and *utterance* respectively. The basic idea underlying their principle of relevance is that in processing information, people generally aim to bring about the greatest improvement to their overall representation of the world for the least cost in processing. Following this line of reasoning, we could say that readers go ahead and interpret every sentence in the expectation that it will interact with their existing assumptions to yield a contextual effect (i.e. a new assumption).

A contextual effect is defined as the impact of a new item of information on an existing representation of the world. Sperber and Wilson (1986) identify three ways in which a new item of information may have a contextual effect: 1) It may allow the derivation of a contextual implication, thereby allowing readers to add assumptions to their existing representation of the world; 2) It may provide further evidence for, and hence strengthen, an existing assumption; and 3) It may contradict an existing assumption. In this latter case, the reader may decide to abandon the existing assumption in favour of the information that has been presented to him. When an item of information has a *contextual effect* in a given context, Sperber and Wilson say it is *relevant* in that context.

For the notion of context, I draw on Blakemore's (1992) view of context as a psychological construct. According to her definition, derived from Sperber and Wilson's (1986) theory of relevance, the context is the set of assumptions that are brought to bear in interpreting a given sentence. Contextual assumptions may be derived from different sources: from direct observation (i.e. from the situational context), through the interpretation of the preceding text (i.e. from the co-text), or from information stored in memory (i.e. from background knowledge, be it cultural or interpersonal). On processing a new item of information the role of contextual assumptions would be to combine with the assumption derived from interpreting the sentence in question (or *text of the moment*) as premises in an argument. Thus establishing the relevance of the new assumption would involve inference. It would involve the interaction of existing assumptions with the new assumption. Therefore, the relevance of a new assumption would depend on the context in which it is processed.

One important question is which principle readers follow to choose the particular contextual assumptions they bring to bear on the interpretation of a new sentence. For, logically speaking, any of their beliefs and assumptions may be brought to bear. In answer to this question, Sperber & Wilson (1986) argue that intuitively, it is clear that the greater the impact a proposition has on the readers' representation of the world the greater its relevance. Also, accessing contextual assumptions and using them to derive contextual effects involves a cost, and the cost of deriving contextual effects in a small, easily accessible context will be less than the cost of obtaining them from a larger, less accessible context. Of course, there are other

factors that may also affect the effort made in achieving relevance, such as the readers' interpreting ability, their level of concentration, their interest, their emotional states, and so on. Let us assume for a moment that we are dealing with very motivated competent readers. Thus, readers who are searching for relevance at every *text of the moment* will process each new item of information in the context that yields a maximum contextual effect for the minimum cost in processing. According to Sperber and Wilson (1986), what the writer does is manipulate the readers' search for relevance. Obviously, it is in the interest of these readers that the writer should produce a sentence whose interpretation calls for less processing effort than any other sentence that s/he could have made. But equally, given that writers wish to communicate with potential readers, it is in their interest to make their sentences as easily understood as possible. This means that readers are entitled to interpret every sentence on the assumption that writers have tried to give them adequate contextual effects for the minimum necessary processing, or, in other words, that writers have aimed at *optimal relevance*.

In written text, the most easily accessible contextual assumptions are those derived from the preceding text, and in particular those still stored in the readers' short-term memory. As Blakemore (1987: 112) suggests, the most easily accessible assumption at any stage of the reading process is likely to be the one derived from the immediately preceding sentence. This assumption made by readers and writers in their cooperative effort to communicate facilitates the interpretation process in such a way that readers can assume that the new sentence should be interpreted at least in the context provided by the assumption derived from the preceding sentence, which in its turn has been interpreted in the context generated from interpreting its preceding sentence, and so on. Or to put it in a way parallel to Sinclair's (1993) terms, we might say that readers can assume that *the text of the moment* can be interpreted at least in relation to the meaning derived from the *text of the past*. In this sense we may say that readers can trust *the text of the past* to a great extent in order to achieve relevance at any *text of the moment* (cf. Sinclair, 1992). I say *to a great extent* because readers, of course, may and actually do use other sources of meaning as well as that derived from previous text (see above).

The picture of discourse which, according to Blakemore (1987: 122), emerges from this relevance-based framework is one in which the interpretation of a sentence (that is, its propositional content and its contextual effects) contributes toward the context for interpreting subsequent sentences. That is, as discourse proceeds, readers are provided with a gradually changing background against which new information is processed. As Blakemore explains, interpreting a sentence involves more than identifying the proposition it expresses. It also involves working out the consequences of adding it to the readers' existing assumptions, or, in other words, working out its relevance (cf. *increment*, Brazil, 1995).

In Blakemore's view, two utterances may be connected in coherent discourse in either of two ways:

Either in virtue of the fact that the interpretation of the first may include propositions used in

establishing the relevance of the second, or in virtue of the fact that a proposition conveyed by one is affected by the interpretation of the other. In either case we might say that the relevance of one is somehow dependent on the interpretation of the other.

*Blakemore (1987: 122)*

Given the role of inference in establishing the contextual effects of a proposition, Blakemore (1987) suggests that it should not be surprising that expressions that instruct the reader to establish an inferential connection between two segments of discourse may be used to indicate how the proposition they introduce is to be interpreted as relevant. Thus expressions like *so*, *after all* and *moreover* can be used to express relationships of dependent relevance. In this sense, expressions such as these can be considered as semantic constraints on relevance. But not only do these expressions have a role in pragmatic interpretation (in helping to perceive dependent relevance), their role is also important in helping the writer optimize relevance in accordance with the Principle of Relevance. In other words, they allow writers to make sure that their readers select the most effective contextual assumptions in their search for relevance at minimal processing cost.

In this sense, cohesive mechanisms, the object of the present research, can be considered as constraints on relevance for both types of coherence. This paper will look at the role of cohesive devices both in establishing the relevance of a new sentence and in helping readers to retrieve the most cost-effective contextual assumptions in the actual process of reading. Given this framework, the present study will attempt to determine which cohesive mechanisms of a given text are more likely to help potential readers to make sense of a discourse-as-process, i.e. to perceive the relevance of each new *text of the moment* and ultimately to perceive the coherence of the entire text.

### III. DESIGN OF THE EMPIRICAL RESEARCH

Just as a text-as-product can experience various fates, there may be different reasons for wanting to process a text, i.e. for retrieving discourse meaning, and, therefore, for improving one's representation of the world. For example, a text can be processed for pleasure, to kill the time: or for the sake of learning new things. On the other hand, a text may be read for practical reasons, whether for personal or for work purposes (e.g. to be able to plan an evening out, to know how to cook a dish, to be able to repair some technical apparatus). A text may also be read for social reasons (e.g. to have something to talk about). Or it may be processed for study purposes (e.g. to learn about a given field and be able to show one's improved knowledge about it). Another possible reason for approaching a text is for research purposes (e.g. when the text is processed by a linguist as an object of analysis). In addition, a text can be read for its general ideas or to find specific information (cf. Nuttall, 1982: 2).

The important implication from there being such a variety of reasons for reading a text is that there may be multiple resulting discourses even from reading the same text, depending



on the reader's motivation to read it. Furthermore, even for readers with similar purposes, interpretation of the **same** text may vary depending on the context in which the text is processed—not only on the assumptions derived from interpreting the previous discourse but also on other assumptions derived from memory (e.g. previous knowledge of the subject matter) and the other factors mentioned above.

Thus, if so many different discourses can be derived from a single text, studying the textual features more likely to contribute to perceiving a text unit as relevant seems an almost impossible task for at least two main reasons: 1) **Because** the perception of this property is ultimately subjective. That **is**, a text unit may be meaningful—and thus may contribute to improving one person's representation of the world—in a way that another person does not **have** the necessary knowledge or level of concentration to make sense of. 2) **Because** the perception of this property depends on the reader's **ultimate** aim in reading the text. In other words, a reader may not **have** perceived the relevance of a coherence unit or the coherence of the whole text because this may not **have** been the reason for approaching the text.

In addition, it is well known that there is more to the perception of relevance than the presence of explicit cohesive devices in a text. That **is**, there are other factors that contribute to this perception which **have** nothing to do with textual features. Take, for instance, a reader's assumptions about the likely sequences of discourse functions derived from memory and acquired on the basis of previous discourse processing experience. In a situation in which every single reader **will** have had different experiences of reading, it does not seem sensible even to attempt to research the question. However, being aware of the fact that the role of cohesive devices in perceiving relevance is **partial**, it may be worthwhile investigating which of these textual features are more likely to contribute to our perception of relevance, if we take certain precautions. In order to design the most appropriate research strategy for this study, a number of considerations about the reading process were taken into account.

### **III.1. Research strategy**

One problem derived from the subjectivity factor is that measuring the relevance and coherence of a piece of discourse is a very difficult task. The first question that rapidly arose is the following. When can we say that a person has made sense of a text? In relation to the writer's intentions, to an intended reader's interpretation, to a non-intended reader's interpretation, to a researcher's interpretation, to **some** standard of coherence? For the purposes of this research, the most adequate answer seemed to be the last alternative. As Cook (1989: 7) points out, "in practice we find that discourse is usually perceived as such by groups, rather than individuals". However, this solution posed a further problem: How could a standard of coherence be established? The solution given to this problem in the present study was to **assume** that the coherence of a text could be established by abstracting away from the particular appreciation of any individual subject (including the researcher herself) to capture instead the pattern of

coherence perceived by the majority of a group of individuals. Consequently, the present study attempted to capture the standard of coherence of a given authentic written text as perceived by a group of individuals in their communicative role as readers of the same text.

### 111.2. The subjects

It also seemed sensible for this study to control for certain factors which are known to determine the discourse meaning actually derived from a text. One such factor was the receiver or the type of reader, with all the factors that this may bring along: previous knowledge of the subject matter, previous reading experience, language proficiency level, motivation and so on. Thus the present study focussed on a well-defined group of readers: the discourse community of Spanish advanced learners of English at the University of León interested to some extent in the description of the English Language.

Two groups of learners were used in the study. The first group was made up of seven doctoral students taking a course in *Cohesion in English*, which was used as part of the pilot study on which the final study was designed. Actually, one of these students wrote a paper discussing his interpretation of the text (Pérez Álvarez, 2001). The final study was carried out with a second group of 25 undergraduate students taking a course in *Contemporary Descriptive Models of English* (taught in the third year of *English Philology* but also taken by students in the fourth year). Both groups were characterized as potentially non-intended readers of the targeted text. Both groups had been provided with a short introduction to the role and type of cohesive devices based on both Halliday and Hasan's (1976) account and Sinclair's (1993) view of cohesive devices, using examples from a variety of sources.

The reason for choosing this type of reader lies in the researcher's interest in making the results of the present study applicable to English as a foreign language reading situations, both in English for Specific Purposes and General English. As is frequently the case with many of the texts now used in most EFL learning and assessment situations, learners are required to approach authentic texts that were not in principle intended for them. Thus the study results both in relation to the pattern of coherence perceived and the textual elements that help to perceive it might be extrapolated to readers of this kind but not to others for the reasons argued above.

### 111.3. The data

The selected text, drawn from the Internet, is a comment article from *Guardian Unlimited* consisting of 60 coherent units (56 sentences) and representing typical argumentative written text. The appendix offers a segmented version of the text. The original version can be found on the website provided in the references section (Moriarty, 1999). The reader of this paper is recommended to read the whole text before starting to read the following section. It should be noted that the text elements presented in parentheses and preceded by an asterisk were not part

of the original text.

The reasons for choosing this text lay both in its topic and its length. On the one hand, the topic of the article, "a pilot scheme consisting in returning examination papers to the original candidates", was relevant in the context of the teaching unit on Education that the subjects were experiencing in one of their courses, Lengua Inglesa 111, at the time the empirical work was being carried out. And it was one of the texts that the students in this course would have to summarize. This way, the study would not interfere unnecessarily with their courses and students would find the kind of analysis done useful for their academic purposes. On the other hand, since the study would have to be based on only one complete text, the selected article had to meet at least two requirements. It had to be long enough to yield sufficient material for analysis. But more importantly, it had to be short enough so as to be manageable for an analysis as complex as the one proposed here with student subjects.

#### **11.4. The procedure: a discourse-as-process view of the text**

Since another determining factor in perceiving text coherence may be the purpose for reading the text, the present paper also attempted to control for this factor. This was achieved by setting up a clear expected outcome for the subjects to produce as a result of the reading task. The required outcome in this case was a written summary of the text. Having to carry out this task was considered as an incentive for the reader to understand the text as best as possible at every point. It was assumed that understanding the text well would involve appreciating the relationship between each new sentence and previous discourse. This skill was considered crucial in establishing a hierarchy of text units so necessary for summarizing the text, i.e. for distinguishing main points from secondary details. It was assumed that in order for the subjects to perceive these relationships, they would have to read the text in great detail.

Obviously, in order to complete the summary task, the subjects would have to read the text various times. However, for the purposes of this research, only the interpretation taking place during the first detailed reading of the text was taken into account. Setting up the task of summarizing the text was then only used by the research design as a stimulus for a detailed reading that would make it possible to control for the confounding factor of purpose of reading. Another confounding factor was the difficulty of the text in terms of vocabulary and structures. To control for this factor the subjects were provided with a glossary with the most predictably difficult items.

The procedure for obtaining the data was the following. The subjects were first presented with the original text so that they could have access to its visual features. The title and subtitle of the text, considered as important elements of the text in generating expectations about the content and purpose of the whole article, were discussed with the subjects. However, since these two units seemed to stand on a different hierarchical level in relation to the core text, they were excluded from detailed analysis. Thus it was the first sentence of the core text that was taken as

the first unit of coherence for focussed attention.

Then the subjects were asked to do a number of interpretation tasks. To make sure all subjects focussed on intersentential relations rather than intrasentential relations (cf. Hyde, 1990, 2002; Moreno, 1997, 1998b), the text was split up into its constituent coherence units. In most cases, the minimal unit of coherence corresponded with the orthographic sentence, or the clause complex (Downing and Locke, 1992), enclosed by a full stop. However, based on Sinclair's (1993) conclusions about this issue, a few variations were introduced. Sinclair identified a number of internal acts of reference "which may suggest that we revise the original assumption that the orthographic sentence is the best minimal unit for text structure. In the text-order analysis, the sentences we choose to divide are those whose two parts behave as two separate sentences in terms of this analysis. This is a circular argument, but a satisfying one nevertheless. That is, we do not make arbitrary or intuitive divisions of sentences" (Sinclair, 1993: 19).

If we look at the clauses where Sinclair identifies internal acts of reference, they seem to be enclosed by a colon, a dash, or a comma followed by a coordinator and a reference item, or a quotation mark (Sinclair, 1993: 25-28). And it is true that these clauses seem to behave quite independently from their neighboring clause from the point of view of coherence. In fact, as Downing and Locke (1992: 283) recognize, "it may be difficult in the spoken language,.... to decide whether such combinations of clauses can be considered to constitute a clause complex, that is to say a single unit, or whether they are to be interpreted as two separate clauses". And this may also apply to written language. Hence, the question remains, should we continue considering the pure orthographic sentence as the minimal unit of coherence or should we reconsider this concept? Sinclair's results could be taken as suggesting that certain types of paratactic relations between clauses are used by writers to present chunks of information as quite independent from the point of view of coherence. However, this still needs to be elucidated.

For the purposes of the present study, in order not to make arbitrary or intuitive divisions of clauses within the different clause complexes in the text, it was decided to divide sentences at points where there was a colon (1, 17, 28, 41, 47, 58), a dash (20, 34), or a comma or dash followed by some cohesive device (3, 29, 31, 56 and 59), provided the following unit could stand as independent from a coherence point of view. No divisions between clauses in hypotactic or dependent relationship were made. This is the only place where the researcher had to impose her own interpretation of what could be considered as an autonomous unit from the point of view of coherence beforehand. However, this imposition was necessary to guarantee the validity of the results, i.e. to guarantee that all the subjects were observing the phenomena that the study was focusing on. Arriving at a consensus on this aspect would have constituted another study in its own right. It should be recalled that the text elements presented in parentheses and preceded by an asterisk in the segmented text were not part of the original text but are meant to represent the type of connection inferred by the subjects between text fragments (cf. appendix).

As the effort made by each subject in their search for relevance at every *text of the moment* might also be a source of variation, all subjects were required to make their

interpretations explicit at every stage in the text in the form of a test as illustrated below. The test asked them to read the first *coherence* unit in the text, (1), and then stop reading to try and see if they perceived a connection between this unit and its co-text. It was assumed that the first coherent unit would provide the most relevant assumption for interpreting the second coherence unit. Therefore in test item (1) students would only perceive a connection between coherence unit (1) and its co-text if that coherence unit were establishing a prospection. From test item (2) onwards, all types of connections were possible, both backwards and forwards.

Table 1: Sample Test Items (1 to 2)

<b>Nineteen ninety-nine was the year we dipped a toe in the water:</b>	
A) Can you perceive any connection between <b>coherence</b> unit (1) and its co-text?	Yes <input type="radio"/> No <input type="checkbox"/>
F) Does coherence unit (1) lead you to expect something specific in the following text?	Yes <input type="radio"/> No <input type="radio"/>
G) If this connection is explicit, circle and write down (the) prospective <b>signal(s)</b> that <b>make(s)</b> it explicit:	
<b>and you know what?</b>	
A) Can you perceive any connection between <b>coherence</b> unit (2) and its co-text?	Yes <input type="radio"/> No <input type="radio"/>
B) If you perceive an explicit connection with previous text, circle and write down the retrospective <b>signal(s)</b> that <b>make(s)</b> it explicit: _____	
C) If you perceive an implicit connection, provide a <b>signal/text</b> fragment to make it explicit:	
D) In relation to which part of previous text can you perceive this connection, whether implicit or explicit?	
A <input type="radio"/> (a word)    B <input type="checkbox"/> (a phrase)    C <input type="radio"/> (a clause)    D <input checked="" type="checkbox"/> (a sentence)    E <input type="radio"/> (a larger unit)	
E) In which <b>sentence(s)</b> is that part of previous text? N° _____	
F) Does coherence unit (2) lead you to expect something <b>specific</b> in the following text? Yes <input type="checkbox"/> No <input type="radio"/>	
G) If this connection is explicit, circle and write down (the) prospective <b>signal(s)</b> that <b>make(s)</b> it explicit:	
H) Does <b>coherence</b> unit (2) satisfy a prospection created in previous text? Yes <input type="checkbox"/> No <input type="checkbox"/>	
I) If so, in which coherence unit was the prospection created? N° _____	

The aim of this test was to guide the subjects' interpretation process at each state of the text and to help them identify the text features of the current sentence that contributed to their achieving relevance, i.e. to their perceiving a connection of some kind in relation to previous or upcoming text at that point in the reading process. Wherever the connection between consecutive text fragments was not explicit, the subjects were questioned about the type of connection that helped them to perceive the relevance of the text at that point by making it explicit themselves by some text item. Subjects were also asked to indicate which part of the text provided them with the most cost-effective contextual assumptions to establish the relevance of the new proposition.

Thus the test was oriented to helping the students capture the following possible types of phenomena in each current sentence, either retrospective —encapsulating (anaphoric)— elements, (questions B to E), or prospective —predictive (cataphoric)— elements (questions F to G). These two phenomena had been amply acknowledged in the literature (cf. Halliday and Hasan 1976; Hyde 1990,2002; Sinclair 1993; Tadros 1985,1994). The subjects were also asked to observe whether the current sentence fulfilled a prospection created in a previous state of the text (questions H to I) (cf. Sinclair, 1993). To avoid giving any specific clues, they were asked to answer the same nine questions (A to I) about each new coherence unit in the text, except for unit (1) at which point only questions A) F) and G), about prospecting mechanisms, were relevant.

The reason for carrying out the process this way had to do with ensuring that every individual had made an effort to interpret the current coherence unit before attempting to interpret the next. Once every individual had specified their interpretations in writing, a round of discussions was opened to contrast the different interpretations, first in groups of five individuals made up in such a way that all groups were balanced in terms of proficiency level. Then the discussion was held open-class. The subjects were given the chance to modify their interpretation after each round of discussions. The aim was to find out whether it was possible to arrive at a consensus on the most likely interpretation at each stage of the text. It should be recalled that the main objective was to capture the coherence pattern of the text as perceived by the group rather than by each individual.

#### IV. METHOD OF ANALYSIS

Once the data had been gathered following the previously mentioned procedure, it was the researcher's task to arrange and classify them. The method of analysis consisted first in distinguishing explicit from implicit relations. Then it analyzed both the text features identified in the text and those inferred by the subjects. Let us now focus on the major types and subtypes of coherence mechanisms.

##### IV.1. Encapsulating, or retrospective, mechanisms (E)

According to Sinclair (1993), encapsulating mechanisms are those text features identified in the new sentence that somehow refer back to the meaning created by the whole of the previous sentence. "By referring to the whole of the previous sentence a new sentence uses it as part of the subject matter. This removes its discourse function, leaving only the meaning which it has created" (Sinclair, 1993: 7). It is in relation to this area where clear links could be established between Blakemore's (1987) view of relevance and coherence, and Sinclair's (1993) account of the encapsulating mechanisms used in perceiving text structure, and therefore, coherence. As

will be recalled, Blakemore (1987) states that two utterances may be connected in coherent discourse in either of two ways.

#### *IV.1.1. Relevance of content*

One type of coherence arises when information made available by the interpretation of one segment of discourse is used in establishing the propositional content of the next (Blakemore, 1987: 112). I propose to call this type *relevance of content* to distinguish it from what I will refer to as *relevance of relational function* (see below).

##### IV.1.1.a. Encapsulating deictic act

Relevance of content closely relates to what Sinclair (1993) terms *deictic acts*, which certainly is the area where the mechanism of encapsulation is better appreciated. From the examples he includes under this category (Sinclair, 1993: 11-12), it is possible to infer that deictic acts include phenomena such as reference items and lexical cohesive items, sometimes used in combination. Let me show this by means of an example taken from the text analyzed, where the numbering in brackets shows the corresponding coherence units.

(39) In my day, I was expected to annotate scripts to explain my marks to the chief examiner. (40) Remove *that requirement*, and the examining process will only appear to be more open, while in fact retaining an almost smug inscrutability.

It is clear that there is one segment in the second sentence, *that requirement*, whose interpretation is affected by the interpretation of another segment of previous discourse. In other words, we can say that in order to establish part of the content of the second proposition we need to use the propositional meaning created by the interpretation of previous text. That is to say, we need to bring to bear an assumption derived from having interpreted a previous segment of text. And, in this case, the segment of previous text that provides the reader with the most relevant assumption, derived from interpreting semantic content, is the previous sentence: i.e. the requirement that in her day, the author was expected to annotate scripts to explain her marks to the chief examiner.

Thus this example shows quite clearly that the encapsulated text is the whole of the previous sentence. However, not all examples of relevance of content seem so clear as this. In fact, Sinclair (1993) opens an interesting debate that is especially relevant in the two areas of cohesion included in his framework under the category of deictic acts, namely, reference and lexical cohesion. The debate refers to a possible distinction between the process of encapsulation and what Sinclair identifies as *point-to-point cohesion*. According to Sinclair (1993), there are other kinds of cohesion that refer to less than a sentence, and these are not regarded as textual in nature. To clarify this distinction terminologically speaking, I propose to call the process of *true* encapsulation *textual cohesion*, as opposed to *point-to-point cohesion*.

Point-to-point *cohesion* may be said to occur in cases where a pronoun can be related back to a noun phrase earlier in the text, and can be said to *refer* to it. This kind of pattern is clearly of frequent occurrence, and is the basis of most accounts of cohesion and the focus of many tasks in teaching reading discourse skills. It includes the rich field of lexical cohesion, where the recurrence of a word or phrase, or the occurrence of something reminiscent of a previous item is noted. Each constituent of these patterns is less than one sentence long; normally a word or phrase, or at most a clause (Sinclair, 1993: 8).

Since one of the first studies where this type of items was discussed at length is Halliday and Hasan (1976), let me show one simple and trivial example that they take from a cookery book to illustrate what Sinclair seems to *call point-to-point cohesion*:

[1] Wash and core *six cooking apples*. Put *them* into the fireproof dish.

According to Halliday and Hasan (1976: 3), "it is clear that *them* in the second sentence refers back to (is anaphoric to) the *six cooking apples* in the first sentence. This anaphoric function of *them* gives *cohesion* to the two sentences, so that we interpret them as a whole; the two sentences together constitute a text. Or rather, they form part of the same text since there may be more of it to follow". And later they go on to say that "*the meaning* of the cohesive relation between *them* and *six cooking apples* is that they refer to the same thing. The two items are identical in reference, or *co-referential*. So, in this case, what provides the *texture* is the *co-referentiality* of *them* and *six cooking apples*". (Halliday & Hasan, 1976: 3). This is the way the authors analyze most cases of cohesion, other than conjunction:

... where the cohesive item is something like *he* or *one*, which coheres by direct reference to, or substitution for, another item the presupposed element is typically a specific item in the immediately preceding sentence. [...] Characteristically these instances also tend to form cohesive chains, sequences in which *it*, for example, refers back to the immediately preceding sentence—but to another *it* in that sentence, and it is necessary to go back three, four or more sentences, stepping across a whole sequence of *its*, before finding the substantial element.

Halliday & Hasan (1976: 15)

As has been noted, in Sinclair's (1993) view, these cases of cohesion are not regarded as textual in nature. According to him, textual cohesion deals "only with sentences or, occasionally, clause complexes, or even longer stretches of text, and it does much more than effect a tenuous connection between isolated constituents of sentences. It is the process of encapsulation, and it reclassifies a previous sentence or text by *demoting* it into an element of the structure of the new sentence" (Sinclair, 1993: 9). A clear example of the process of encapsulation has been discussed at the top of this section (39-40), where it was easy to observe how the meaning of the first sentence, (39), had been demoted into the direct object of the first clause in sentence (40).



As Sinclair (1993: 8) claims, "failure to appreciate the distinction between these two types of cohesion has hampered the development of models of text structure". The model of text that he puts forward "has no place for retention of the actual words and phrases of text so that such connections between text items could be established" (Sinclair, 1993: 8). The model I advocate also adopts the same perspective. However, it reconsiders some cases that might be considered as point-to-point cohesion by Sinclair.

Let us take fragment [1] again:

[1] Wash and core *six* cooking *apples*. Put them into the fireproof dish.

In my view, it is possible to appreciate a mechanism of encapsulation as defined by Sinclair, i.e., by perceiving a cohesive relation between them and the meaning created by interpreting the whole of the previous sentence. The best way to see this is by trying to visualize the state in which the *six* cooking apples that they refers back to are when we put them into the fireproof dish: are they the same six cooking apples that we originally took to be washed and cored or are they six cooking apples already washed and cored? When the group of 25 subjects were asked this question during their short course they unanimously answered that the six cooking apples that we need to put into the fireproof dish, according to the recipe, should already be washed and cored.

Thus it is possible to suggest that in this case the relevance is provided in this respect by the fact that the interpretation of them is affected by the interpretation of the semantic content of the whole previous sentence, not only by the interpretation of the phrase *six* cooking apples, as Halliday and Hasan suggest. Thus, this case of them would be analyzed in our methodological framework as a case of textual cohesion because it encapsulates the meaning created by the whole of the previous sentence.

This departure from previous analyses pertains specifically to cases of cohesion such as the one illustrated by [1], where reference occurs, and some cases of lexical cohesion. If we relate this position to the relevance-based framework, it may be said that the personal pronoun them in [1] functions as a constraint on relevance. It allows the writer to make sure that her readers select the most effective contextual assumptions in their search for relevance at minimal processing cost. As we have suggested, in this case such a contextual assumption is derived from interpreting the semantic content of the whole preceding sentence in such a way that the second fragment of [1] is interpreted as [1B]:

[1B] Put them (the six washed and cored cooking apples) into a fireproof dish

#### IV.1.1.b. Encapsulating discourse act

A second subtype of relevance of content that I would like to propose takes place when, as well as interpreting the semantic content of the whole of a preceding coherence unit, the reader needs

to interpret the discourse act performed by it in order to establish the propositional content of a segment in the new sentence. In other words, the structure of the new sentence contains an element that reclassifies a previous discourse segment in terms of its discourse function. Examples of these signals of discourse acts may be: distinction, definition, difference, comparison, or any other encapsulating device that refers to an act performed by some segment of preceding discourse. Let us consider one example from the text:

(47) There will be logistical problems: returning all scripts will mean 13.5m papers whizzing through the postal system, for instance. Photocopying scripts sounds horrendous even to a convinced "pro-returner" like me. Proper scrutiny of the papers in school will take time, possibly precious holiday time. (51) And if the big learners here are teachers, not pupils, should they be returned at all?

The answer is yes. I believe now, as I believed last year when I wrote one of the first articles calling for this move towards long-overdue transparency and accountability, and as the authorities hold in New Zealand, that it is simply the right thing to do. The right thing overrides logistical problems. (55) Pupil neglect of the papers is beside *the point*.

After reading these two paragraphs of the text, if we focus our attention on the noun phrase *the point* in the last sentence, it is clear that it has an encapsulating function. The reader will rapidly wonder which point, to remember that the point had been made in the preceding text in the form of a rhetorical question "should they (the scripts) be returned at all?" which in its context, where problems are being described, really implies what could be expressed by a negative statement: *they should not be returned at all*. The answer given to this question by the author, however, cancels this negative interpretation by providing what is presented as a powerful argument: i.e. it is simply the right thing to do, and this overrides logistical problems.

Then, the last sentence, (55), retrieves by means of the encapsulating device pupil *neglect of the papers* a previous assumption supplied by interpreting the text at coherence unit (26), which was presented as a negative aspect (an irony) of the pilot scheme, i.e. that most of the candidates didn't want them (i.e. the scripts). What the sentence in focus, (55), does then is discard the relevance of that assumption, (26), elaborated from (27) to (33), in relation to *the point* made, i.e. the question posed in coherence unit (51). Thus in order for the reader to establish the content of the noun phrase *the point*, s/he needs to interpret the discourse act performed by coherence unit (51) as *making a point*.

Finally, encapsulating discourse acts can also co-occur with other deictic acts, such as in *this distinction*. This reinforcement makes the encapsulation process easier to perceive.

#### *IV.1.2. Relevance of relationul function (Encapsulating logical act)*

The other type of coherence arises when the information made available by one discourse segment is used in establishing the relevance of the next (Blakemore, 1987: 112). In other words,

this type of coherence arises when, on trying to establish the relevance of the new coherence unit as a whole (not simply one element in it — as in relevance of content), the reader needs to do some extra inferential work to interpret the discourse function (i.e. an implicit import) of the whole of a previous discourse unit in relation to the discourse function of the whole of the current discourse unit. That is why I refer to this type as *relevance of relational function*, because the extra propositions inferred from the two related discourse segments are relational, i.e. depend on each other, and they are perceived in discourse functional terms. Other terms used in the literature to describe roughly the same kind of phenomena are the following: conjunctive relations (Halliday & Hasan, 1976); semantic relations (Crombie, 1985); relational propositions (Mann and Thompson, 1986); clause relations (Winter, 1986); intersentential relations (Hyde, 1990, 2002); and coherence relations (Sanders et al., 1993).

Examples of these relational propositions are: sequence, claim-support, argument-conclusion, claim-contrast, reason-action, effect-cause, etc. Since it does not seem possible to arrive at a consensus on a universal taxonomy, I will use the terms that the subjects employed intuitively to describe their interpretations. What most authors seem to agree on is that relational propositions may be implicit or explicit. It is important to notice that it is when the relational propositions are made explicit that the encapsulation is patent, serving as a powerful textual constraint on relevance. Otherwise, the relevance of the new coherence unit can only count on the reader's inferential capacity.

If we considered this phenomenon from Halliday and Hasan's (1976) view, then we would be considering the encapsulating mechanism effected by conjunctive items, which include expressions such as *And*, *Yet*, *So* and *Then*. However, as has been attested by Winter (1977), Crombie (1985), Hyde (1990, 2002) and Moreno (1995, 1997, 1998b, in press), there are alternative means of signalling relational propositions to the well-recognized conjuncts. These alternative means stretch right across the spectrum of sentence structure, constituting central elements such as nominal, verbal, adjectival and others items. Hyde (1990) provides a full account of these means in his study of the explicit signalling of intersentential relations as they occur in a corpus of editorials from *The Guardian*. Moreno (1995, 1995, 1998b) focuses on the expression of different kinds of causal expressions in a corpus of research articles to offer contrastive results between Spanish and English. Moreno (in press) identifies the full range of possibilities for the expression of intersentential causal relations in a corpus of cause-effect analytical essays.

It is precisely in most of these other alternative expressions where the mechanism of encapsulation is perceived more clearly. The main reason is that these integrated signals usually co-occur with other devices such as ellipsis, reference or lexical cohesion, which also encapsulate, making the encapsulation stronger. Consider for example the metatextual expression *this is not to say* identified in coherence unit (15) in the text analyzed, where the previous relevant segment of text (12-14) is encapsulated by the reference item *this*, establishing relevance of content. What is interesting to point out is that the subjects agreed that this

expression was also signalling a relation of inferred consequence derived from the previous relevant discourse and that this relation was being cancelled by the negative word.

If we now consider Sinclair's (1993) analytical framework, relational propositions would approximately correspond to what he terms logical acts. And this is the term I will adopt to refer to this phenomenon in order to avoid using more extraneous terminology. I say approximately because, according to Sinclair (1993: 9), logical acts "show the use of the logical connectors and associated mechanisms such as ellipsis", but in the present analysis ellipsis is not considered under logical acts, but as a form of inferred connection, for the following reasons.

On the one hand, it is true that signals of relational propositions are also occasionally associated with ellipsis such as in connectors like *as a result* (i.e. 'as a result \* of a previously-stated proposition'). This, in fact, has been well attested by Moreno (1997, 1998b, in press). However, in a detailed analysis of the mechanisms of coherence involved in this expression, it is possible to identify two distinctive sources of relevance which occur in combination: one which arises when the second related fragment of text is interpreted as the result of what has been stated in the previous relevant proposition, which is interpreted as the cause, thus inferring a cause-effect relational proposition. The other source of coherence arises when the elliptical element is recovered. It is then that the encapsulating mechanism is perceived. However, if we had to analyze the encapsulating elements recovered, we would say that the type of relevance they contribute to establishing has more to do with relevance of content. This type of relevance would correspond more precisely to the coherence mechanisms Sinclair terms deictic acts.

On the other hand, ellipsis may also occur in expressions that do not signal a logical act. Consider the following metatextual expression found in unit (26) in the text, the irony is. In this case, the subjects interpreted that the expression was one form of evaluation of the proposition previously stated in (6), where the pilot scheme had been first introduced and described. In fact, the students were able to establish the connection with that previously stated proposition by recovering the following textual material of the pilot scheme, which would be functioning as a post-modifier in the NP: the irony of the pilot scheme. What is important to notice in this case is that the encapsulation is not explicit, but implicit by means of ellipsis. It is only when the elliptical material is recovered, not always an easy task with student subjects, that the encapsulation is perceived. However, again, if we had to analyze the encapsulating elements recovered, of the pilot scheme, we would say that the type of coherence they contribute to establishing is relevance of content by means of reference (the) and lexical cohesion (repetition of pilot scheme). This is perhaps the major difference between the present analytical framework and Sinclair's (1993).

Sinclair (1993) proves his hypothesis about the coherence mechanism termed encapsulation, and concludes that the principal type of coherence is through encapsulation. It is so well established that in cases where there is no explicit link between sentences the default interpretation is encapsulation. Now, as Sinclair (1993) acknowledges, if encapsulation were an absolute rule, and not just a default hypothesis, then the nature of text structure would be

obvious. The current sentence would encapsulate the previous one, which in its turn had encapsulated its predecessor, and so on back to the beginning of the text. The current sentence would then be encapsulated in an act of reference in the next to come, and so on until the end of the text.

As a model of text structure, I agree with Sinclair that it seems very attractive. It explains how texts can be organized and how their dynamism may be created and fuelled. It provides the basis for a powerful definition of coherence, and reduces cohesion to the identification of the act of reference only. However, Sinclair (1993) introduces a variation to the default hypothesis, which he considers as another major category of coherence: that is, prospection. This is an alternative —but not so frequent— structure to that of retrospective encapsulation, which Blakemore (1987) does not explicitly account for in her study.

#### **IV.2. Prospective mechanisms (P)**

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. The sentence fulfilling the prospection does not encapsulate the prospecting sentence. (Sinclair, 1993: 28)

So, prospection occurs where the phrasing of a sentence leads the reader to expect something specific in the forthcoming text. Due to the precise nature of the type of relevance established in cases of prospection, I will distinguish the following two types on the basis of whether they are used to establish relevance of content or to establish relevance of relational function.

##### *IV.2.1. Relevance of content*

In this variation of coherence mechanism we can perceive a similar principle to the one we could perceive in the corresponding type of encapsulation but in the opposite direction. Blakemore (1987, 1992) does not acknowledge the phenomenon of prospection, because she focuses on the relevance of the current utterance in relation to meaning generated by interpreting the preceding discourse. However, from our relevance-based perspective it should be possible to say that one type of prospection occurs where there are text elements in the current sentence whose propositional content is likely to be affected by the interpretation of an upcoming text fragment in the sense that its meaning will be fully determined.

Another way of looking at this is to say that prospection occurs when there is an element in the current sentence that gives the reader advanced warning as to the way in which the assumptions derived from interpreting the following segment of discourse will be relevant. Thus in prospective acts of this type, an element of the current sentence serves as a powerful constraint on the relevance of an upcoming fragment of text. It is also important to notice that this phenomenon implies that the word or phrase to be elucidated in the upcoming text is presented

as new to the context created in the course of interpretation. Within prospecting relevance of content it is possible to distinguish at least two types of prospecting act.

#### IV.2.1.a. Prospecting deictic act

The first type roughly corresponds to the phenomenon identified by Tadros (1985: 14) as *enumeration*. It rests on the reader interpreting the full meaning of a word or phrase (e.g. a sub-technical word such as *advantages*, aspects, functions, which Tadros terms the enumerable), as something to be elucidated in the following text. Tadros shows how the enumerable, or prospecting signal, is usually preceded by some kind of numeral, whether exact, such as two, or inexact, such as *several* that commits the writer to enumerate. However, as the text shows, the enumerable does not need to be preceded by a numeral to create a prospection. It is sometimes simply expressed in the plural. A clear example from the text is found in coherence unit (47): there will be logistical problems, which by means of the lexical word problems (a superordinate), followed by a colon, makes a prospection over a group of sentences (48-50), which specify the logistical problems prospected.

The distinguishing feature of this type of prospection from the relevance perspective rests on the fact that interpreting the semantic content of a segment of upcoming discourse will help to fully determine the meaning of the prospecting signal. This also has the effect of establishing the relevance of the next fragment of discourse. What is more, for the prospection to be fulfilled satisfactorily, the semantic interpretation derived from the following unit(s) needs to be congruent with the general semantic meaning of the prospecting signal. For instance, relevance is easily perceived at each of text units (48-50) when after interpreting their semantic content we are able to abstract away and interpret each of the events described as problems.

I have termed this first type prospecting deictic act in a general sense to include not only this type of sub-technical lexical words, or superordinates, but also other prospecting signals such as cataphoric reference items and question words, where the meaning of the prospecting item is also elucidated by interpreting the semantic content of a relevant segment of upcoming discourse. The question word, *what*, in coherence unit (2) in the text is a clear case. Punctuation marks such as the question mark (2) or the colon (47) would also contribute to establishing a prospection.

#### IV.2.1.b. Prospecting discourse act

Another common way in which this type of prospection may happen is when the current sentence contains a signal, similar to what Tadros (1985) terms advance labelling, such as *let us define*, whereby the "writer labels, and thereby commits himself to perform a discourse act" (Tadros. 1985: 22). In this case, the writer is committed to performing an act of definition. In other words, for the reader to fully determine the content of the element *define* in the current coherence unit, s/he will need to go on reading the following relevant fragment of text and interpret it as a definition. Thus, in this case too, the current sentence serves as a powerful

constraint on the relevance of the upcoming coherence unit, in that it will constrain its interpretation to a given discourse function, a definition. In fact, if the reader is to perceive the new coherent unit as relevant, s/he needs to be able to infer its discourse function as a definition. It is this inferred discourse function that needs to be congruent with the general meaning of the prospecting signal.

This type of prospection would embrace cases such as those accounted for by Sinclair (1993). One example is the introduction of quoted speech by means of attribution, as in *his message, the statement or the exhortation* (Sinclair, 1993: 13). Other possible signals of prospected discourse acts may be the following: *consider, discuss, compare, describe, examine, mention* and *distinguish*, as in a sentence like "It is important to *distinguish* between real and nominal wages" (Tadros, 1985: 22) followed by other sentences elucidating this distinction. It should be noted that the function of the following fragment of discourse is not part of a relational proposition but is just an autonomous discourse act.

The only example of a prospecting discourse act found in the text under analysis is in coherence unit (58):

(56) A few will be very interested indeed, (57) and that's enough. (58) \* (*It is*) A bit *like* voting, really: <[(59) lots of people don't care about that either, (60) but for those who do, it's one of the markers of a civilized world.]

After reading (58), it seems as if the writer is committed to performing an act of comparison. It is true that a comparison is made in this clause by means of the comparative preposition, *like*, between the situation encapsulated by elliptical material such as *it is* and *voting*. In this sense, *like* is encapsulating, because the reference of the comparison is found in previous text. However, the comparison is not fully determined in the clause where *like* occurs, since the reader does not know in what way the two members of the comparison are similar. To satisfy this, the reader will need to go on reading. In this sense, the comparative preposition is prospecting a discourse act of comparison. Reinforcing this prospection is the colon, which indicates that the fulfilment of the prospection will follow immediately.

#### IV.2.2. Relevance of relational function (Prospecting logical act)

Another variation of prospection that I would like to propose serves to help readers perceive the relevance of a new coherence unit by advancing the relational discourse function that will be established between the next fragment of discourse and, either the current sentence, or a previous fragment of discourse. In other words, prospecting logical acts also play an important role as textual constraints on relevance in the sense that by interpreting the current coherent unit, the reader is able to predict the relevance of the next in terms of its relational discourse function. That is, in this type of prospection some proposition (or pragmatic import) derived from interpreting the current segment of discourse is used in establishing the relevance of the

following segment of discourse by virtue of its discourse function in relation to the discourse function inferred from the current sentence or a previous one.

An interesting example from the text is in (28), *the reasons are obvious*, where the prospecting signal is the plural noun *reasons*. It is true that this case might also be analyzed as a case of enumeration (i.e. as a prospecting deictic act), in the sense that the content of the word *reasons* will be elucidated in the following text. That is, the reader will need to go on reading the following fragment of discourse to find the reasons enumerated. However, it also seems quite clear that interpreting the coherence unit in which the signal appears leads the reader to predict the relevance of the upcoming unit(s) in discourse functional terms. In the present case, the reader is led to interpret the following fragment of text as the *reasons* for the previous relevant discourse, which is then interpreted as the *fact* or *action* that will be justified. Therefore the reader infers a relational proposition of *fact-explanation* or *action-reason*, which helps him/her establish relevance of relational discourse function for the forthcoming piece of discourse.

In this particular case, what can also be observed is that the fragment of discourse from which one member of the relational proposition is inferred (i.e. the action to be justified) is in a previous independent sentence. Thus in order to perceive the relevance of the current sentence the reader needs to recover the previously stated proposition which has been omitted in the current sentence. On recovering elliptical discourse material such as *for the previously stated action*, a mechanism of encapsulation is clearly perceived as establishing relevance of content. So, we could say that this coherence unit is perceived as coherent by virtue of *dependent relevance of relational function* both retrospectively and prospectively, and by virtue of *relevance of content* prospectively, by means of the signal *reasons*.

It is in cases like these where it is possible to appreciate the role of prospecting cohesive devices as another type of constraint on the relevance of the upcoming piece of discourse. Blakemore (1987, 1992), however, does not account for this kind of relevance. Sinclair (1993) and Tadros (1985), for instance, do account for some of these prospecting signals such as *examples, implications* in their role as what I have called constraints on relevance of content, but they do not clearly account for their role as constraints on relevance of relational function. Hyde (1990), on his part, gives full account of this role in his discussion of cataphoric and anaphoric-cum-cataphoric intersentential relations signals which occurred in editorials from *The Guardian* throughout the whole spectrum of relational propositions: causal, adversative, additive and temporal.

### IV.3. Units fulfilling or satisfying a prospection (S)

As Sinclair (1993) puts it, the prospective acts relevant to a sentence are made in the previous sentence. The act of prospection means that the interactive force of a sentence extends to the end of the sentence following. If we now look at this phenomenon from the relevance-based framework, we will also need to account for the relevance of the unit following a prospective act.



I would like to suggest that the relevance of that upcoming unit, which becomes the current sentence in the process of interpretation, is perceived if it satisfies the prospection made in the previous text. The prospection may be fulfilled in two ways: a) if the current sentence provides information from which to derive assumptions (in terms of semantic content or discourse act) that may be used to determine fully the content of a part of the propositional content of the coherence unit where the prospection was created, and/or b) if it provides information from which to derive a relational discourse function congruent with the relational proposition prospected in the preceding discourse. Failing this, the reader may find the discourse either unsatisfactory, incomplete or illogical.

In the case under analysis, every sentence in the rest of the paragraph following *the reasons are obvious* is relevant in this sense. All these sentences together are then said to fulfil the prospection. And their status in the text structure will be that of fulfilling the prospection. Let us imagine, for instance, that instead of coherence unit (28) being continued in the way it was, it had been followed by the following coherence unit: *If you had two older brothers, you really don't care about the papers*. Even though the relevance of this upcoming segment of discourse, now the current text of the moment, may have been prospected by the previous coherent unit *the reasons are obvious*, the reader will very probably find it difficult to derive any assumption from the information contained in it that allows him/her to infer that the information is functioning as one of the prospected reasons. Therefore, the reader is bound to find the text illogical or irrational at this (invented) point. This is why I would like to stress the role of the fulfilment of a prospection as a powerful though less frequent coherence mechanism.

In this section I have introduced the main criteria used to analyze explicit coherence mechanisms and have discussed their role as textual constraints on relevance. It should be emphasized that this method of analysis was applied only to those text features identified by the subjects, whose contribution to establishing the relevance of each new sentence was discussed open-class. In summary, these text features were classified either as encapsulating (deictic act, discourse act, logical act), prospecting (deictic act, discourse act, logical act), combining both mechanisms, or fulfilling a prospection.

#### **IV.4. Inferred encapsulation, or qualified assignments (I)**

In cases where there were no clear explicit signals of the coherence mechanism, that is, in cases of implicit connections, the subjects were asked to make them explicit. These were the cases that roughly correspond to what Sinclair (1993:20) terms *qualified assignments*. He also suggests that, as a general rule in interpretation, in the absence of a clear indication we reverse the argument and ask what is the kind of relationship that, using all the powers of inference available, one would assume in that case. As a method for gathering data, that is exactly what the subjects were asked to do. Then the group tried to arrive at a consensus about the most reasonable interpretation in relation to the groups' standard of coherence, which may not be the

same in other discourse communities. This recovered textual material typically signals logical acts and deictic acts of an elliptical type.

It is important to stress that the category of *ellipsis* has been treated in the present study either as a case of inferred point-to-point cohesion or inferred encapsulation since one of the characteristics of this cohesive tie is precisely that there is no text signal indicating the tie but a structural slot that needs to be recovered for relevance to be established.

In some cases the structural slot is obligatory from a syntactic viewpoint as in (23).

(23) \* (Anyway) Even if he didn't (\*loom over one's shoulder, checking, commenting, re-marking if necessary), the fear that he would (\*loom over one's shoulder, checking, commenting, re-marking if necessary) was a great deterrent to misdemeanour.

In this case the elliptical text segment refers to a part of the wording used in the previous coherence unit (22): the predication in the clause. This would be a case of point-to-point cohesion. In other types of ellipsis, the structural slot is optional, as in (7).

(7) The Qualifications and Curriculum Authority has carried out an interim evaluation \* (of the pilot scheme).

In (7), the elliptical encapsulating item did not simply refer to the part of the wording in the preceding coherence unit, (6) where the pilot scheme is first mentioned but to the whole semantic content of (6), where the pilot scheme is described in detail. Once recovered, the encapsulating devices were analyzed and classified as any other explicit encapsulating acts. If one looks at these and other cases of ellipsis closely, two types of relevance seem to arise once the elliptical material is recovered.

#### IV.4.1. Relevance of content (Inferred encapsulating deictic act)

One is relevance of content, as illustrated by (7), where the interpretation of one segment in the current sentence (excluding the linking word *of*), *the pilot scheme*, is affected by the interpretation of another segment of previous discourse, i.e. the whole of coherence unit (6) where the pilot scheme is described. It is this phenomenon that can be considered as really textual in nature because it involves encapsulation rather than point-to-point cohesion.

#### IV.4.2. Relevance of wording (Inferred point-to-point wording act)

A second subtype of relevance that I would like to propose, drawing on Halliday and Hasan (1976), takes place when, rather than recovering the semantic content of the whole preceding coherence unit, the reader needs to recover (a part of) the wording used in it in order to establish the content of the elliptical segment in the new sentence, as in the two instances of ellipsis in (23) above. As we shall see, this type of point-to-point cohesion is usually accompanied by other

types of cohesion, such as *he* in (23), which are able to encapsulate. It is worth noting that this type of relevance would also apply to cases of substitution, although in these cases the relation is made explicit by a word such as *one* and *do*. These cases also seem to reflect point-to-point cohesion rather than true encapsulation, as will be shown.

#### IV.5. Type of cohesive tie

Once all the sentences in the text had been classified according to the type of coherence mechanism that helped the readers to perceive their relevance, the study sought to determine which type(s) of cohesive tie was/were involved in each case. One problem at this stage was to decide which taxonomy of cohesive devices to use to classify the different coherence mechanisms found. It was eventually decided to use Halliday and Hasan's (1976) classification of cohesive devices for the simple reason that it is still the most comprehensive and widely known account of cohesive devices. Therefore, using their terminological framework would make it easier for researchers to establish comparisons between results obtained applying different but related models.

Thus, the textual features identified by the group as contributing to their perception of coherence were further classified, wherever possible, under the different categories identified by Halliday and Hasan (1976): *lexical cohesion* (i.e. repetition, synonym, superordinate, general word, related word); *substitution* (nominal, verbal, clausal) *reference* (personal, demonstrative, comparative). Logical acts were classified on a first level according to the four types of *conjunction* (additive, causal, adversative, temporal). In cases where the identified features did not fit any of these categories, further categories were added. Within conjunctive relations, further subcategories were specified but, as has been mentioned, the terminology used to name each logical relation in some cases had more to do with the subjects' interpretation of the relational discourse functions inferred than with the categories used by any of the existing studies in the literature to avoid losing the shades of relational discourse meaning perceived. Finally, as justified above, the category of *ellipsis* was treated as a case of either inferred encapsulation or point-to-point cohesion.

#### IV.6. A text-as-product view of cohesive devices

The last stage in this research was to analyze the cohesive ties contained in the text when looked at as a product. By this I mean using a method whereby the researcher approaches the whole text as a finished product in an attempt to identify all kinds of cohesive ties that play a role in establishing connections between a text fragment and another one across sentence boundaries. Due to obvious space limitations, it was beyond the scope of this paper to classify all the different resources found. Therefore, these are only marked in the text. However, let me point out that, in order to make future comparisons possible, the identification of these devices was

carried out following Halliday and Hasan's (1976) classification of cohesive ties as far as possible: lexical cohesion (repetition, synonyms, opposites, related words), substitution and ellipsis, reference (just endophoric) and conjunction.

## V. RESULTS

The results obtained from the discourse-as-process view of textual constraints on relevance are summarized in Table 2.

Table 2: Textual constraints on the relevance of each coherence unit in the text

N <sup>o</sup>	Explicit signal(s) * =Inferred signal(s)	Type and subtype of coherence mechanism	Type of cohesive tie	Relates to
1				
2	1) and 2) what?	E: Logical P: Deictic	Additive: Positive Reference: Question word Punctuation: Question mark	1 3-4
3	1)	S		2
4	1) 2) and 3) the water	S E: Logical E: Deictic	Additive: Positive Phrasal: Demonstrative reference + Lexical repetition	2 3 1-3
5	1) The water	E: Deictic	Phrasal: Demonstrative reference + Lexical repetition	1-4
6	1) the ... return ... scripts ... to candidates	E: Deictic	Phrasal: Demonstrative reference + Lexical repetition with word class change + Synonym + Repetition	5
7	1) * (of the pilot scheme) 2) an evaluation	I: Deictic P: Deictic	Elliptical: Post-modifier Lexical: Superordinate	6 9-11
8	1) it	E: Deictic	Reference: Personal	6
9	1) 2) * (about the pilot scheme)	S I	Elliptical: Post-modifier	7 6
10	1) 2) * (In other words)	S I: Logical	Additive: Expository: Metaphorical paraphrase	7 9
11	1) 2) It	S E: Deictic	Reference: Personal	7 6
12	1) * (In fact) 2) * (in the pilot scheme)	I: Logical I: Deictic	Causal: Claim-support Elliptical: Post-modifier	9-11 6
13	1) * (because)	I: Logical	Causal: Claim-reason	12
14	1) * (In other words)	I: Logical	Causal: Inferred consequence	13
15	1) This is not to say that	E: Deictic E: Logical	Reference: Demonstrative Causal: (Cancellation of) inferred consequence	12-14

16	1) such a thing	E: Deictic	Phrasal: Comparative reference + Lexical general word	15
17	1) * (because)	I: Logical	Causal: Claim-reason	16
18	1) * (examining was)	I: Deictic	Elliptical: Subject + Operator	17
19	1) * (In other words)	I: logical	Additive: Expository: Paraphrase	18
20	1) And * (And = but)	E: Logical	Adversative: Proper	19
21	1) * (because)	I: Logical	Causal: Claim-reason	20
22	1) At least 2) that + he did	E: Logical E: Deictic	Adversative: Corrective Clausal: Same meaning: Demonstrative reference + Personal reference + Lexical general verb	21
23	1) * (Anyway)	I: Logical	Adversative: Dismissive	21-22
	2) he	E: Deictic	Clausal: Personal reference +	21-22
	3) did * (loom over one's shoulder...)	I (PP): Wording	Predicator ellipsis	Predication
	4) he	E: Deictic	Clausal: Personal reference +	21-22
24	5) would * (loom over one's shoulder...)	I (PP): Wording	Predicator ellipsis	Predication
	1) But 2) -er / more 3) * (than the chief examiner looming over ...)	E: Logical E: Deictic I: Deictic	Adversative: Contrastive Reference: Comparative Elliptical: Comparative clause	21-23
25	1) * (Returning the marked scripts... is)	I: Deictic	Elliptical: Subject + Operator	24
26	2) * (of the pilot scheme)	I: Deictic	Elliptical: Post-modifier	6
	3) * (in spite of...) having been offered the scripts	E: Logical E: Deictic	Adversative: Proper Clausal: Inferred meaning	24-25
27	1) * (As a matter of fact)	I: Logical	support	26
28	1) The reasons	P: Deictic EP: Logical	Phrasal: Demonstrative reference + Lexical superordinate Causal: Action-reason	29-30
	2)* (why most of the students did not want to view the scripts)	I: Deictic	Elliptical: Clause	26-27
29	1)	S		28
30	1)	S		28
	2) and	E: Logical	Additive: Positive	29
	3) that	E: Deictic	Reference: Demonstrative	
31	1) * (By contrast)	I: Logical	Adversative: Contrastive	28-30
	2) Interest in the a ers is enerated	E: Deictic	Clausal: Opposite meaning (situation)	
32	2) and * (and = but)	E: Logical	Adversative: Proper	31
33	3) then * (then = that)	E: Deictic	Reference: Demonstrative	
	1) * (because)	I: Logical	Causal: Claim-support	32
	2) If	E: Logical	Causal: Reversed polarity conditional	

	3) you partied all year, or had a personal crisis	E: Deictic	Clausal: Opposite meaning (instance)	
34	1) also	E: Logical	Additive: Positive	26-33
35	1) (this is)	I: Deictic	Elliptical: Subject + Operator	34
36	1) * (because)	I: Logical	Causal: Claim-support	35
37	1) Actually, 2) this	E: Logical E: Deictic	Additive: Avowal Reference: Demonstrative	36
38	1) * (because)	I: Logical	Causal: Claim-reason	37
39	1) * (In fact)	I: Logical	Causal: Claim-support	38
40	1) that requirement	E: Deictic	Phrasal: Demonstrative reference + Lexical superordinate	39
41	1) If * (If = while) 2) candidates didn't care about the scripts	E: Logical E: Deictic	Adversative: Proper Clausal: Similar meaning	26-33
42	1) * (As a matter of fact)	I: Logical	Causal: Claim-support	41
43	1) Of course * (Of course = this is natural)	I: Deictic	Elliptical: Subject + Operator Operator	42
44	1) * (because)	I: Logical		
45	1) * (However) 2) Better than 3) knowing what they got * (which is the best learning tool a teacher can...)	I: Logical E: Deictic E: Deictic	Adversative: Claim-Proposer Reference: Comparative Clausal: Inferred meaning	44
46	1) * (So) 2) this	I: Logical E: Deictic	Causal: Inferred consequence Reference: Demonstrative	45
47	1) problems: 2) * (with the process of returning the scripts to candidates)	P: Deictic I: Deictic	Lexical: Superordinate + Punctuation: Colon Elliptical: Post-modifier	48-50 6
48	1) 2) for instance	S E: Logical	Additive: Exemplificatory	47 47
49	1)	S		47
50	1)	S		47
51	1) And 2) if 3) the big learners are teachers, not pupils	E: Logical E: Logical E: Deictic	Additive: Positive Causal: Conditional Clausal: Inferred meaning	47-50 41-46
52	1) * (However) 2) * (to this question) 3) * (they should be returned)	I: Logical I: Discourse I: Deictic	Adversative: Proper Elliptical: Post-modifier Elliptical: Clause	51
53	1) * (because)	I: Logical	Causal: Claim-reason	52
54	1) * (And) 2) The right thing	I: Logical E: Deictic	Additive: Positive Phrasal: Demonstrative reference + Lexical repetition	53

	3) <b>problems</b>	E: Deictic	Lexical: <u>Superordinate</u>	48-50
55	1) * (On the other hand / <b>Also</b> )	I: Logical	Additive: Positive	53-54
	2) pupil neglect of the papers	E: Deictic	Phrasal: Lexical synonym + Synonym with word <b>class change</b> + Synonym Phrasal: Demonstrative reference + Lexical superordinate	26
	3) the point	E: Deictic + Discourse		51
56	1) * (because)	I: Logical	Causal: Claim-support	55
57	1) and	E: Logical	Additive: Positive	56
	2) that	E: Deictic	<b>Referente</b> : Demonstrative	
58	1) * (It is)	I: Deictic	<b>Elliptical</b> : Subject + Operator	56-57
	2) like	E: Deictic	Reference: Comparative	
	3) like	P: Discourse	Reference: Comparative	59-60
	4) :	P: Deictic	Punctuation: Colon	
59	1)	S		58
	2) that	PP: Deictic	Reference: Demonstrative	Noun in (58)
	3) either	PP: Deictic	Reference: Comparative adverb	
60	1)	S		58
	2) but	E: Logical	Adversative: Proper	59
	3) those * (people)	PP + I (PP): Deictic I (PP): Wording	Demonstrative reference + Nominal ellipsis	Noun in (59)
	4) do * (care)	PP: Deictic	Ellipsis or Substitution: Verbal	Predicate in (59)
	5) it		Reference: Personal	Noun in (58)

The first column indicates the number of the coherence unit being analyzed. The second column indicates which signal(s) were reported to make the connection between the current unit and its co-text explicit. In cases where the connection is implicit, the results show in brackets and preceded by an asterisk which signal(s) were provided by the subjects to make the connection explicit. The third column first specifies the type of coherence mechanism perceived (E = encapsulation, I = inferred connection, PP = point-to-point cohesion, P = prospection. EP = encapsulation-cum-prospection, S = satisfaction or fulfilment of prospection). What comes after the colon specifies the subtype of mechanism involved on the basis of the type of relevance perceived: (Deictic / Discourse = relevance of content; Logical = relevance of relational function, Wording = relevance of wording). The fourth column shows the type of cohesive tie identified. The fifth column indicates in relation to which part of the co-text the connection is established. This may be specified by: the number(s) of the encapsulated or prospected coherence unit(s); the number of the coherence unit where the prospection was created; or, when the related element is smaller than a clause, its grammatical function in the clause.

These text features can be observed in their full context in the segmented text found in the appendix. They appear in bold type. The underlined items can be considered as the other text-as-product cohesive mechanisms. Thus, although they may contribute to the perception of

superficial cohesion in the text, they are not essential to perceiving its coherence and text structure at least by these subjects. This does not of course mean that the cohesive signals identified in this paper as textual constraints on relevance from a discourse-as-process perspective would not also be identified as cohesive signals from a text-as-product perspective. It is most probable that a text-as-product view would have identified almost all these cases too, except for most of the inferred items.

Table 3 offers a summary of the coherence mechanisms affecting each coherence unit in the text that account for the coherence of this text as perceived by the subjects.

Table 3: Major coherence mechanisms affecting each coherence unit

Coherence mechanism	N	%	Number of coherence unit
liiferrcd encapsulation	19	32.2	12, 13, 14, 17, 18, 19, 21, 25, 27, 35, 36, 38, 39, 42, 43, 44, 52, 53, 56
Encapsulation	14	23.7	5, 6, 8, 15, 16, 20, 22, 32, 34, 37, 40, 41, 51, 57
Encapsulation + Inferred E.	8	13.6	24, 26, 31, 33, 45, 46, 54, 55
Encapsulation + Inferred E. + Inferred point-to-point cohesion	1	1.7	23
Encapsulation + Prospection	1	1.7	2
Encapsulation + Inferred E. + Prospection	2	3.4	28, 58
Inferred E. + Prospection	2	3.4	7, 47
Fulfilment of prospection	4	6.8	3, 29, 49, 50
Fulfilment of prospection + Encapsulation	4	6.8	4, 11, 30, 48
Fulfilment of prospectionii + liiferrcd E.	2	3.4	9, 10
Fulfilment of prospectionii + Point-to-point cohesion	1	1.7	59
Fulfilment of prospection + Encapsulation + liiferrcd point-to-point cohesion + Point-to-point cohesion	1	1.7	60
<b>Total</b>	<b>59</b>	<b>100,0</b>	

## VI. DISCUSSION

The first finding worth noting is the fact that the subjects were able to perceive a connection of some kind between each new unit of coherence and its co-text. In cases where they could not identify an explicit textual item marking the connection, the subjects were able to make the relation explicit by inserting some kind of textual element. As 88% of the subjects reported in a post-test questionnaire, having to make this interpretation task explicit was very useful in helping them to perceive the coherence of the text at each juncture. Thus, it has been possible to assign all coherence units to one of the coherence mechanisms listed in table 3, some of which are combinations. In this sense, the framework proposed can be considered as satisfactory in accounting for the coherence pattern of this text. Let us now comment on the most salient findings, referring especially to those cases that have been difficult to classify.

### VI.1. Inferred encapsulation

In this particular text, the percentage of inferred encapsulations that account for coherence on their own is relatively high (32.2%). So, if it were possible to establish a correlation between the degree of implicitness of coherence relations in a text and the level of difficulty in perceiving



the coherence of its discourse, the difficulty in perceiving the coherence of this text might be said to be in principle relatively high. And so it was, as the majority (80%) of subjects acknowledged. However, after the group discussion it was possible to arrive at a consensus on most cases without much difficulty. This points to the existence of a standard of coherence shared by this discourse community that goes beyond the presence or absence of explicit signals.

*VI.1.1. Overlay revisited (Inferred additive expository logical act by means of a paraphrase)*

A number of cases that deserve special attention are what Sinclair (1993) could have termed *overlay* within his methodological framework. In overlay "there is no obvious act of reference in a sentence with respect to the one before it, and yet the two appear to be closely connected—in fact, they are often almost paraphrases of each other. In such cases the new sentence takes the place of the old" (Sinclair, 1993: 17). For instance, coherence unit (10) was interpreted as a metaphorical paraphrase of (9), and (19) was interpreted as a paraphrase of (18). Let us consider the relation between (19) and (18).

(17) I examined for years: (18) the most gruelling job in the world, requiring painstaking effort and concentration to sustain standards justly for 300 scripts in three weeks. (19) Conscientious marking is a killer.

Both coherence units, (18) and (19), refer to the process of *examining/marking* done in a conscientious/painstakingly way to say that this task was the most *gruelling job/la killer*. It is interesting to notice how there is no single element in sentence (19) that may be said to encapsulate the whole of the previous sentence on its own, leaving the rest of the sentence to develop meaning further. In this case, the whole sentence paraphrases the previous one without making the discourse advance at this point. The second sentence is simply another way of expressing the same idea perhaps to strengthen, more or less forcefully, the assumption derived from coherence unit (18), as could be explained from the relevance framework. In fact, when the subjects analyzed this relationship, they unanimously agreed that they could perceive an expository additive relation, which they could make explicit by means of a conjunct such as *in other words*.

Now, if we agree that an additive relation of this kind is a logical relation, as many accounts of cohesion do (Halliday & Hasan, 1976), then we could say that the relation between these two coherence units is just another case of an inferred logical act. If we use a phrase like *in other words*, or an equivalent expression such as *let me express this in other words*, then we may be able to see this as a case of implicit encapsulation, *this* being the explicit encapsulating item. Thus, this interpretation saves us from having to interpret this phenomenon as an exception (Sinclair, 1993: 16), but rather as a qualified statement. This way Sinclair's model may be made even more powerful in accounting for discourse coherence than it looks, because it would reduce the number of exceptions.

A smaller number of inferred encapsulations have been perceived in combination with other types of coherence mechanism such as: encapsulation (13.6%); encapsulation and inferred point-to-point cohesion (1.7%); encapsulation and prospection (3.4%); prospection (3.4%); and fulfilment of prospection (3.4%). That is, although there was enough evidence in the text to account for the relevance of some coherence units by virtue of explicit mechanisms, the subjects were still able to infer other connections. This might be interpreted as the subjects' need to reinforce relevance in order to make better sense of the text at that point in the interpretation of the discourse.

## VI.2. Encapsulation

As far as explicit encapsulation is concerned, it was easy to classify all acts according to the type of relevance they contributed to establishing (deictic, discourse, or logical). Furthermore, most of the cases of encapsulation could be classified under any of the categories of cohesive tie established *a priori* by the method described above. However, there were some problems with certain deictic devices that led me to create new categories that supplemented the well-recognized categories of reference and lexical cohesion. It should be noted that on some occasions these two categories occur in combination in the form of a nominal phrase (cf. Examples (5), (16), (54) and (55)).

### VI.2.1. Encapsulating clausal deictic act

The first new category is what I have termed *clausal deictic act* because the text segment of the current sentence that is affected by the interpretation of the semantic content of a previous fragment of text is not realized lexico-grammatically by a reference item and/or a lexical item but by a whole clause. Various subtypes of encapsulating clauses have been noted according to the type of meaning they convey in relation to previous discourse.

#### VI.2.1.a. Similar meaning (similar meaning clause)

This type occurs when a clause in the current sentence expresses meaning similar to the meaning retrieved from a previous text segment in order to develop it further. One example can be observed in the relationship between the following two sentences, which both serve to open two different paragraphs in the text.

(26) The irony is, of course, that having been offered their scripts, most of the candidates didn't want them.

(41) *If candidates didn't care about the scripts*, 71% of staff cared a great deal;

In (41) the propositional content expressed by the seemingly conditional clause *candidates didn't care about the scripts* can be considered as a clausal rephrase of the semantic content expressed in (26)—excluding other metatextual elements both textual and interpersonal,

such as: *the irony is, of course, and having been offered their scripts*. However, it is important to highlight the distinction between *overlay*, or, in my view, inferred additive expository logical act, and the present type of deictic act. The former rests on the interpretation of a relational proposition between two related discourse segments, and the latter rests on the interpretation of the semantic content of a previous segment of text. In the former it is the whole current coherence unit that may be said to paraphrase the whole of the previous coherence unit. By contrast, in the latter only one element in the current coherence unit—a clause—encapsulates a previously stated proposition. The rest of the coherence unit is used to develop mutually shared meaning further. In other words, while in the logical act the whole sentence paraphrases the previous one without making the discourse advance at that point in terms of propositional meaning, in the deictic act there are other elements in the same coherence unit that convey new assumptions.

It is true that lexical point-to-point cohesion is involved in the clausal deictic act under consideration, such as repetition by means of *candidates* and *scripts* (notice that *them* in (26) refers back to *scripts* in the same sentence), and synonymy by means of *care* (referring back to *want*). However, what helped the subjects to perceive the relevance of sentence (41) was the appreciation that a whole idea previously stated in (26) was taken up again by (41) and was reused as part of the propositional content of (41). In fact, the subjects observed that this whole idea was used again to retrieve the relevant context in which introducing information such as *71% of staff cared a great deal* was perceived as something totally unexpected. It is interesting to notice how, in spite of there being a typical marker of a conditional relation *if*, the subjects interpreted this relation as an adversative proper one and they even provided an alternative signal such as *while*. Since the subordinate clause encapsulates the whole of a previously stated proposition, the adversative proper relation in (41) is analyzed as intersentential rather than intrasentential, therefore contributing to the subjects' perception of textual coherence.

#### VI.2.1.b. Inferred meaning (Inferred meaning clause)

An interesting variation of clausal deictic act occurs when a clause in the current coherent unit is interpreted as conveying meaning that may be inferred from a previous segment, and that meaning is further developed in the current sentence. This can be observed in the relationship between (51) and the whole of a previous paragraph (41-46).

(41-46) If candidates didn't care about the scripts, **71%** of staff cared a great deal: 82% agreed that access to the scripts would help with teaching the syllabus in the coming year. Well of course. Knowing exactly where the last candidates got it **wrong** is the best learning tool a teacher can have to improve performance next year. Better than knowing what they got is knowing why they got it. If any government wants to conjure up massive whole school improvement, this is the magic wand.

(S1) And *if the big learners here are teachers, not pupils*, should they be returned at all?

It is worth noting how coherence unit (51) encapsulates the meaning created by paragraph (41-46). However, in this case instead of rephrasing the semantic meaning conveyed by that previous fragment of discourse in a straightforward way, the author takes up the meaning conveyed by the whole of that paragraph and expresses it in the form of an inference, or interpretation, that may be derived from it on the following assumption: the fact that those who have learned from the pilot scheme are those to whom it was not in principle addressed is negative. However, this assumption is not made explicit in the text. It needs to be brought to bear by the reader, and it is the writer who manipulates the retrieval of that assumption by means of persuasion. The persuasive strategy here was easy to perceive.

Adding this inferential assumption to a sequence of negative points (stated from (48) to (50), cf. the segmented text in the appendix) makes it clear to the reader that the fact that *the big learners here are teachers, not pupils* should also be interpreted as a problem or negative point. That is, by using an inferential rephrase in the appropriate place the author has managed to make accessible to the reader the most relevant assumptions the reader needs to bring to bear in order to interpret that assumption as another negative point which makes it easier for the reader to accept the authors's new point in coherence unit (51): *should the scripts be returned at all?*

#### VI.2.1.c. Opposite meaning (opposite meaning clause)

Another variation of clausal deictic act occurs when a clause in the current coherence unit expresses the opposite meaning to the meaning conveyed in the whole of a previous fragment of discourse in order to develop it further. This has taken two forms in the text: A) by expressing the opposite situation; and B) by expressing an opposite instance.

**A) Opposite situation:** If we look at the connection between (31) and previous discourse, it will be easy to realize that a clause in (31), i.e. *interest in the papers is generated*, expresses the opposite situation to that expressed in (28). In other words, this clause serves to introduce the reason(s) for the opposite situation expressed in (28), i.e. the reason(s) why students were interested in viewing the papers. The rest of the clause, *by doing badly*, then develops that reason.

(28) The reasons \* (*why most of the students did not want to view the scripts*) are obvious: if you did well, you really don't care about the papers —*and that* goes for doing well unexpectedly, as well as having the satisfaction of achieving just what you expected.

(31) *Interest in the papers is generated* by doing badly, (32) and then only if it surprises you.

**B) Opposite instance:** A clear example of the second variation can be seen in the relationship between (33) and (32):

(31) Interest in the papers is generated by doing badly, (32) and then only if it surprises you. (33) *If you partied all year, or had a personal crisis*, then you will have done badly but you won't need to see the papers to see why.

In (33) we observe that the propositional content expressed by *you partied all year, or had a personal crisis* conveys two instances which contradict or oppose the claim made in (32) *doing badly surprises you*. In other words, the two instances provided by the conditional clause compound express events that would not **allow** anybody to be surprised at doing badly. It is possible to state that clause compound (33) encapsulates previous meaning **because** it does not really add new propositional material. It just presents it on a more specific level by means of an instance, or instances. In addition, the two events change the polarity of the proposition in relation to which they are relevant. The encapsulation could, in fact, be paraphrased in more general terms as: *if it does not surprise you* or *otherwise*. This is what allows us to analyze the conditional relation as one of **reversed polarity** (cf. Halliday & Hasan, 1976: 259). This is also why the conditional relation can be considered as intersentential rather than intrasentential: **because** it really serves to link the propositional content of the claim made in the matrix clause of (33) to the propositional content of (32) by means of a **reversed polarity conditional relation**, therefore crossing over sentence boundaries.

This relationship of **opposite meaning** would be parallel to the relationship of **lexical opposition** identified in most accounts of cohesion but there would be an important difference. While lexical opposition normally operates at the lexical level to establish a point-to-point relation between two words or phrases, in which the meaning of one of the members of the pair conveys the opposite meaning to the other member, **opposite meaning clausal cohesion** would operate at the propositional level. That is, the semantic relation would be similar but it would be between two propositions, each of which would be on opposite sides of the antonymic scale, whether on the same or different degree of generality.

Now, **despite** there being enough evidence of the process of encapsulation between (33) and (32), the predominant relationship that the subjects perceived between these two coherence units was one inferred logical relation of **support-claim**. As they reported, unit (33) was interpreted as offering **support** to the **claim** expressed by (32), which in its turn encapsulates (31).

### VI.3. Textual versus Point-to-point cohesion

Let us now go back to the open debate about the role of point-to-point cohesion in helping to establish the relevance of text fragments by looking at the data provided by this text. There are some cases identified by the subjects as really crucial that might be considered as cases of point-to-point cohesion. For instance, it might be said that the phrase *the water* in (4) refers back to

the NP *the water* in (1). However, the present model has reconsidered some of these cases in the following way.

By virtue of relevance theory, the reader will bring to bear the most cost-effective assumptions on the interpretation of the current sentence. In written language, these are most likely to be derived from the immediately preceding text. As we have also said, the reader does not usually retain the linguistic properties of previous text but the meaning created by it in the form of assumptions. By virtue of the cooperative principle, the writer can rely on the fact that the reader will retain the meaning conveyed so far by her discourse to some extent. So much so that it will not be necessary to remind the reader of all the assumptions already shared at every point in the text. From this perspective, it may be said that phrases such as *the water* in (4) and (5) also function as textual constraints on relevance. They act as pointers that help readers to retrieve whatever previous assumptions are needed for the interpretation of the new sentence, not just the meaning created by the repeated phrase in previous text.

In fact, when the subjects of this study were asked about the assumptions they had used in interpreting sentence (5), for instance, they acknowledged that the repetition of the phrase *the water* did not make them think of water in general but the water to which the author had referred metaphorically as *the water in which we dipped a toe in 1999, where the sharks didn't bite and which was not freezing*. Thus, the new sentence was seen as a sentence that reuses—encapsulates—the ideas created in (1-4), to develop them further by means of identification, in such way that it helps to resolve the metaphor, a device that may have been used to attract the reader's attention. In other words, what the readers of this study seem to have interpreted on reading (5) is that:

(5) *The water* [in which we dipped a toe in 1999, where the sharks didn't bite and which was not freezing] was the great scary ocean of returning examination papers to candidates.

There are other cases where the encapsulation does not seem to affect the whole of the previous relevant piece of text but only a smaller part. For instance, the encapsulation effected by the combination of deictic acts observed in (6) by means of *the...return of...scripts...to candidates* seems to operate only over the meaning created by *returning examination papers to candidates* in (5).

(5) *The water* was the great scary ocean of returning examination papers to candidates.  
 (6) This year saw the pilot scheme, with three different models for GCSE and at A level, for *the* copying and *return* of all *scripts* in 10 syllabuses, allowing centres to decide how to release the copied scripts *to candidates*.

However, on closer inspection of (5), it is precisely this part of the text that contributes new propositional meaning in the coherence unit. All the rest is metadiscourse material. On the one hand, there is the NP *the water*, whose metadiscourse function is of a textual type, since it encapsulates backwards. On the other hand, there is the NP containing the great scary *ocean*, which is part of a metaphorical phrase used by the writer to show her attitude towards the new propositional meaning conveyed in the post-modifier. Thus, this metaphorical phrase also contains metadiscourse material of an interpersonal type. The process of encapsulation at (6) seems to have operated at least on the new propositional meaning generated by interpreting (5). In the method section, I have already discussed the point-to-point cohesive effect of ellipsis such as the two cases in (23) in relation to (21) in the sense that the elliptical material recovered only refers to one part of the wording used to express the new propositional content of the related fragment of text, thus establishing relevance of wording.

(21)—the chief examiner always loomed over one's shoulder, checking, commenting, re-marking if necessary. (22) At least, I think *that's* what he *did*. (23) Even if he didn't, the fear that he would was a great deterrent to misdemeanour.

This seems to point to the working conclusion that this type of ellipsis cannot on its own establish true encapsulation. If encapsulation is perceived, it should be attributed instead to the textual role of the reference personal pronoun *he*. From our relevance perspective, it could now be understood that when the reader approaches the interpretation of *he*, *s/he* does not only relate it to the phrase the *chief examiner* mentioned in (21), but to the assumption generated by the interpretation of the whole of (21-22), along the following lines:

(23) Even if he [the chief examiner whom at least I think always loomed over one's shoulder, checking, commenting, re-marking if necessary] didn't \*[loom over one's shoulder, checking, commenting, re-marking if necessary], the fear that he [the chief examiner whom at least I think always loomed over one's shoulder, checking, commenting, re-marking if necessary] would \*[loom over one's shoulder, checking, commenting, re-marking if necessary] was a great deterrent to misdemeanour.

I presume that the same may occur with substitution, though I cannot find clear evidence in this text. The only possible case is do in (60). However, this is an ambiguous case, since it might be considered as an emphatic auxiliary *do* followed by ellipsis or a true substitute. In any case it would be carrying out point-to-point cohesion. Another point-to-point cohesive signal in this clause would be those, which —together with *do*— is by the way the only case of point-to-point cohesion identified by the subjects as really textual. In this coherence unit, though, the most powerful coherence mechanism perceived in relation to previous discourse was the explicit

encapsulation established by the adversative logical signal *but*, as well as the fact that this clause was also contributing to satisfying the prospection created in (58).

A different case, which should not be confused with substitution, is what happens with the general verb *do*, as in (22). This general verb can be considered as a general lexical word, which in the combination *he did that* manages to encapsulate the semantic meaning of the whole of (21) by means of deictic acts that establish relevance of content. In any case, again the most powerful coherence mechanism perceived in (22) is the explicit encapsulation effected by the adversative corrective signal at *least*. And if we look at the data in detail, there is no single coherence unit whose relevance is perceived through point-to-point cohesion signals only. If these do occur, there is always a more powerful device at work to establish relevance, as in (60). Another case of combination of devices that is not considered by Halliday and Hasan (1976), for instance, is what we find in (24) in relation to (21-23):

(24) But how much simpler and more thorough \* (than the chief examiner looming over one's shoulder...) is the returning of marked scripts to the original writers.

The authors analyze the occurrence of the comparative forms *-er* and *more* as cases of indirect anaphoric reference. They state that "particular comparison, like general comparison, is also referential; there must be a standard of reference by which one thing is said to be superior, equal or inferior in quality and quantity" (Halliday & Hasan, 1976: 81). And in fact their referent, though indirect, is easy to identify in the previous text, (21-23). What I would like to claim is that this type of comparison also involves the phenomenon of standard ellipsis (cf. Quirk & Greenbaum, 1985: 888), and that this type of ellipsis is really textual since it helps to establish relevance of content encapsulating the whole of the meaning created by a previous fragment of discourse. It is not merely establishing relevance of wording.

#### VI.4. Prospection

It is interesting to note that the textual role of none of the coherence units in the text structure can be accounted for exclusively on the basis of prospection. In all cases prospection co-occurs either with encapsulation, as in (2), or encapsulation and inferred encapsulation as in (28), or inferred encapsulation only, as in (7) and (47). This seems logical as the places where prospection might be expected as the exclusive coherence mechanism would be in the first coherence unit of a text, or in the first unit of a totally independent segment of the text, as may happen when the subject changes completely (cf. Sinclair, 1993: 14). However, prospection occurred in this text at points where it was also possible to perceive a connection between the prospecting coherence unit and previous discourse by virtue of some encapsulating device, whether explicit or not.



The only remarkable feature worth mentioning is that there have been cases where the prospecting word to be elucidated in upcoming discourse is not expressed in a plural form. It is simply presented as new to the context in an indefinite nounphrase, such as *an evaluation* in unit (7). According to the group interpretation, on reading coherence unit (7), the writer seemed to be committed to specifying the contents of such an evaluation in the following text. In fact, coherence units (9-11) were perceived as satisfying the prospection created in (7).

It is worth pointing out that from a text-as-product view it might be said that coherence units (26), (34), (41), and (47) also serve to satisfy the prospection created in (7). However, when the subjects had to analyze the relevance of these new units they had forgotten that a prospection had been created in (7). In any case, they were able to connect them with other units in the text by means of encapsulation. For instance, the students were able to perceive encapsulation over (6) at coherence units (26) and (47). It should be recalled that unit (6) introduces the major topic of the text, the pilot scheme. Thus, although the subjects could not state that these coherence units really fulfilled the prospection generated at (7), they did perceive the fact that both coherence units were conveying a form of evaluation of the pilot scheme.

#### VI.4.1. The role of questions in the text

Questions have been considered as the most obvious ways of creating prospectings (cf. Sinclair, 1993: 12). And this is true in this text too. For example, the one question that clearly does this is in coherence unit (2), *and you know what?* From our relevance-based framework, it might be said that the question may have been introduced to establish the relevance of the following piece of discourse (3-4) by means of the prospection that it creates. This could also be interpreted as an attempt to engage the reader in the reading process, but it was clearly understood by the subjects that it would be the writer who would fulfil the prospection created.

However, not all questions in the text are used in this way. For instance, coherence unit (8), *how was it for you?*, was expressed as a question too. But it was obvious that in this type of written communication the reader could not respond immediately to the writer's message. Nor could the writer answer for the reader. Thus, it cannot be said that a prospection is created at this point. What is interesting to note is that this question is placed after a unit that does create a prospection, (7), but (8) does not serve to fulfil it. In cases like this we are faced with a phenomenon that may be termed *interpolation* in the sense that the interpolated sentence occurs after a prospection but is not at least part of the fulfilment of the prospection. Therefore, the prospection created in the previous unit remains (cf. *insertion sequences* in Schegloff, 1972). In fact, readers need to wait until coherence unit (9) to see at least part of the prospection fulfilled. The interpolated question at (8) is a novelist's cliché said by one of the partners after an act of sexual intercourse, and is here used to make a silly journalistic joke. It creates the assumption that the reader of this text had participated in the same pilot scheme as the writer is describing. This may be perceived as an attempt by the writer to engage the readers more actively in the communication process by asking them to evaluate their own experience of the pilot scheme. It

is interesting to note how the writer adapts a cliché from the same domain "did the earth move for you?" at coherence unit (10) to restate the general evaluation of the pilot scheme made at coherence unit (9). which clinches the intention of the writer at coherence unit (8).

On the other hand, both coherence units (16) and (51), though expressed in the form of a question, were understood as rhetorical questions. i.e. forceful statements which had the form of a question but which did not expect an answer. They were functioning as negative statements rather than questions. Thus, for instance. (16) might be reformulated as *I would not say such a thing*. Likewise, in coherence unit (51) the question *should they be returned at all?* was understood as a negative statement meaning *they should not be returned at all*.

### VI.5. Fulfilment of prospection + encapsulation

Twelve coherence units in the text serve to fulfil a prospection (20.33%). In almost half of these cases, though, encapsulation seems to coexist with the fulfilment of a prospection, such as in coherence units (4), (11), (30), (48) and (60). If this were really the case, we would have found evidence to contradict Sinclair's claim (1993: 12) that "a sentence cannot simultaneously fulfil a prospection and encapsulate the utterance that makes the prospection. The former requires maintenance of the discourse function of the previous utterance, and the latter requires the cancellation of that discourse function". However, on closer inspection, we shall realize that the reason for this co-existence is that in the present analytical framework each of the coherence units in a rhetorical routine fulfilling a prospection created in previous discourse has been classified as such, i.e. as fulfilling a prospection. Sinclair, by contrast, only seems to classify the first sentence in the rhetorical routine satisfying the prospection as *prospected*.

In any case, it is worth noting that the encapsulated coherence unit in these cases was not the coherence unit that had created the prospection. For instance, there is additive logical encapsulation between (3) and (4), and the two coherence units together can be said to fulfil the prospection created in (2). So (4) was classified both as encapsulating over (3) and fulfilling the prospection created in (2). The same happens with the following: (11) in relation to (6) and (7); (30) in relation to (29) and (28); and (60) in relation to (59) and (58). But in neither case does the scope of the prospection coincide with the scope of the encapsulation. From this perspective, one possible way to adapt Sinclair's words so as to improve the explanatory power of this analytical framework might be to state the following: the coherence unit (or the first coherence unit in a rhetorical routine) fulfilling a prospection cannot simultaneously fulfil the prospection and encapsulate the utterance that makes the prospection.

Even so, there is one exceptional case that does not seem to comply with this norm. For example, coherence unit (47) makes a prospection over a group of sentences (48-50), which enumerate logistical problems advanced by means of the lexical superordinate *problems* (an *enumerable*). If we now take (48), this sentence clearly encapsulates over (47), by means of the

conjunct *for instance*, which might be paraphrased as "an example of these logistical problems that there will be is", whose scope is the whole of the previous sentence.

This exactly corresponds to what Tadros identified as a typical phenomenon in prediction: "following a prediction of enumeration sequencing signals (*firstly, finally, one, next, further*, etc.) are one of the means whereby we can recognize the different heads" of the predicted members (Tadros, 1985: 20). These cases might be considered as exceptions in the sense that the enumerating signals do not seem to cancel the prospecting function of the coherence unit creating the prospection. They only serve to organize the textual material used to fulfil it. In any case, it is also important to notice that the scope of the encapsulation does not coincide with the scope of the prospection.

Also worth noting are cases where a discourse fragment fulfils a prospection created in a previous sentence. but encapsulates discourse generated by a different piece of text to that which created the prospection. For instance, coherence units (9-11) serve to satisfy the prospection created in (7). However, units (9) and (11) also seem to encapsulate previous discourse meaning —that generated by (6), at least— in both cases. So, again, although the fulfilment of a prospection and encapsulation may co-exist in the same current coherence unit, the sentences fulfilling the prospection do not encapsulate the utterance making the prospection. Having analyzed all types of textual cohesive ties in the text, and discussed cases of difficult classification. table 4 summarizes the major mechanisms identified in the text as truly textual, bearing in mind that some of them occur in further combinations, as table 3 shows above.

Table 4: Textual mechanisms of coherence identified in the text

Coherence mechanism	Subtype	Cohesive tie	Subtype
Relevance of content	Deictic acts	<b>Encapsulation</b>	
		Reference	<ul style="list-style-type: none"> <li>• Personal</li> <li>• Demonstrative</li> <li>• Comparative</li> </ul>
		Phrasal: Reference + Lexical	<ul style="list-style-type: none"> <li>• Demonstrative + Repetition</li> <li>• Demonstrative + Repetition with word class change + Synonym + Repetition</li> <li>• Demonstrative + Superordinate</li> <li>• Synonym + Synonym with word class change + Synonym</li> <li>• Comparative + General word</li> <li>• Personal + General word + Demonstrative</li> </ul>
		Lexical	<ul style="list-style-type: none"> <li>• Superordinate</li> </ul>
Relevance of relational function	Discourse acts	Phrasal	<ul style="list-style-type: none"> <li>• Demonstrative + Superordinate</li> </ul>
		Reference + Lexical	
		Additive	<ul style="list-style-type: none"> <li>• Positive</li> <li>• Avowal</li> <li>• Exemplificatory</li> </ul>
		Causal	<ul style="list-style-type: none"> <li>• (Cancellation of) Inferred consequence</li> <li>• Conditional</li> <li>• Reversed polarity conditional</li> </ul>
Relevance of relational function	Logical acts	Adversative	<ul style="list-style-type: none"> <li>• Proper</li> <li>• Corrective</li> <li>• Contrastive</li> </ul>

<b>Inferred encapsulation</b>		
Relevance of content	Deictic acts	Elliptical <ul style="list-style-type: none"> <li>• Post-modifier</li> <li>• Subject + Operator</li> <li>• Comparative clause</li> <li>• Clause (other)</li> </ul>
	Discourse acts	Elliptical <ul style="list-style-type: none"> <li>• Post-modifier</li> </ul>
Relevance of relational function	Logical acts	Additive <ul style="list-style-type: none"> <li>• Positive</li> <li>• Expository:                             <ul style="list-style-type: none"> <li>○ Metaphorical paraphrase</li> <li>○ Paraphrase</li> </ul> </li> </ul>
		Causal <ul style="list-style-type: none"> <li>• Claim-support</li> <li>• Claim-reason</li> <li>• Inferred consequence</li> </ul>
		Adversative <ul style="list-style-type: none"> <li>• Proper</li> <li>• Dismissive</li> <li>• Contrastive</li> </ul>
<b>Encapsulation + inferred encapsulation</b>		
Relevance of content	Deictic acts	Reference + Elliptical <ul style="list-style-type: none"> <li>• Comparative word + Comparative clause</li> </ul>
<b>Encapsulation + inferred point-to-point cohesion</b>		
Relevance of content + relevance of wording	Deictic act + Wording act	Clausal: Reference + Elliptical <ul style="list-style-type: none"> <li>• Personal + Predicator ellipsis</li> </ul>
<b>Encapsulation + propection</b>		
Relevance of relational function	Logical acts	Causal <ul style="list-style-type: none"> <li>• Action-reason</li> </ul>
<b>Propection</b>		
Relevance of content	Deictic acts	Reference <ul style="list-style-type: none"> <li>• Question word</li> </ul>
		Punctuation <ul style="list-style-type: none"> <li>• Question mark</li> <li>• Colon</li> </ul>
		Lexical <ul style="list-style-type: none"> <li>• Superordinate</li> </ul>
		Phrasal: Reference + Lexical <ul style="list-style-type: none"> <li>• Demonstrative + Superordinate</li> </ul>
	Discourse acts	Reference <ul style="list-style-type: none"> <li>• Comparalive</li> </ul>
<b>Fulfilment of propection</b>		

## VII. CONCLUSIONS

The present paper has determined which features of a given text have an important role in helping a discourse community of undergraduate student subjects to perceive the relevance and coherence of the text in the process of reading. It has also shown how these expressions serve both the writer and the readers as textual constraints to optimize relevance in accordance with the Principle of Relevance. The results clearly show that there are many cases of point-to-point cohesion that cannot be regarded as textual in nature in the sense that they were not essential to account for the relevance of each successive *text of the moment*. By contrast, there are a number of cohesive resources that deal only with discourse meaning derived from entire sentences, larger fragments of text or, occasionally, certain simple clauses linked paratactically, and they do much more than effect a tenuous connection between isolated constituents of sentences. This validates the reformulation of Sinclair's (1993: 19) hypothesis about text structure.

What seems clear is that in the discourse perceived from this text by the group of subjects at least one coherence mechanism was identified to relate every current coherence unit to its context. There was in most current units at least one encapsulating mechanism, whether explicit, inferred, or both. As well as this, there were very few cases of point-to-point cohesion. However, these did not seem to account for relevance by themselves. There was always a more powerful mechanism to account for coherence at that point. There were also a number of prospections. The only current coherence units where encapsulation did not occur were the following: the first sentence in the text and those fulfilling a prospection. In the latter cases, however, this norm only seemed to apply consistently to those coherence units that initiate the rhetorical routine satisfying the prospection because there were some encapsulations between the coherence units within the same rhetorical routine.

The metadiscourse items identified or inferred, which are part of the interactive apparatus of the language, may be allocated a textual role in that they serve to give independence to the sentence, and occasionally the clause. They helped to progressively determine the status of previous or upcoming text in relation to the current coherent unit (cf. Sinclair, 1993: 7). That is why it is possible to confirm that these metadiscourse elements serve to give independence to a coherence unit and also help to perceive it as relevant.

The results from this study support Sinclair's suggestion that considering the pure orthographic sentence, i.e. the clause complex enclosed by a full stop, as the minimal unit for text structure may have to be revised slightly. The present analysis identified clauses in paratactic relationships within several clause complexes that proved to be autonomous from a coherence point of view. They were separated from a neighboring clause by a colon, a dash, or a comma or dash followed by some cohesive device. However, the analysis of the connection between these clauses and previous or upcoming discourse identified logical acts establishing relevance of function and/or deictic acts, or discourse acts, establishing relevance of content, usually in connection with the meaning conveyed by the other clause in the same clause

complex. In this sense, the full stop should not be considered as the only adequate indicator of a coherence unit. There may be other indicators of a coherence unit, such as the colon, the dash, or the comma or dash followed by some cohesive device that might also be adequate. The question to be elucidated is in which circumstances this may happen.

If we accept this redefinition of minimal coherence unit, which does not correspond strictly with the orthographic sentence, it might be more adequate to relate the concept of *text of the moment*—which is very useful from the point of view of discourse interpretation—directly to the concept of minimal coherence unit, instead of relating it to the abstract theoretical construct of sentence. The problem again is to find out how the minimal coherence unit is enclosed in actual written discourse. Further studies should then focus on this definition on the basis of more evidence. However, this is not bad news. As Hyde puts it: "Discourse analysis is (for the moment at least) not so much interested in the definition of a sentence in structural, system terms as investigating where and why writers place full-stops (in written texts)" (Hyde, 1990: 188). Why not colons, semicolons, dashes, and commas followed by some cohesive device too? "This point of view focuses more on chunking than on structure. that is to say, on how much information is loaded on to a given format" (Hyde, 1990: 188).

As has been noted in the discussion, in order to establish relevance, meaning was not always derived from the immediately preceding coherence unit only but also from other parts of the text. In view of the data, I would suggest reformulating Sinclair's hypothesis by saying that the encapsulation process does not operate necessarily only over the previous sentence, or rather the meaning created by it, but over the most relevant information stored in the reader's mind. In written discourse, as we have seen, the most relevant information is usually the information derived from the previous coherence unit which is stored in the reader's short-term memory. But the text has shown examples where the relevant fragment of text from which meaning was retrieved was a larger immediately preceding fragment, although the immediately preceding coherence unit was at least part of the referent, such as (26-33) in connection with (34). On the other hand, the study has also shown that, in order for the subjects to perceive relevance, meaning was also derived from other parts of the text which had been stored somewhere in the reader's short-term memory, such as (26) and (51) together with (53-54) in connection with (55).

The only problems that arise in terms of the encapsulation hypothesis are at coherence units (41) and (47), which are both the beginning of a paragraph. In both cases, it was quite obvious to the subjects that there was no connection with the immediately preceding sentence or even paragraph. At (41), a connection could be established in relation to coherence units (26-33) in the sense that it presented an unexpected result in relation to the meaning developed in a previous but not immediately preceding paragraph. At coherence unit (47), the connection was established with sentence (6). Therefore, in this case the encapsulation neither scoped over at least the immediately preceding coherence unit or fragment.

It could be argued that the problems here do not really have to do with the analytical scheme but with the subjects' capacity to perceive the text structure. The point is that, for whatever reason, the subjects had forgotten that a clear prospection had been established at coherence unit (7), where it was announced that an evaluation of the pilot scheme was going to be made. Had they maintained that prospection open throughout the text, they would have perceived some of the upcoming paragraphs as fulfilling that prospection. Looking at the text from hindsight, it could be interpreted that the paragraphs starting at coherence units (9), (26), (34), (41), and (47) fulfil such a prospection in the sense that they present evaluative material about the pilot scheme introduced at coherence unit (6). And that may account for the discontinuity of the encapsulation process at some of these places, some of which were found problematic. One reason why the subjects might have forgotten the prospection may have had to do with the fact that the analysis was carried out in various sessions for unavoidable practical reasons. Thus when the subjects approached the text in subsequent sessions their short-term memories may have been weakened. A clear implication for further studies of this kind is that the text used should be shorter so that it may be dealt with in just one session.

The model proposed by Sinclair (1993) was based on one single text, just as this is, and it may need some refinement as more discourse units and genres are analyzed. However, I believe that this model is nowadays the most explanatory in accounting for those text elements that contribute to our perception as readers of discourse coherence and structure. It may also be applicable to other types of text with little adaptation. Thus table 4, which does not intend to be exhaustive, might serve as a good basis on which to build the model further. More importantly, this model is highly consistent with a cognitive view of discourse interpretation. This, in my opinion, gives it even more support, because a cognitive view of the role of cohesive items in the perception of relevance, and therefore coherence, seems much more convincing than previous accounts.

Lastly, the reader of this article may not have perceived the coherence of the text that we have analyzed in the same way as has been reported here. But that does not invalidate my argument because that is likely to have happened. As has been suggested, there may be multiple discourses from a single text. I would invite the readers of this paper to try and do the same test to find out which text features help them to make sense of the text at every stage and to check whether their interpretation is similar or differs from the one reported here. What I can guarantee, after my experience of using the outlined model of text structure and coherence with advanced undergraduate students of *English Philology* and doctoral students for about five years now, is that they find it highly explanatory and convincing. What is more important, students consider it as very clarifying in their understanding of coherence and how interpretation of written discourse works.



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## APPENDIX

## Segmented text

**Exam scripts pilot gets top marks for effort**

The verdict on returning examination papers to students? Fairly good, room for improvement

Hilary Moriarty

Tuesday November 23, 1999

The Guardian

- (1) Nineteen ninety-nine was the year we dipped a toe in the water:
- (2) **and you know what?** <
- (3) [The sharks didn't bite,
- (4) **and the water** wasn't freezing.]
- (5) **The water** was the great scary ocean of returning examination papers to candidates.
- (6) This year saw the pilot scheme, with **three** different models for GCSE and at A level, for **the** copying and **return** of all **scripts** in 10 syllabuses, allowing centres to decide how to **release** the copied scripts to candidates.
- (7) The Qualifications and Curriculum Authority has carried out **an** interim **evaluation** \* (of **the pilot scheme**). <
- (8) "How was **it** for you?"
- (9) [The great news \* (**about the pilot scheme**) is that there seems to be general approval for the principle of returning the scripts.
- (10) \* (**In other words**) The **earth** may not have moved, but the world didn't come to a standstill either.
- (11) **It** was OK.]
- (12) \* (**In fact**) Not surprisingly, most of the people involved \* (in **the pilot scheme**) felt that returning the scripts made the examination system more transparent and examiners more accountable.

- (13) \* (because) Sometimes you don't need to tell people to work better, you just tell them there's an audience for what they produce.
- (14) \* (In other words) Knowing that whatever was done to the papers would be seen in the outside world must have been salutary.
- (15) This is not to say that examiners were sloppy before.
- (16) Would I say such a thing? (= I would not say such a thing)
- (17) \* (because) I examined for years:
- (18) \* (examining was) the most gruelling job in the world, requiring painstaking effort and concentration to sustain standards justly for 300 scripts in three weeks.
- (19) \* (In other words) Conscientious marking is a killer.
- (20) \* (And = but) And examiners never did work in an irresponsible vacuum —
- (21) \* (because) the chief examiner always loomed over one's shoulder. checking, commenting, re-marking if necessary.
- (22) At **least**, I think that's what he **did**.
- (23) \* (Anyway) Even if he didn't, the fear that he would was a great deterrent to misdemeanour.
- (24) But how much simpler and more thorough \* (than the chief examiner **looming** over one's shoulder...) is the returning of marked scripts to the original writers.
- (25) \* (Returning the marked scripts... is) Real accountability.
- (26) The irony \* (of the **pilot** scheme) is, of course, that \* (in spite of) having **been** offered their scripts, most of the candidates didn't want them.
- (27) \* (As a matter of fact) Staff in the centres reported the percentage of students "very interested" in viewing the scripts as about 12%, with a further 27% only "fairly interested".
- (28) The reasons \* (why most of the students did not want to view the scripts) are obvious: <
- (29) [if you did well, you really don't care about the papers —
- (30) and that goes for doing well unexpectedly, as well as having the satisfaction of achieving just what you expected.]

- (31) \* (By contrast) Interest in the papers is generated by doing badly,
- (32) \* (and = but; then = that) and then only if it surprises you.
- (33) \* (because) If you partied **all** year, or had a personal crisis, then you will have done badly but you won't need to see the papers to see why.
- (34) The interim report indicates **also** that pupils needed teachers to decode what they **m —**
- (35) \* (this is) small wonder, if the rumours are right and examiners were virtually forbidden to write on the scripts for fear of litigation from insulted students.
- (36) \* (because) Without some sort of written explanatory commentary, candidates might well find the scripts "more meaningful when interpreted by their teacher".
- (37) Actually, if the pilot scheme is judged successful and more scripts are returned in the future, this is an area where practice must be improved.
- (38) \* (because) Particularly in arts subjects, where marking is notoriously subjective, the examiner's commentary is vital evidence.
- (39) \* (In fact) In my day, I was expected to annotate scripts to explain my marks to the chief examiner.
- (40) Remove that requirement, and the examining process will only appear to be more open, while in fact retaining an almost smug inscrutability.
- (41) \* (If = While) If candidates **didn't** care about the scripts, 71% of staff cared a great deal:
- (42) \* (As a matter of fact) 82% agreed that access to the scripts would help with teaching the syllabus in the coming year.
- (43) \* (Of course = this is natural) **Well** of course.
- (44) \* (because) Knowing exactly where the last candidates got it wrong is the best learning tool a teacher can have to improve performance next year.
- (45) \* (However) Better than knowing what they got is knowing why they got it.
- (46) \* (So) If any government wants to conjure up massive whole school improvement, this is the magic wand.

- (47) There will be logistical problems \* (with the process of returning the scripts to candidates): <
- (48) [returning all scripts will mean 13.5m papers whizzing through the postal system, for **instance**.
- (49) Photocopying scripts sounds horrendous even to a convinced "pro-returned" like me.
- (50) Proper scrutiny of the papers in school will take time, possibly precious holiday time.]
- (51) And if the big learners **here** are teachers, not **pupils**, should they be returned at all? \* (= with all these problems, it looks as if they should not be returned at all)
- (52) \* (However) The answer (to this question) is yes (they should be returned).
- (53) \* (because) I believe now, as I believed last year when I wrote one of the first articles calling for this move towards long-overdue transparency and accountability, and as the authorities hold in New Zealand, that it is simply the right thing to do.
- (54) \* (And) The right thing overrides logistical problems.
- (55) Pupil neglect of the papers is beside the point. \* (= is not relevant to the question)
- (56) \* (because) A few \* will be very interested indeed,
- (57) and that's enough.
- (58) \* (It is) A bit like voting, really: <
- (59) [lots of people don't care about that either,
- (60) but for those \* (people) who do \* (care), it's one of the markers of a civilised world.]