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INTERACTION IN WRITING

An analysis of the writer-reader relationship
in four corpora of medical written texts

by

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Thesis submitted in accordance with the requirements of the University of
Liverpool for the degree of Doctor of Philosophy

May 2001

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The University of Liverpool

ABSTRACT

**INTERACTION IN WRITING
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FOUR CORPORA OF MEDICAL WRITTEN TEXTS**

Sultan M. Al-Sharief

Interaction is a widely used linguistic term that is not unequivocally characterised, especially in relation to written discourse. The present study seeks to examine this phenomenon through a detailed analysis of the various ways in which a text can project interaction with its readers. The study sets out to first establish an elaborate description of interaction in written texts by combining some of the major approaches within a unified general analytical framework. This framework distinguishes three basic forms of interaction: Informational, Lexico-grammatical, and Pragmatic. The way these three forms construct interaction as well as the signals they utilise for this purpose are extensively discussed.

In order to validate this proposed framework of interaction, a corpus of four medical text types – textbooks, research articles, press reports, and leaflets – is analysed. Each form of interaction is investigated separately, both quantitatively and qualitatively. In terms of the former, the frequencies of the signals of each form of interaction in the data are counted and then compared across the four text types. In terms of the latter, each signal is thoroughly studied, and conclusions about its use and its relation to the general management of each form of interaction are drawn. Besides elucidating how these signals work in various text types, the three analyses of the different forms of interaction demonstrate a considerable variation of the way interaction is managed in the four sub-corpora comprising the data.

The study concludes by summarising and commenting on the analyses. This allows an overall picture of the management of interaction in the data. Moreover, this makes it possible to further refine and expand the framework used for the analysis. Several implications of the framework for the general understanding of some linguistic phenomena, in addition to some of its applications to the teaching of writing are also discussed. The thesis terminates by stressing the importance of studying interaction in writing and by raising some further possible research issues.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION TO THE STUDY.....	1
1.1 Interaction Outside and Inside Linguistics	2
1.1.1 Interaction in media, marketing, and the Internet	2
1.1.2 Interaction in speech and writing	5
1.1.3 Usefulness of interaction	7
1.2 Aims and Definitions	8
1.3 Organisation and Presentation of the Thesis	10
CHAPTER 2: INTRODUCTION TO INTERACTION.....	12
2.1 Context and Text Variation	13
2.1.1 Context of writing	13
2.1.2 Text variation: register, genre, and interaction	16
2.2 The Identity and Role of the Addressee	17
2.2.1 What it means to be an audience	18
2.2.2 Audiences, speech communities, and addressees	20
2.2.3 The role of the text	23
2.3 The Interpersonal Face of Language	24
2.3.1 Language as choice	25
2.3.2 Language as interaction	26
2.4 Some Research Issues	29
CHAPTER 3: INTRODUCTION TO MEDICAL DISCOURSE.....	31
3.1 Writing as a Vehicle for Conveying Scientific Knowledge	32
3.2 The Medical Encounter	35
3.3 Aspects of Interaction in Four Types of Medical Written Texts	38
3.4 Investigating Addressee Characteristics	41
3.5 Some Research Issues	44
CHAPTER 4: ANALYSING INTERACTION IN TEXTS: A FRAMEWORK.....	47
4.1 Writing as Interaction	48
4.2 Interactional Effects: Orientation, Negotiation, and Involvement	49
4.3 Types of Interaction	52
4.3.1 Informational Interaction	52
4.3.1.1 Signalling	53
4.3.1.2 Organisation	54
4.3.2 Lexico-grammatical Interaction	56

4.3.2.1	Role-relationships	57
4.3.2.2	Modality and evaluation	58
4.3.3	Pragmatic Interaction	60
4.3.3.1	Reference	61
4.3.3.2	Politeness	62
4.4	A Framework of Interaction	63
4.5	Some Research Issues	65
CHAPTER 5: METHODOLOGY.....		68
5.1	Rationale for the Study	69
5.1.1	Why interaction?	69
5.1.2	Why medical discourse?	71
5.1.3	Research questions	73
5.2	Data Collection and Analysis Tools	74
5.2.1	Source and scope of data	74
5.2.2	Using computers in language research: corpora and concordance software	77
5.3	Quantitative Analysis: Calculating ‘Markedness’	80
5.4	Qualitative Analyses: Identifying Signals of Interaction	83
5.4.1	Informational Interaction signals: prediction, labelling, and patterning	83
5.4.2	Lexico-grammatical Interaction signals: commands, questions, modality, and evaluation	85
5.4.3	Pragmatic Interaction signals: reference and politeness	90
5.5	Methodological Constraints	93
CHAPTER 6: INFORMATIONAL INTERACTION ANALYSIS.....		98
6.1	Introduction	99
6.2	Quantitative Overview	104
6.3	Guiding Expectations	109
6.3.1	Enumeration	109
6.3.2	Advance labelling	111
6.3.3	Predictive questions	112
6.4	Guiding Interpretations	114
6.5	Text Patterning	120
6.6	Summary	123
CHAPTER 7: LEXICO-GRAMMATICAL INTERACTION ANALYSIS.....		126
7.1	Introduction	127
7.2	Quantitative Overview	132
7.3	Negotiating it Together	136

7.3.1	Commands	136
7.3.2	Questions	139
7.4	Opening it up for Negotiation	145
7.4.1	Modalisation	145
7.4.2	Evaluation	148
7.5	Summary	151
CHAPTER 8: PRAGMATIC INTERACTION ANALYSIS		155
8.1	Introduction	156
8.2	Quantitative Overview	160
8.3	Reference	166
8.3.1	To writer	167
8.3.2	To addressee	170
8.3.3	Referential switch	174
8.4	Politeness	176
8.4.1	Negative politeness	177
8.4.2	Positive politeness	184
8.5	Summary	189
CHAPTER 9: CONCLUSION: IMPLICATIONS AND APPLICATIONS.....		192
9.1	Summary of the Analyses	193
9.2	Interaction in Text	199
9.3	Some Theoretical Implications	204
9.4	Some Teaching Applications	209
9.5	Concluding Remarks	214
References		219
Appendix I		i
Appendix II		x

LIST OF TABLES

Table 3-1: The general characteristics of addressee in four types of medical writing.	43
Table 6-1: The frequencies of the Informational Interaction signals in each corpus of the data.	104
Table 6-2: The calculation of the 'markedness' of the Informational Interaction signals in each corpus of the data.	107
Table 6-3: Labels used in each type of the data.	118
Table 7-1: The frequencies of the Lexico-grammatical Interaction signals in each corpus of the data.	132
Table 7-2: The calculation of the 'markedness' of the Lexico-grammatical Interaction signals in each corpus of the data.	134
Table 8-1: The frequencies of the Pragmatic Interaction signals in each corpus of the data.	161
Table 8-2: The calculation of the 'markedness' of the Pragmatic Interaction signals in each corpus of the data.	165
Table 9-1: The calculation of the 'markedness' of the three types of interaction in each corpus of the data.	194
Table 9-2: Classifying questions based on the form of interaction.	207

LIST OF FIGURES

- Figure 4-1: The three types of interaction and their focuses and effects. 65
- Figure 5-1: A snapshot of the concordance program used in this analysis, showing a number of the occurrences of the imperatives in the press reports corpus. 79
- Figure 6-1: Example 6-6 represented as a series of questions highlighting the Problem-Solution pattern. 102
- Figure 6-2: Guidance of expectations and interpretations through text prediction, labelling, and patterning. 103
- Figure 6-3: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Informational Interaction signals. 107
- Figure 6-4: Mapping the possibilities of the prediction of details of the predicted member in enumeration. 111
- Figure 7-1: Signals of Lexico-grammatical Interaction on the scale of negotiation. 131
- Figure 7-2: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Lexico-grammatical Interaction signals. 134
- Figure 8-1: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Pragmatic Interaction signals. 165
- Figure 9-1: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the three types of interaction, showing the positively marked signals in each corpus, if any. 194
- Figure 9-2: The three types of interaction and their focuses and effects, including the interrelationships among the signals of the types of interaction and among their effects. 197
- Figure 9-3: The signals of interaction in the sample text. 201
- Figure 9-4: A simple representation of the writing process from the perspective of interaction. 213

ACKNOWLEDGEMENTS

I am very grateful to Geoff Thompson, my supervisor, for his prompt and valuable feedback on the early drafts of this work. I would like to thank him for the generous sharing of his ideas about interaction and writing which have greatly enhanced my understanding and dramatically influenced my study. I cannot also tell how much I enjoyed and benefited from his intelligent and stimulating comments during the supervisions. His pleasant personality and admirable ability to provoke 'interaction' played an important role in motivating a conservative student like me to more freely express and support my thoughts and continue inspecting them to the farthest point possible.

Special thanks to Mike Scott from the AELSU for offering me a free copy of his WordSmith concordance software to use in the analyses, and for kindly taking the time to answer my (sometimes absurd) questions about corpus analysis. I am grateful to the whole staff and secretaries at the AELSU for their continuous support; specifically, I would like to thank Carol Marley, the second reader, for commenting on a near-final draft of this thesis. My deepest appreciation is also due to Umm Al-Qura University, Makkah, Saudi Arabia for sponsoring my postgraduate study. I am particularly and personally indebted to Dr. Rashid Al-Rajih, former Vice-Chancellor of Umm Al-Qura University, for his constant support and encouragement. My brother Faisal continues to be an indispensable source of help and inspiration and deserves my sincere gratitude. I would like equally to thank Mr. Ahmed Sabri from the Saudi Arabian Cultural Bureau in London for his helpful advice.

On the more personal level, I am thankful to all my friends and relatives who have always been a great source of enjoyment, helping me be more productive in my study. In particular, the past and present members of the Saudi Students Club in Liverpool deserve my thanks for the unforgettable time we spent together. Last but not least, I am indebted to my family, my wife and my daughter, whose presence made my life full of love and pleasure and encouraged me to get on with my research. It is because of them and because of all those people referred to above that I indeed consider myself fortunate, both personally and professionally.



**In the name of Allah, the most
gracious, the most merciful**

INTRODUCTION TO THE STUDY

The present study aims at exploring interaction in written texts. The phenomenon of interaction is by no means an unfamiliar one; so this introductory chapter opens with a general overview of interaction inside and outside linguistics. The first section turns attention to the ubiquitous use of terms like interaction and interactivity in fields like media, marketing, and the Internet. Works from these fields that reflect an obvious concern with interaction and audience are cited. The second part of this section demonstrates that interaction is an equally essential phenomenon from the perspective of linguistics, and some general aspects of how language – spoken and written – can be interactive are indicated. Then, some of the general advantages of being interactive and some of the reasons why people should care about interaction are briefly discussed. The next section overviews the broad aims of the study and glosses some of the terms and definitions that will be encountered in the course of the discussion. The final section describes the overall structure and presentation of the thesis.

1.1 Interaction Outside and Inside Linguistics

Interaction, interactivity, or interactive-ness is a commonly encountered concept, and such terms are widely used in various contexts. There are, for example, new *interactive* video and computer games, creative *interactive* learning tools for children, innovative modern methods for more *interactive* communication through media networks, telephony/cable systems, and the Internet. In all these references to interaction, the general perception is that being interactive is in one way or another 'good'. The link with advances in technology is also obvious, as new technology continuously promises to make things more interactive, and by implication better – e.g. the more interactive games are the better ones.

This section will therefore survey the concern with interaction in several modes of human communication. It will be shown that being interactive is an eventual aim that is not always fulfilled. Some media allows for more possibilities of interaction, but these are often not exploited. The discussion will then move to interaction within linguistics, giving examples of the interactive features of both speech and writing, emphasising that it is especially in the case of written texts that more examination of how interaction is managed is a crucial and timely endeavour. The final part of this section seeks to provide a brief overview of the advantages of considering interaction both inside and outside linguistics.

1.1.1 *Interaction in media, marketing, and the Internet*

The widespread use of the concept of interaction has nearly turned it into a buzzword with an uncertain, or at best an oversimplified, meaning. The frequently held perspective on interaction is that it is about sending and receiving or giving and taking at the same time, as opposed to one-way systems of either sending or receiving, giving or taking. But is this what interaction is all about? Bi-directionality? Certainly some of the above references to interaction mean exactly this; interactive games (or at least some of them) are interactive because they respond to your actions: if you hit your opponent, it will disappear and you will get more scores for this action. Yet, in some situations that are essentially similar, such as using a vending machine, we are much less likely to find the term 'interactive' appropriate. In his attempt to precisely delimit the notion of interactivity, Rafaeli (1988) describes this kind of situation as bi-directional or even reactive, but not necessarily interactive. According to Rafaeli, reactive (or quasi-interactive) communication is somewhere between non-interactive and fully interactive communication.

Non-interactivity characterises communication the moment a message is addressed from one participant to the other; reactivity requires that a message refers to or corresponds with an earlier one; and finally interactive messages should refer not only to earlier ones but also to the reference of these messages to even earlier messages, that is to the content of the interaction as a whole (see Rafaeli, 1988, pp.118ff).

Clearly this definition – which Rafaeli intends to cover not only direct human encounters, but also electronic and mediated ones – is very restrictive, even to some human, spoken exchanges (see Rafaeli's own illustrative example of a political press conference). This reflects the complexity of explicating interaction and analysing interactive situations. Because of the many contextual factors that contribute to the management of interaction, it is often difficult to specify how interaction is performed or even what communicative situations count as interactive. Despite these problems of characterisation, there is a general recent trend of attempting to steer various forms of communication towards more non-monolithic, dynamic, and personal interaction. Even when full interactivity is not possible or desired, some media seem to try to at least 'simulate' interaction to effectively achieve its goals.

The Internet is a relatively new medium that offers many potential opportunities for more interactivity. Employing Rafaeli's conceptualisation, Schultz (2000) studies the relation between traditional print mass media and its online presence. He surveys readers' e-mail messages to the editors of the *New York Times* and readers' discussions in the newspaper online forums. On the whole, he finds many possibilities for more or less full interactivity between readers and journalists are being missed and suggests that online newspapers "can serve as complementary forms whose interactive capacity explicitly blurs the sender-receiver roles of journalists and readers" (p.216). Moreover, Rafaeli & Sudweeks (1997) analyse messages from a number of computer-mediated discussion groups and conclude that interactivity is an important factor behind the popularity of some of these discussions. They suggest that "interactivity may be a mechanism through which netting occurs on the net", since interactive messages are characterised by being "significantly more humorous, and more likely to contain self disclosure...[and they] are more than twice as likely to contain first-person plural pronouns." What these explorations of Internet-based communication indicate is that the Internet is one of the examples of the contemporary systems through which more interactive communication is increasingly accomplished.

The Internet makes more interactivity possible by allowing more personal exchanges to take place, as discussions about public issues are expressed in a somewhat personal, involved way. This is one important factor that differentiates this medium from traditional mass media, which is addressed to mass audiences. For example, some of the effects of interactive advertisements through the Internet are that they allow “consumers to control and interact with the advertising content” (Yang, 1997, p.62), i.e. adapt it for their personal needs; in traditional media, audiences are treated as one harmonious entity, and consumers cannot alter the timing, content, or form of advertising. The issue of audience is clearly essential for messages to be interactive, and the more audiences can be addressed personally, the more successful the interaction is.

As is clear from the above, advertising through interactive media partly helps in achieving this goal. Another marketing strategy for personalised, rather than mass, advertising is direct mail, which aims at conveying messages to specified, well-known audiences. It is important for direct mail writers to “have a specific image of a person in mind and [to] write directly to that person” (Sonnenberg, 1989, p.62), in order to appear as addressing the consumer as an individual. This issue of audience is also essential to contemporary mass media, which strives to make it possible that “each viewer finds that what they see and hear seems to speak to them directly and individually” (Scannell, 2000, p.5). To accomplish this, most of today’s media appear to employ a communicative “structure that mediates between the impersonal for-anyone structure and the personal for-someone structure” (p.9), what Scannell calls ‘for-anyone-as-someone structure’. Aspects of this structure include the mode of address frequently used in radio and television, in addition to many other ways of ‘saying and showing’ (see Scannell, 2000, pp.10ff).

To sum up, the examples from media, marketing, and the Internet given above demonstrate that the concept of interactivity or interaction is quite widespread. Achieving full interactivity – or at least the illusion of it – is obviously an ultimate ambition sought by each of these means of communication. It is worth noticing, however, that one of the fundamental ways through which these media undertake to accomplish more interactivity is language. This is evident in the discussion above from some of the supposedly interactive linguistic forms utilised. Language is the primary vehicle for most human communication, and it is consequently expected to play a central role in how this communication is performed. Hence, it is legitimate

to focus attention on the linguistic message *per se*, in addition to the medium or purpose of its conveyance, if we wish to understand how interaction as a phenomenon is brought about in communication. As a first step in pursuing this aim in relation to written communication, the next part of this section will try to shed some light on interaction within language.

1.1.2 Interaction in speech and writing

The concept of interaction is as widely referred to in linguistics as in most other human interests, such as the ones discussed above. And it is equally not possible to pin down the exact meaning of all references to interaction in linguistic studies. So, as Bolívar (1986, p.25) indicates, “we come across sentences interacting with sentences, syntax interacting with semantics, and also with readers who interact with texts...and texts that interact with readers” and so on. Such usages of the term are generally intended “to indicate negotiation of some kind where a result is expected” (p.25). Compared to Rafaeli’s definition referred to above, this is a rather broad meaning that explains why the term is used freely to denote a wide variety of linguistic phenomena. Nonetheless, there is one important factor that seems to restrict this definition (particularly in relation to text analysis), that is the parallelism with face-to-face conversations. It is worth mentioning here that Rafaeli (1988) – perhaps quite rightly – rejects such practices of explicating interaction, contending that “the focus...should be on the functions of interactivity, not the horse race with face-to-face interaction” (p.129).

Conversational exchanges are undoubtedly potentially highly interactive. Many of the defining characteristics of the conversation are indications of explicit negotiation taking place between speakers and listeners, not least the dynamic system of turn-taking. Hughes (1996, pp.39-44), for instance, presents three basic features of ‘actual interaction’ in spoken discourse: “co-operation between speakers” (so, unlike monologues, the production of utterances is not only the role of one participant – here, the interlocutor currently having the turn; it is rather a mutual task), “sharing responsibility of an utterance” (where overall meanings, such as an evaluation, are a combination of the contributions of all participants), and “bending the rules of conversation” (e.g. interruptions, joint productions, corrections, etc.). All these features of interaction in conversations highlight the fact that the listener is in more or less equal position to the speaker in terms of the right to contribute to and control the discourse.

With more monologic forms of linguistic communication, the receiver does not, of course, have this ability to directly influence the flow of the interaction. The rules that govern the communicative event may require the audience to refrain from active participation, as in the case of some formal public speeches. Or it may simply be physically not possible; in written discourse, for instance, writers and their readers are typically temporally and spatially distant from each other. Nevertheless, language, whether dialogic or monologic in form, has an essential interpersonal component, which represents

language as interaction: it is meaning in the active mode [that] expresses the speaker's intrusion in the speech event: his attitudes, evaluations and judgements; his expectations and demands; and the nature of the exchange as he is setting it up – the role that he is taking on himself in the communication process, and the role, or rather the role choice, that he is assigning to the hearer.

(Halliday, 1979, pp.59-60)

This interpersonal system is available to writers in the same way it is available to conversationalists. It could further be argued that speech is not interactive only because it is “*exchanged* between parties” (Duranti, 1986, p.243, emphasis in original), but also because “the mere presence of an audience socially constitutes and ratifies the nature of a speech event (e.g. a sermon, a play, a class lecture, a story telling)” (p.243). This ‘presence of an audience’ applies to writing, as most types of written texts are *addressed* to an audience of some kind. Finally, if we accept that “dialogue is the means language gives us for expressing interpersonal meanings about roles and attitudes” (Eggins, 1994, p.149) and that this is its main function, then all other features of language for communicating such meanings could also be regarded as dialogic – at least in terms of function – and hence interactive.

Writing from this perspective is in essence a dialogic/interactive activity; similar to the speech situation, “a writer is engaging in a dialogue with a range of potential recipients, and with her own developing text as she rereads and edits it” (Ford, 1994, p.549). Consequently, it is possible to specify a number of dialogic/interactive qualities of written texts. For example, McCarthy & Carter (1994) list some of the dialogic elements of texts:

projected questions that the receiver might want answered (a common type of ‘rhetorical’ question), discourse markers that presuppose a contribution by another participant...and actual inclusion of what a second party’s contributions might have been.

(McCarthy & Carter, 1994, p.18)

Similarly, Davies (1994) identifies some “interactive units” in her data of written texts (as opposed to organisational and topic units):

the selection of interrogatives/imperatives as well as declaratives, Interactive Theme choices, modality/evaluation, mental/verbal processes relating to discourse participants, superordinate lexical items specifying Topic and short lexical chains/changes of topic, and reference to goals.

(Davies, 1994, p.175)

What this disclosure of the dialogic/interactive aspects of written discourse underscores is that this mode of language is not necessarily less interactive than the spoken mode, notwithstanding the fact that it is naturally not as overt. A logical conclusion from this consideration of interaction in writing is that, in a similar way to spoken discourse, “an interactive model might also be appropriate for written discourse” (Coulthard, 1977, p.180). This is obviously not a straightforward objective, taking into account the less overt nature of interaction in written texts and the various ways in which it may be projected, as is clear from the two lists of features above. This thesis will attempt to provide a synthesis of the different conceptions of interaction in written discourse, which, though it does not represent a coherent interactive model of writing, is one small step towards this ambitious goal.

1.1.3 Usefulness of interaction

Aside from the theoretical explication of interaction inside and outside linguistics, some practical questions about interaction need to be addressed. Why should we care about attaining more interactivity? What are the *actual* benefits of more interaction? And what are the risks of less- or non-interactive communication? Rafaeli (1988, pp.122-6) comments on three main effects of increased interactivity that ranges from the most obvious to the least: (a) “acceptance and satisfaction”, as numerous studies of audience response indicate more preference of more interactive arrangements, (b) positive “effects on performance quality, motivation, sense of fun, cognition, learning, normativity and extremism, and sociability” (p123), and (c) “mindfulness” and “co-operation”, i.e. improving the users’ way of thinking and making them more cooperative. On the other hand, interactivity has its pitfalls, though these do not probably outweigh the benefits and do not necessarily apply to all types of interaction; two of these, as Rafaeli (1988, p.126) points out, are high cost and complicating and prolonging the communication.

Within language, most of the above general advantages/disadvantages of interaction are also applicable, but in a different sense. Producing appropriately interactive texts does require more effort and time, and such texts are probably linguistically more complex than less interactively-wrought ones. But a successful management of interaction in texts has also important consequences in terms of the effectiveness of the message. By contrast, failure in writing interactively may lead to the production of problematic texts. Hoey (1988), for instance, demonstrates that some of the problems of school writing may be attributed to the students' inability to be fully aware of the audience they are writing for, arguing that proper interaction with the reader by organising and signalling the text makes it more successful. Also, Bowles (1995) shows that what makes newspaper law reports difficult to understand for non-expert readers is that they are not adequately signalled, and suggests alternative ways that may help students better interact with and thus consume these texts. Finally, Crismore & Vande Kopple (1988) design an experiment that aims at exploring the effect of hedges, as an interactive device of expressing writers' assessments, on readers' learning. On the whole, the main result of this experiment is that passages with hedges are learnt better than non-hedged ones.

In conclusion, considering its benefits, it may be said that interaction is to a certain extent a human necessity. People need to interact more to gain as much as possible from the activities they engage in. In written texts, the question may be how interaction is managed for the specific purposes and audience of the text, rather than how much interaction is needed and/or possible. As is clear from the discussion above, the proper management of interaction in written discourse is necessary for successful communication.

1.2 Aims and Definitions

This study seeks to explore how interaction is managed in written texts. The previous section shows that this phenomenon of communication is of particular importance both within and outside linguistics, that it is not – as yet – fully characterised in relation to writing, and that it may have some useful applications. Such observations about interaction motivate the present research, which sets out to first establish a broad and extensive framework that combines several common views of interaction in written discourse. The main purpose of designing the framework is to use it as a tool for analysing as thoroughly and systematically as possible the management of interaction in texts. Consequently, the next step in this research is to apply the

framework proposed to a sample corpus of texts. The texts collected reflect many significant contextual differences, but still share relatively similar content. The medical corpus created contained four types of texts: research articles, textbooks, press reports, and leaflets. Separate quantitative and qualitative analyses of many signals of interaction are then attempted, indicating the complexity of the management of interaction in written texts and the usefulness of such investigations for understanding how texts achieve their goals.

The review of the concept of interaction in the previous section also emphasises the issue of uncertainty about the analytically and practically acceptable meaning of certain terms. Interaction is one such term that is not easily explicable. In the present study, the primary aim is not to work out a theoretical definition of interaction in written discourse in as much as it is the investigation of how interaction is managed through writing. However, a working definition or explanation of the term 'interaction' is obviously necessary, so that when the term is used in the following chapters, its meaning – in broad terms at least – would be satisfactorily clear. As indicated in 1.1.2 above, interaction in written texts may be seen as referring to the means of establishing and maintaining a relationship of negotiation – overt or otherwise – holding between the writer and the addressee through the text. The aim of this relationship is to help the reader better exploit the text and the writer to better express his/her message. Another related point is that the form 'interaction', as opposed to alternatives such as 'interactivity' and 'interactive-ness', is the preferred one here. This is merely due to the fact that this form is the one commonly used in linguistic studies. In the course of this thesis, however, a distinction will be made between the two adjectival variants 'interactive' and 'interactional'; an explanation of this will be offered in due time.

In the definition of interaction proposed above, the term 'addressee' is used. This term (versus 'reader', 'audience', and other substitutes) will be discussed in more detail in the next chapter. At this stage, it may suffice to mention that this term is used to denote the other participant in the relationship of interaction – the first being the writer. It is the co-participant the writer constructs within and through the text to make interaction possible. As such, the idea of the addressee resembles, but is not identical to, other widely used constructs, such as the ideal, typical, or hypothetical reader. The actual reader may be completely different from the addressee, or they may be similar in some respects. From the perspective of interaction in texts, however, it is the addressee inside the text that is important.

Two other terms will be used frequently in this study, especially in the analytical part, corpus and medical discourse. The former is particularly encountered in computer-assisted language research and refers to a group of texts which are compiled in a particular way to serve a particular purpose (see also Chapter 5). Medical discourse is used in this study to refer to texts, spoken or written, whose main topic is medical, i.e. the motives behind the text and its content have to do with health-related issues. This excludes texts whose main subject matter or purpose is not medical, but have some medical references. The corpus of medical texts analysed in this study is derived from unmistakable medical sources, like medical research papers and medical textbooks.

1.3 Organisation and Presentation of the Thesis

The linguistic phenomenon this study seeks to investigate is 'interaction in writing'. To carry out as much exhaustive analysis as possible of this phenomenon, the rest of the thesis comprises two main parts: theoretical (Chapters 2, 3, and 4) and analytical (Chapters 6, 7, and 8). Chapter 5 bridges the gap between the two parts by building on the theoretical discussion to design the methodology to be used in the analytical chapters. Towards the end of the thesis, Chapter 9 also combines the theoretical and analytical perspectives, chiefly by reflecting on the earlier theoretical arguments in light of the results of the analyses, and by discussing the broad implications and applications of the study.

The main theoretical section of the thesis covers most of the issues relating to the phenomenon of interaction, including audience, context, and the interpersonal component of the language (Chapter 2). In addition, the type of discourse from which the sample corpora to be analysed here are taken, that is medical discourse, will be reviewed from the perspective of interaction (Chapter 3). Then, the concept of interaction in written texts will be thoroughly examined and a general framework that subsumes three primary types of interaction is proposed (Chapter 4). Each chapter of the analytical part of the study focuses on one of these types of interaction, in an attempt to find out how it is managed in each of the sub-corpora comprising the data. This is carried out using both quantitative and qualitative analyses that are largely based on the theoretical framework introduced in Chapter 4.

The final section in each of the three theoretical chapters reformulates some of the research issues raised by the overall discussion in that chapter. This helps point to some interesting lines

of inquiry that an analysis of interaction might be able to address. The analytical chapters open with an introductory section that provides a panoramic view of the features to be analysed in each chapter, with illustrative examples drawn from the data. All examples used in the analytical chapters are sequentially numbered for each chapter, and the special code of the data source from which each example is taken is provided in square brackets following that example. These chapters conclude with a summary of the general results and a discussion of some of their implications.

INTRODUCTION TO INTERACTION

Since it is interaction that this study is mainly concerned with, the current chapter sets out to provide a broad overview of this phenomenon. Questions related to writing and the writer-reader relationship will be particularly addressed. The first section reviews the idea of context in writing and some approaches of its definition, and relates each of these definitions to the general conception of writing. It also highlights the importance of distinguishing texts on interpersonal grounds, not only on the basis of their content. The following section concentrates on the meaning of audience-ship and some of the relevant misconceptions, the various constructs of the writer's other, and the role text plays in this regard. The third section explores the interpersonal meaning of language by studying the two related concepts of choice and interaction. The discussion of interaction points to some of the problems encountered in relation to the analysis of interaction in written discourse, and the final section stresses that this is evidence that more research about this topic is needed.

2.1 Context and Text Variation

A major contribution to the theory of linguistics has been made by the general notion of context¹. Since it was taken into linguistics as a result of work in sociology and anthropology (see Halliday & Hasan, 1989, for a survey of the origins of this term), much has been said about context and its implications for how language – ‘real’ language – actually functions in ‘real’ life. One important example of these is that language users need not be fully explicit since meaning is not only contained in texts; it is instead a combination of language and context (e.g. Nystrand & Wiemelt, 1991; Sinclair, M., 1993). Another important implication that is particularly relevant to this study is the view especially developed within the framework of Systemic-Functional Grammar of the role of context in explaining how and why different discourses that have similar content² are different.

In what follows, the question of context in relation to written discourse will be discussed. The aim will be to gauge the importance of context in helping us sufficiently understand written language. This is definitely not a simple task, and it is true that, as Georgakopoulou & Goutsos (1997, p.17) conclude, “although context is relatively easy to conceive and describe, it is quite hard to delimit and define in a precise, formal way”. However, this will enable us, it is hoped, to adequately explore the more general and intricate issue of text variation, and the role context variables play in explaining how texts differ. The focus will be on the two phenomena of register and genre moving to the broader interactional nature of texts.

2.1.1 *Context of writing*

Context is not as straightforwardly conceived in the written medium as it is in the spoken, and there are a number of theories in fields like composition and applied linguistics about how and whether context can play a role in written interaction. One of the prime reasons for the controversy over the role of context in written discourse is the differences in the very conception of the phenomenon of context itself. For every definition of context, there is a distinct view of writing in general that ranges from fully decontextualized and autonomous to a fully context-dependent mode of language.

The proponents of the autonomous model that considers written language as void of context, e.g. Kay (1977) and Olson (1977), claim that sentences and texts exclusively constitute meaning and that the only resource the reader can rely on to understand them

is linguistic, namely the grammar and the lexicon of the language. From a diachronic perspective, Olson argues that writing is becoming more and more autonomous; this is borne out by the adoption of an explicit alphabetical system, on the one hand, and by the movement from spoken, context-bound “utterances” to written, context-independent “texts” that children experience in schools on the other. It is particularly with the invention of printing and the development of genres like essays, what Olson calls “the essayist technique”, that the writer’s task becomes

to create autonomous text – to write in such a manner that the sentence [is] an adequate, explicit representation of the meaning, relying on no implicit premises or personal interpretations.

(Olson, 1977, p.268)

Unlike the case of spoken exchanges there are contextual restrictions on writing that limit, if not completely prevent, any role for the context in the passive process of the extraction of meaning from written texts. Instead, that is accomplished, it is argued, wholly through logical and linguistic relationships that are explicit enough so as to rule out any possibility of misinterpretation.

This view of written language as typically autonomous and explicit in nature is refuted by many, especially dialogists like Rommetveit (1974) and Nystrand (1986, 1987). Dialogists’ argument is based on a different conception of context; they make a distinction between the context of production and that of use or reception (Nystrand, 1986; Nystrand & Wiemelt, 1991). These are the same when speaking, but are distinct in the case of writing. And it is the context of use that matters when interpreting written texts. One of the factors affecting context of use, Nystrand & Wiemelt contend, is “the reader’s *purpose*”; hence for a text to make sense, “the respective purposes of the writer and reader must intersect; at the very least the writer’s purpose must not exclude the reader’s” (Nystrand & Wiemelt, 1991, p.30). According to this perception, another interpretation of text explicitness that is context-dependent is proposed: a text is explicit “when it is attuned to and functions adequately in terms of its context of use vis-à-vis readers’ respective purposes, situations, and cultures” (p.31), and not when it is bereft of context. Relying on context does not therefore mean that texts are implicit; on the contrary, explicitness of meaning may be achieved by a match of writer and reader expectations about what needs to be said and what should be assumed.

From a pragmatic perspective³, a more general notion of context is adopted by M. Sinclair (1993) who substantiates her argument by an analysis of selected utterances from

an academic text. Context here is that which helps us understand utterances and is defined as

a set of assumptions which the hearer brings to the interpretation process, assumptions which can, but need not, be derived through perceptual processing of the situation in which the utterance is produced. Indeed, *any* selection of assumptions from the hearer's beliefs and assumptions about the world could form part of the context for the interpretation of an utterance.

(Sinclair, M., 1993, p.534, emphasis in the original)

The above outline of the different views of the relation between writing and context shows that it is the conception of context that forms the real basis of each perspective. On the one hand, those maintaining that written language is autonomous and explicit in nature build their argument on the assumption that context amounts primarily to the physical setting of the utterance production. On the other hand, both the dialogist and the pragmatic views depict context as essentially that of reception and argue that it has more to do with the participants' expectations and shared knowledge than with the actual setting. More importantly, both of these perspectives, unlike the autonomous one, stress the role of the hearer/reader in the conception of context. If the dialogists' notion of context highlights the reader's purpose as an important factor of the context of eventual use, this is even more forcefully emphasised in the pragmatic view that relates context directly to the hearer/reader's representation of situation and to his/her background knowledge.

These dialogic and pragmatic views of context in written discourse support the conclusion that writers and readers are no exception in relying on the contextual nature of all linguistic interactions. If writers seek to communicate with their readers, they have to consider a mutual context that would make proper conditions for conveying meaning. Readers, on their part, should as well 're-contextualise' written texts in order to successfully interpret them. Duranti (1986, p.244) argues that "interpretation is a form of re-contextualization", and Tannen (1985, p.140) proposes using the term "recontextualized", instead of "decontextualized" in relation to writing as "the context must be posited rather than being found in the actual setting". This is one sense in which audience in written discourse can be described as active. And, for the purposes of this study, this is a crucial consequence of the above deliberation of context. Another important consequence will be dealt with in the next part of this section, that is how contextual factors help us understand text variation.

2.1.2 Text variation: register, genre, and interaction

The concept of register has long been established as an answer to the search for criteria for classifying different forms of language. Register is “the concept of a variety of language, corresponding to a variety of situation” (Halliday & Hasan, 1989, p.38). It is a theoretical semantic concept by which contextual factors can be construed in the formal linguistic structure of a piece of language⁴. In Halliday’s Systemic approach, three aspects of the situational context can be related to linguistic categories: the field (the content or what is being talked about), the tenor (the participants’ relationship), and the mode (the role the language plays) are construed by the experiential, interpersonal, and textual metafunctions respectively (e.g. Halliday & Hasan, 1989, pp.29-34)⁵.

Though it is clearly a useful framework for classifying texts, applications of register analysis have resulted in inaccurate assumptions about the nature of language. The problem with register theorists, as pointed out by Leckie-Tarry (1995), is in the tendency of viewing text

as a finished linguistic product. The outcome of this position is the assumption of a primarily synoptic view of texts which ignores the idea of dynamic meaning and language as performance/dialogue.
(Leckie-Tarry, 1995, p.12)

It is here where the concept of genre claims to have kept the balance between linguistic structure and contextual variables: it “allows a dual focus: the synoptic focus of text as product, and the dynamic focus of text as process” (pp.12-3). This is not to say that the concept of genre is entirely distinct from that of register (but see Couture, 1986a). Both concepts are inter-related; genre is defined as “a staged, goal-oriented social process realised through register” (Martin, 1992, p.505). So the relation is that register realisation mediates realisation of genre – in Martin’s words, “genre as pattern of register patterns” (p.505). In relation to context, genre is broadly associated with the context of culture, and register with the more specific context of situation (Eggins, 1994).

Genre and register analyses are clearly based on a consideration of the context as a whole. But some perspectives particularly in the case of genre, as critically noted by Martin (1992, p.506), focus on one contextual variable or another. Field is more likely to attract attention as the dominant contextual factor in most linguistic interactions, and discourses are therefore normally classified according to their subject matter. As pointed out by Gregory & Carroll (1978, p.48), the tenor variable is mostly ignored. There are, however, plenty of

situations where the tenors of discourse seem to dominate the choices made. The example given by Gregory & Carroll (p.60) is that of advertisements in which choices are markedly determined by the tenor of persuading addressees. From a purely interactional view, tenor is clearly the most significant factor of the context of situation, as it bears directly on the interpersonal choices that reflect the relationship between the interactants. It is therefore possible, within a social theory of language, to understand the interactional variation of texts by simultaneously referring to both the formal interpersonal choices of such texts and the tenor features of the situation.

Unlike the case of spoken face-to-face exchanges, a full understanding of interaction in written discourse may, however, be obscured by the fact that audience of the written medium is theoretically “an undifferentiated one” and its role, status, and relationship to the writer and the topic in general are accordingly less obvious. Gregory & Carroll (1978) discuss the “undifferentiated” audience as one of the main weaknesses of mass media exemplified by television. They argue that the consumer is being chiefly cast in this role of consumer and not as a member of a specific class, religion, sex, etc. But they significantly supplement their argument by stressing that language “offers the possibility of distinguishing addressees along just these lines” (p.62). In such media as television broadcasting and writing, relationships are sometimes conspicuously established through the language, and roles are assigned and played relying principally on linguistic interpersonal choices. This helps in shaping and defining audience and distinguishing addressees. In written discourse in particular, the question of audience or addressee is pragmatically and interactionally crucial, and this is what the following section will attempt to investigate.

2.2 The Identity and Role of the Addressee

The discussion of the context of writing in the previous section would not be complete without further elaboration on the addressees, audiences, or readers of written texts, since “one important element in the ‘context of situation’ for writing is the reader(s)” (Clark & Ivanič, 1997, p.161). This section considers this crucial issue by first exploring the general meaning of audience-ship and some related common misconceptions. Then the two constructs of ‘audience’ in rhetoric and ‘speech community’ in linguistics are compared, and a new one termed ‘addressee’ is proposed for the purposes of the present study. The final section focuses on the role the text plays in constructing addressees.

2.2.1 What it means to be an audience

If there is one single role we play most in our lives, it would be that of being an audience. In almost every human activity, there are moments when we sit back and allow ourselves to watch, listen to, or read what other people (or sometimes objects or things) do, say, or write. In some other activities, it is not only a matter of moments; for the whole activity, we play the sole role of being an audience, e.g. watching a television programme or attending a lecture. In many cases we are not aware that we are playing a role at all until something suddenly happens and draws us away from being an audience, e.g. somebody talks to you or the telephone rings while engaged in watching a television show. (We may sometimes feel angry because we have been forced to stop playing an unfinished role that we have willingly committed ourselves to.)

The wide use of the term 'audience' in our daily activities results in some misconceptions of what an audience is and what role it is assumed to play. A major misconception is that of the passivity of audience. The popular stereotype of audience is that of a group of people sitting together doing nothing but watching and/or listening to an activity. This contrasts with what actually happens when people play this role. In fact, a passive audience is normally blamed for being uncooperative and generally not motivating. Although they know that they are not addressed personally, members of an audience should respond to what they see or listen to – and they normally do. These audience responses, as shown by Pratt (1977), are largely evaluations of what the speaker or performer is doing, and they need not be done at the end of the activity, though there is commonly an overall evaluative response at the end of each activity.

Audiences across the board assume this major and crucial role of evaluation. The pragmatics of this phenomenon is cogently discussed and explained in Pratt (1977, pp.100-16). One basic fact about these responses is that they are the right of the audience. Pratt argues that when somebody voluntarily assumes the role of audience, what he/she is essentially doing is waiving his/her right to take a speech turn in favour of an extended turn for the speaker/performer. An audience, in turn, has the right to see or listen to something interesting or informative that deserves the sacrifice made. An audience therefore acquires the right to evaluate the speech or performance and to applaud or boo as appropriate.

Another misconception related to our daily use of the term 'audience' is that we often think of an audience as a group of people and feel reluctant to describe an individual as

constituting an audience. In an act of story telling in a two-party conversation, for instance, the terms listener or interlocutor are generally preferred. This may be attributed to the fact that 'audience' is a collective noun that indicates an abstract collectivity of, rather than individual, listeners or attendants (Ong, 1975, p.11). But if we accept the above generalised view of audience, then what happens during the act of story telling is indeed a clear example of the shift of roles from interlocutors sharing equal turn taking rights, to a speaker having access to an extended turn vis-à-vis an audience temporarily waiving its right to take a turn and acquiring in exchange the privilege of evaluating and commenting on the story being told.

A third and perhaps less common misconception is that of the necessity for speakers/writers and their audiences to be physically present in front of each other. Physical presence means that audience can participate and react tangibly, and thus fulfil its role in a more salient way. But performers and their audiences could be temporally and/or spatially separated from each other. We still, for example, use the term 'audience' to refer to people watching television shows or listening to radio programmes despite the fact that these audiences do not play their role in the same way as if they are present. What seems to be more at stake here is the performer's (the television or radio presenter's) sense of being 'audienced', i.e. of being listened to and evaluated, and his/her accommodation of the audience's expected responses. A more striking example of this is the process of reading written texts. Readers are separated from writers, but this does not mean that readers do not play the basic role of evaluation, and that writers do not have a sense of this basic role assumed by their readers. In fact writing is as associated with the objective of evaluation as other forms of communication, and readers – like other audiences – have the right to evaluate what is written. Evaluation is indeed one of the major goals of the process of reading; and this is probably why readers are often given convenient means and encouraged to say what they think – a popular example is the letters to the editor.

The relatively simple and generalised way in which the phenomenon of audience-ship has been discussed above does not automatically entail that the identity and role of audience is in practice as straightforward. The meaning of audience is far from being truly resolved by merely referring to the distribution of speech turns between the interactants. Pratt's (1977) model is clearly helpful as shown above in at least two ways: pointing to the fact that being an audience is a basic role that we assume in many of our daily activities, and highlighting some of our misconceptions about being an audience. Nevertheless, in the

case of written discourse in particular, the notion of audience becomes more complex. The problem with writing is a fundamental one: due to the isolation of the writer when writing and the separation of writers from their readers, doubts naturally arise over whether writers do genuinely have audiences and whether readers actually assume and fulfil the role of audience. Even if writers have an audience of whatever kind, what role(s) can this audience play if the interaction is technically over and the writer may be unknown to the reader or perhaps not alive? How can audiences of the written medium affect the interaction if the text is already a finished product? Or is it that an audience in this case is more or less passive and its role is almost limited? Such serious questions will guide the discussion not only in the following section, but also throughout the whole study.

2.2.2 Audiences, speech communities, and addressees

Because the phenomenon of audience-ship is so pervasive in our lives, it has received a great deal of attention in disciplines that are concerned with communication in general. The main objectives have been to explore what really an audience is and what role(s) it is supposed to play in various contexts. Different disciplines have different approaches to these fundamental questions that have not resolved, but rather added to the many controversies we already have about the concept of audience. This section will attempt to sketch some of these controversies and then briefly outline the treatment of this concept in two disciplines to which the notion of the speaker/writer's other is fundamental, rhetoric and linguistics.

It has been pointed out earlier that Pratt's generalised and rather simple interpretation of audience based on the conversational system of turn taking poses fewer problems for speakers than for writers, and it is actually in relation to written discourse that many of the controversies about audience have risen. One of the strongest and most influential claims made with this regard is Ong's (1975) that a "writer's audience is always a fiction." Referring to different types of writings – e.g. literary works, personal letters, and diaries – Ong argues that "if the writer succeeds in writing, it is generally because he can fictionalize in his imagination an audience" (p.11). This audience is not someone the writer knows, not the pupil's composition teacher or his/her father, mother, or classmates – it is not somebody in the pupil's real life. Audience, Ong claims, is a made-up entity the writer has learned about from reading earlier "writers who were

fictionalizing in their imagination audiences they had learned to know in still earlier writers” (p.11).

This argument is, however, contested by many theorists who believe that a writer’s audience, at least in certain kinds of writings, is – from the writer’s point of view – a more or less concrete entity that can influence what he/she is writing. This is the approach widely accepted by many linguists, notably sociolinguists and composition theorists, and it has been developed to the extent that it has at present serious practical applications particularly relevant to the study of composition and the training of unskilled writers. To give an example that specifically criticises Ong’s concept of a fictional audience, Tomlinson (1990) takes the case of the writers of composition studies arguing that they take account of three groups of “non-fictional” readers: intimate friends and colleagues, expert reviewers, and non-expert researchers from other disciplines, showing how each of these communities can influence the process of research writing. So it is obvious that there exist divergent opinions about the basic idea of how an audience is perceived in written language. What concerns us at this stage is the consensus on the fact that audience, whether fictional or not, is always there – in the writer’s mind and in the text – and the more important fact that audience has a clear and basic role to play in the written interaction.

These divergent views about the writer’s other and its role can also be illustrated by referring to the concept of audience in rhetoric and that of speech community in linguistics. The notion of audience has long been used by rhetoricians to explore how efficient writers of particular texts succeed in achieving particular effects on their readers and the means through which this is brought about. This contrasts, as shown by Nystrand (1982a), with the linguists’ notion of speech community which stresses the effects of the readers on the writer and what he/she writes. It is perhaps because linguists have become aware that it is practically possible to study how writers adjust their texts for their community (since the conventions of the community are all known or available through the discourse itself to be identified) that they have developed the idea of the speech community. In linguistic terms, it is not as clear how audiences may be moved, entertained, or made involved because of what the writer has written. In addition, rhetoricians’ focus when investigating how writers seek to influence their readers is on the writer’s mental processes (Nystrand, 1982a, p.24), and little needs to be known about the specific character of the audience and the context in general. Over time, as indicated by Leith & Myerson (1989, p.5), the term audience “slides into that

amorphous and supremely useless category of 'the masses' (with its equally unhelpful sub-divisions 'the public', 'folk', or 'youth')." Despite this abstract and fuzzy conceptualisation of audience, its role has always been given priority over that of the writer and the text. Unsurprisingly, this results in counter-arguments for ignoring audience (e.g. Elbow, 1987) so as to give writers better opportunity to express themselves using the right language that reflects the richness of the subject being written about. Nonetheless, audience cannot be ignored, and the general idea of audience, however abstract, is still useful in drawing attention to the writer's other and its crucial role in the written interaction.

Similarly, the notion of speech community is no less problematic (see, for example, Romaine, 1982); this is especially true when we have to talk about writer-reader relationship, since the writer is in fact part of the speech community. Unlike a member of the audience who "always shares some particular concern with the speaker", as pointed out by Nystrand (1982a, p.15), "members of a speech community are not ever required, either by rule or definition, to actually interact with each other." Nystrand argues that the writer's speech community is not all of his/her potential readers; rather the concept of speech community in writing is dependent on the general function of writing in the community and on its character as a stable and highly conventionalised system. So writers conform to their speech communities through a set of linguistic and situational constraints that create appropriate "conditions of meaning" (see Nystrand, 1982a). Nevertheless, the concept of speech community highlights the social aspect of writing and creates the necessary balance between the roles of writers, readers, and discourse. In conclusion, the real theoretical value of the two concepts of 'audience' and 'speech community' is that they complement each other and show the recursiveness of the processes of influencing and being influenced by the potential participants of the written text.

For the purposes of this study, which rests upon the assumption that the role of the reader in the written interaction is paramount, the term 'addressee' will be adopted to account for the complementarity of the terms 'audience' and 'speech community'. Because of the vague meaning audience has acquired, it becomes necessary to draw a distinction between the general audience or unspecified readers and those to whom the text is written and addressed. Such distinction is encoded, though differently, in, for example, Brenneis' (1986) primary and secondary audience and Hymes' (1986) addressee and audience⁶. The addressee in our terms refers to an entity that is more concrete than

audience; audience may be fictional in some cases, but an addressee may not. We do not write for no one or anyone – at least in most types of writing; there is normally an addressee to whom the writer is writing. Sometimes it is fairly obvious who the addressee is, a letter to a friend for example; sometimes we can identify the addressee rather laboriously from the characteristics of the text, e.g. public writings which are not necessarily written to anyone and are for everyone as the name may suggest. Also, unlike speech communities, addressees are completely distinct from the speaker/writer and it is possible to identify different sorts of relationships between them. Addressees influence the message by being seen by the addresser as particular in their needs and attitudes, and by interacting implicitly or explicitly with him/her. In short, the term ‘addressee’ encompasses a set of dynamic expectations, beliefs, and needs that exist in the writer’s mind, the text, and the potential readers.

In this section, I have argued that whether writers have real or fictional audiences is a moot point that is further complicated by the fact that audience is a rather ambiguous notion which, though theoretically useful, is difficult to recognise in practice. Speech community is equally problematic because writers are not distinct from their readers; but it is fruitful in focusing the attention on how the reader influences the writer and the written product. The term ‘addressee’ has been proposed to account for both of the inseparable and recursive effects of writers on readers and readers on writers. It has also been indicated in passing that addressees may be identified through text characteristics. The crucial role of the text is explored below.

2.2.3 The role of the text

In the discussion so far the focus has been on the speaker/writer versus the audience or addressee. Little mention has been made, however, of how texts participate in our conceptualisation of the writer’s other. But the important issue of whether audience exists inside or outside discourse was always there underlying most of the discussion above. For example, Ong’s idea of the fictional audience clearly rejects any real-world presence of audience opting for its existence in the writer’s mind and his/her text; speech communities, on the other hand, are more than anything else actual external entities whom the writer must accommodate rather than invent (see Park, 1982, on these two main directions to the meaning of audience).

There is no need to accept Ong’s fictionalisation of audience or to refute the physical quality of speech communities to appreciate the role of the text, since if there were no

text, there would be no writer and no addressee. It may be plausible to theorise that if the writer has no addressee in front of him/her, the only means through which he/she can tell us about the 'nature' of his/her addressee is the text itself. Some texts are full of cues through which readers can identify themselves as potential addressees. And while those readers may accept and enjoy reading certain texts, others may reject these texts simply because they are not written for them, that is because – as far as they can tell from the textual cues – they are not the intended addressees of the text.

The text enables the writer to construct an addressee that serves the writer's purposes. The constructed addressee may or may not coincide with the real reader, though this is what normally happens and what is certainly always hoped to happen. In certain types of texts, like advertisements, the addressee created by the text is mostly different from the actual reader. There might be a shift of addressee characteristics in the same text. So at the end the nature and roles assigned to the addressee may be different from those at the beginning. Thompson & Thetela (1995) build their analysis of the roles of writers and readers in written advertisements on the central idea of the negotiation and the assignment of roles between the "writer-in-the-text" and the "reader-in-the-text". Through this, advertisement writers hope, as pointed out by Thompson & Thetela (1995), that real readers will converge with the reader-in-the-text. In almost all types of written discourse, addressees who have influenced the writer and whom the writer wants to influence can be traced inside the text.

It is therefore possible to conclude that our point of departure should be the text itself. Through the text we will be able to identify not only the addressee, but also what the effects on both the writer and the reader are. Some features of the text will show how the writer wants to influence his/her reader, and others will demonstrate the effect the addressee has on the writer. Equally important, the text can say a lot about the writer and the stance he/she assumes against that projected on the reader. This further helps providing us with a fuller picture of the addressee that is otherwise not possible.

2.3 The Interpersonal Face of Language

The idea that language is an interpersonal system underlies this study. This means that language is partly composed of 'interactional choices', that is selections from lexis and grammar that are conditioned by interactional purposes. The first part of this section, therefore, argues that choice is used both to analyse linguistic systems and to explain the way language is actually used. The next part discusses the way language is typically

perceived as interaction, highlighting some of the problems caused by such perception, particularly in relation to written discourse.

2.3.1 Language as choice

Among the most important underlying principles of how language works is the concept of 'choice'. From a communicative view of language, it is possible to take as our starting point the idea that "text represents choice" (Halliday, 1978, p.109), and that "all language is indeed choice from alternatives" (McCarthy, 1992, p.202). There seem, however, to be two possible complementary ways of looking at this underlying aspect of choice. From the viewpoint of language analysis, choice could be taken as a basis for modelling language structures into systems, as is primarily the case in the Systemic-Functional approach. And from the viewpoint of language use, particularly at the interpersonal and interactional level, choice could be taken as the basis for explicating how actual language users convey meaning in the way they do. The difference lies in which conditions for choice are given priority, the linguistic or the interactional ones. For example, a system of personal pronouns could be constructed from a purely linguistic perspective; however, the way individuals actually use personal pronouns could be more flexible than a system constructed in this way would suggest, and some unpredictable choices may be made.

In the Systemic-Functional approach, "the notion of choice, or opposition, [is] of fundamental importance in understanding how language makes meanings" (Eggins, 1994, p.213). Systemicists have developed a mechanism for constructing systems of the language through paradigmatic choices which are realised by structures (see Halliday, 1978, 1994). Nesbitt & Plum (1988) point out that the concept of choice, or as they put it "the paradigmatic 'either/or' relations", in systemic linguistics is useful for a qualitative analysis of language. As an enrichment to the 'either/or' relations of choice, they further propose that "we need to recognize that overlaying such relations are relations of 'more likely/less likely'" (p.8). These latter relations are referred to as probabilities (as opposed to possibilities) and are important, as Nesbitt & Plum have demonstrated, for the analysis of the quantitative difference of language. Of particular importance is Nesbitt & Plum's probabilistic analysis on the basis of genre and register variation which highlights the role contextual constraints have in certain choices. Generally, the idea of probability is clearly useful in broadening the conception and application of the phenomenon of choice and in accounting, on the linguistic level, for marked and unmarked choices.

The fact that choice can be seen in terms of a system of use as it is a system of analysis is crucial for explaining many of the apparent unpredictabilities of actual language use. More than anything else, “it is the existence of choice which allows the individual to express particular meanings by selecting a ‘marked’ form rather than the expected, socially prescribed form” (Fielding & Fraser, 1978, p.218). Language users do not make choices from the available linguistic systems in isolation; their choices are intimately connected with the immediate interactional and social environment. Allerton (1996, p.632) notes that some preferences of certain choices “go beyond the merely linguistic” and proposes that we refer to them as “cultural-pragmatic”. This is borne out by, for example, work on reference and pronominal choice – including Allerton’s – which concludes that choice is generally not purely a linguistic phenomenon, it is a pragmatic and interactional one as well (see also Brown & Gilman, 1960; Watson, 1975; Clark & Marshall, 1981; Duranti, 1984; Maitland & Wilson, 1987; Connor-Linton, 1995; Fina, 1995).

Linguistic and interactional factors are inter-related in a variety of complex ways. One reflection of this is interactional language, language whose main objective is doing something and influencing others. Interactional language is a matter of fundamental choice available to language users. Though language use is in essence always interactional, users may adopt a language that overtly signals this interaction, or one that is less overt in this respect. Language that is overtly interactional is in a sense more complex as its function is not simply conveying information, but also construing interaction. Consequently, various contextual and interactional factors will have clear effect on the users’ linguistic choices. Choices in general are complex, and they are particularly rich and diverse when associated with overt interactional language. This richness and diversity are also inherent in the many perspectives about how language can reflect interaction, as will be discussed next.

2.3.2 Language as interaction

It is generally accepted that there are two major uses of language: one related to content and the other to relationship. The first is primarily intralinguistic, i.e. it can be expressed and understood by referring mainly to the language itself; the other, however, is equally intra- and extralinguistic, that is we need to know the social and contextual environment of the linguistic product to appreciate the linguistic relationship between the participants and its impact on the meaning. Central to this latter use is the role of the addressee, the listener or the reader, in the construction and interpretation of meaning. Meaning from this interactional point of view

is not present in a piece of text ready to be consumed by the reader but is negotiated by the 'interactive' endeavour on the part of the participants engaged in the encounter, giving specifically appropriate values to utterances...discourse as interaction is the reader's discourse.

(Bhatia, 1993, p.8)

In spoken discourse, this interactional negotiability of meaning and of linguistic choices in general – including the choices of turn taking in conversations (Sacks *et al.*, 1974) – is well-documented. This is not only restricted to conversational exchanges, but also includes the more monologic types of spoken discourse (see, for example, Atkinson, 1984; Thompson, 1997). Furthermore, analyses of spoken encounters typically take into consideration the interactional nature of paralinguistic and non-linguistic aspects of the exchange. McCarthy (1992, p.207), for example, argues that “prominence choices will reflect speakers’ projections of mutual understanding of the situation”, and Bavelas *et al.*'s (1992, p.471) “examination of dialogue data revealed an apparent subclass of illustrators [i.e. gestures] that [they] understood as making a reference to the interlocutor rather than to the topic of the discourse”. An extensive account of this interactional aspect of spoken discourse is particularly reported within the framework of conversation analysis (e.g. Duncan, 1972, 1974; Goodwin, 1981; Ford, 1993; Ochs, Schegloff & Thompson, 1996).

The case is undoubtedly not the same concerning written discourse. Overshadowed by debates about the oral/literate dichotomies and the autonomous models of writing, as discussed in the two sections above, research into the interactional nature of the written medium can be described – with a few exceptions as will be mentioned later – as generally limited and cautious. With the exception of political and media discourse, as pointed out by Harvey (1995, p.189), analysis of written texts “is often concerned with the processes of understanding information, but less attention is given to the intentional and subjective character of discourse production”. One possible reason behind this trend of research is the wide assumption that, contrary to the spoken language, “written language is, in general, used for primarily transactional purposes” (Brown & Yule, 1983, p.4), restricting the types of written discourse that can be described as interactional and thus the role an interactional view can play in understanding much of what happens during the production and consumption of written texts.

Another, possibly more important, reason behind the limited and cautious approach to interaction in written discourse is the disagreement over how precisely the concept of interaction works in written texts and how far should we go in pursuing it. Referring to

both spoken and written discourse, Holec (1980), for instance, considers unsatisfactory the notion of interaction which only means that “discourse is a phenomenon involving two or more participants influencing one another” (p.192) or that which is “limited to the fact that one of the participants, the speaker, takes into account the presence of other participant(s)” (pp.192-3). He argues alternatively that “a definition of interaction...should be based on an analysis of the types of role played by participants” (p.193). By ‘role’, Holec refers to ‘speaking turns’ and thus considers ‘interactive’ discourse which is characterised by participants “each contributing in turn to its realisation” (p.193) and ‘non-interactive’ discourse to which only a single participant contributes. Though clearly right in his hesitation in accepting the first two definitions of interaction, the definition he proposes and its application to personal letters still falls short of accounting for interaction in written discourse in general. While it is true that interaction subsumes joint production of meaning, basing this on the conversational model and the mechanical system of turn taking does not capture much of the negotiation and collaboration involved. Nevertheless, Holec’s definition is still relatively more precise than some other treatments that vaguely equate interaction to the writer-reader relationship (e.g. Harvey, 1995).

In addition to the problems of conception of interaction in writing, there are also problems relating to how texts manifest interaction and its participants. Myers (1999) discusses some of the ‘principles-based’ models of interaction in texts that set some pragmatic/social rules for communication and study the text in light of them (Grice, 1975; Nystrand, 1986; Brown & Levinson, 1987; Nystrand, 1989); he points out that the analysis of texts based on such approaches “can show that there *is* interaction in these texts, but it cannot tell us what sort of interaction, between what sorts of actors, because it starts with assumptions about what interaction is” (p.56, emphasis in original). Myers also describes other approaches to interaction in written discourse that are not based on presumptions about the interaction and the participants; such approaches overcome problems faced by the principles-based models, but they may also raise other kinds of problems. Another view of various ways of analysing interaction in texts is described in Thompson & Thetela (1995, pp.103-5) who distinguish between two main complementary approaches: the first concerns itself with the organisation and signalling of information in the text (e.g. Hoey, 1983/1991; Widdowson, 1984; Hoey, 1988), and the other is grounded in the interpersonal metafunction of language (Halliday, 1994), and is largely concerned with the attitudes and roles of the interactants.

While language on the whole, and regardless of form and medium, is clearly interactional, it is also obvious that there are many problems with regard to the medium of writing. In theory, interaction in written texts as a notion is not well-defined and ranges from mere consideration or sense of audience to conversation-like, mutual production of the message. In practice, the mechanisms through which we can identify the interactants in written texts and the characteristics of their relationship are, to say the least, problematic and generally unsatisfactory. What all this entails is that interaction in writing is a topic that is worth investigating in order to throw light on some of the many uncertainties surrounding it.

2.4 Some Research Issues

The discussion in this chapter demonstrates that studying interaction in written discourse is bound to be problematic. The basic aspects of interaction overviewed, like context and audience, tend to be less straightforwardly applied in writing than in speaking. Although several misconceptions about these concepts were highlighted, which could be helpful when considering written texts, many questions about, for example, the role addressees play in the texts and the methods of making this explicit are still unresolved. As the previous section concludes, the main issue that the whole discussion in this chapter amounts to is that interaction in writing is still a theoretically and practically problematic subject that needs to be further investigated.

NOTES

- ¹ The term 'context' is used here to refer generally to the context of situation, i.e. the social and material setting of the production and/or reception of texts. It is not used in the sense of an immediate surrounding of a particular word or phrase in a text as it was originally used in language studies, nor in the sense of the broad cultural context (though this latter context will, of course, underlie what could be considered as the situation of an utterance).
- ² 'Content' is used here in a technical sense. Since, as illustrated by, e.g., M. Sinclair (1993, p.544) "there is a gap between the linguistic meaning encoded in the utterances contained in the text and the author-intended meaning," 'content' is used to refer to the first meaning while 'message' is used to denote the latter.
- ³ See Cooper (1982) for another pragmatic view of context.
- ⁴ This construal relationship between context and language is best illustrated in relation to written discourse by Macleod (1992) who concludes his study by pointing out that

a context can be altered by the very expression it contextualizes, just as much as the interpretation of an expression can depend on its context. Indeed, appropriate reading is as much a matter of seeing the context that the lexicogrammar of an expression calls forth, as it is a matter of seeing the lexicogrammar in terms of some determinate and pre-existent context.
(Macleod, 1992, p.157)
- ⁵ However, this correlation between contextual variables and linguistic meanings is, in practice, more complex than is suggested here – see Thompson (1999).
- ⁶ Another example of the attempts to delimit the meanings of audience is Bell's (1984) taxonomy of audience to addressees, auditors, overhearers, and eavesdroppers according to whether they are known, ratified, or addressed by the speaker.

INTRODUCTION TO MEDICAL DISCOURSE

This chapter introduces medical discourse, the type of discourse the study is primarily concerned with. The first section is devoted to scientific writing in general, and the discussion covers both social and linguistic accounts of this form of writing. The main points raised are centred around how writers and readers influence the way scientific facts are represented. In an attempt to provide a general overview of medical discourse, the discussion then turns to a different form and context of medical language, the medical encounter. It is argued that the medical interview is governed by a number of contextual factors that influence its general structure and orientation. To provide a more detailed account of medical writing and the crucial role of context/audience, four types of medical texts – research articles, textbooks, leaflets, and press reports – are then investigated in terms of how interaction is managed. Various aspects of interaction in each of these four text types are briefly discussed and their relation to the specific addressee is indicated. Some of the main external characteristics of this addressee in each text type are explored in the next section; these are argued to explain some of the main aspects of interaction in the four text types, and they may partly explain why these texts appear to construct interaction in different ways. The final section suggests that a more delicate, text-based investigation of the addressee is needed for better understanding of interaction in each text type.

3.1 Writing as a Vehicle for Conveying Scientific Knowledge

Writing is the primary and official means through which scientific facts are exchanged among scientists. These facts are also chiefly transmitted to other groups of the society, who may – for various reasons – be interested in this knowledge, by way of written documents. It is thus not surprising that this particular form of discourse has received much attention in fields like sociology and linguistics. Specifically, questions relating to the different ways in which scientific knowledge is conveyed in different contexts makes such type of discourse of special significance to the general understanding of how language enables us to effectively communicate with others.

Testifying to its peculiar value, many aspects of scientific discourse have been investigated, including the social, semantic, pragmatic, grammatical, rhetorical, etc. (see Bazerman, 1998). Generally speaking, two kinds of studies of this discourse can be identified: social and linguistic (though the distinction is sometimes not as clear-cut). The former may in turn be subdivided, as pointed out by Latour & Woolgar (1979, p.17), into studies of the broad “external effects and reception of science” in relation to the society, like its overall development, its influence on politics and economics, and so on, and investigations of “the complex activities which constitute the internal workings of scientific activity”. Understanding such activities requires observing scientists as they perform their job in the laboratory and linking this to the knowledge they produce. One important outcome of this monitoring of the social life of science is that scientific writing is mostly not, as scientists tend to claim, an entirely objective, impartial description of the ‘facts’, where the role of the scientist is no more than a mere observer/reporter.

From a social perspective, scientific discourse, parallel to that of religion, is viewed as ‘sacred’ because “in thinking about knowledge we are thinking about society...[and] society tends to be perceived as sacred” (Bloor, 1991, p.52; see also Midgley, 1992). This general attitude towards science, coupled with a non-personal subject matter that does not typically motivate bias, clearly facilitates acceptance of claims of objectivity. However, context plays a crucial role in the production of scientific knowledge; as Bazerman (1988, Chapter 2) demonstrates by examining four academic contexts (according to topic, literature, audience, and writer), the way written knowledge is produced is largely a consequence of the context of their existence. This

is taken by Bazerman as evidence for “the amount of difference writing makes in constituting what we consider knowledge” (p.24). More concretely, Knorr-Cetina (1981) argues for a ‘constructivist’ interpretation of science that views scientific products as ‘manufactured’ by social factors; so there are various kinds of choices which can be linked to “a social process of *negotiation* situated in time and space rather than to a logic of individual decision-making” (p.152, my emphasis). For instance, decisions scientists make about the experiments they carry out, e.g. what equipment to use, are dependent in part on situational constraints, like funding, which leads to the conclusion that “scientific products are unlikely to be reproduced in the same way under different circumstances” (p.6). Gilbert & Mulkay (1984, especially Chapter 3) highlight the importance of context to the presentation of scientific facts by comparing biochemists’ formal writing and less formal spoken accounts of some of their research, identifying “two major interpretative repertoires, or linguistic registers, which occur repeatedly in scientific discourse” (p.39). These are the “empiricist” and the “contingent” repertoires: the former is characterised by impersonal style with few indications of the writers’ opinions or actions, and the latter is more expressive of the writers’ involvement and personal influence on the empirical results.

This view of the highly context-dependent nature of scientific discourse has been argued for even more forcefully in the more linguistically and rhetorically oriented accounts of this discourse. For example, Ochs, Gonzales & Jacoby (1996) direct attention to a particular linguistic construction used by physicists when communicating with each other, namely “personal pronominal subjects (especially “I” and “you”) and predicates of motion/change of state (e.g., “go,” “break up”)” (p.331), stressing that this is one way in which “scientists verbally portray their own or other scientists’ subjective involvement in the world of physical events” (p.329). Analysing the style of some scientific texts, Mistichelli (1994) also points out that figurative features, such as simile and analogy, are used in these texts to support their writers’ point of view, suggesting that they represent an integral part of scientists’ thoughts, and highlighting the fact that “science is as much about us as the reality it attempts to explain... [it] is an outgrowth of our humanity, of our engagement in the world” (p.282). Several other linguistic/rhetorical studies of scientific discourse, as will be discussed in more detail in 3.3 below, point to the importance of the context of writing to how knowledge is conveyed in scientific texts, either by investigating the overall generic/rhetorical structuring of these texts

(see, e.g., Prelli, 1989; Gross, 1990 for a rhetorical discussion) or through an analysis of certain linguistic phenomena.

Perhaps the strongest arguments for the centrality of the contextual dimension of scientific writing are those expressed in studies directly concerned with the persuasive – tacit or overt – quality of such writing (e.g. Blanton, 1982; Fish, 1987; Atkinson, 1991). Blanton, for instance, argues that the various ways of both organising and developing discourse help accomplish an important aim, that

of compelling any likely reader to participate in a rhetorical reenactment of some particular bit of research and thereby to become convinced by and of the writer's research as if it were one's own.

(Blanton, 1982, p.130)

So, as Blanton shows, scientific research papers may be conceived of as a series of organisational/developmental 'shifts': *Agreed – But – But Suppose – Then – Indeed* (see pp.132ff). These shifts indicate the writer's responsibility in raising the reader's attention and in persuading him/her of the writer's argument.

Chronological and historical studies are another type of the accounts of scientific writing that particularly make explicit its persuasive, contextual characteristic. Valle (1997), for example, analyses a corpus of texts in the life sciences published in the *Philosophical Transactions of the Royal Society of London* and "look[s] at changes in the way the discourse community is represented in the texts" (p.79) over a period of 160 years; the findings indicate a consistent move "from a discourse community identified with the Royal Society as a concrete group of individuals, to the Society more abstractly, to a yet more abstract discipline-based research community" (p.94). This is a reflection of the central role audience plays in scientific writing, notwithstanding how exactly it is represented. In addition, Reeves (1996) interviews those who early reported the AIDS problem and examines some of their writings, showing how they attempt to influence our views and attitudes towards patients diagnosed with this disease. Finally, Alford (1988) analyses an ancient description of a disease, showing that the clarity and objectivity of such text is dependent on its intended audience. Alford contends that "doctors' prior knowledge of the subject influences their understanding of the text, enabling them to extract pertinent information and to infer missing information" (p.134). Such historical

accounts of scientific language and achievements provide more evidence of the important function contextual variables play in enabling scientists/writers achieve their communicative goals.

The discussion above highlights a basic fact about scientific discourse overshadowed by the necessary claims of objectivity, that it is no less context-bound than other discourses; in particular, it has been pointed out that scientific writing is clearly shaped by the perceptions and attitudes of its writers and addressees. From a pragmatic point of view, scientific texts cannot thus be regarded as context-independent; they represent “a peculiar form of conversation but some interaction between the author and the reader can still be traced” (Stroinska, 1986, p.2). As Stroinska further argues, Gricean maxims (Grice, 1975) “apply to scientific discourse more readily than to colloquial language” (p.2), since they characterise language that is supposed to be sincere and well-organised.

Having said this, it should be noted from the discussion that the general view of what constitutes scientific language is rather narrow, as it is limited to the standard form of the scientific research paper. This may be understandable, since this is the type of text that allows the communication of scientific knowledge from scientists to other fellow scientists. There are, however, other kinds of texts that convey such knowledge between participants of varying scientific background. As noted by Martin (1998), it may be important to consider other types of scientific discourse, like popularisations, which – for the purposes of the present discussion – provide more evidence for the importance of context to the presentation of science. These other forms of scientific writing will be discussed in section 3.3 below, but within the framework of a more specific discourse, medical discourse.

3.2 The Medical Encounter

As has just been pointed out in the previous section, the academic research article is regarded as the form of writing most representative of scientific discourse, in spite of the existence of other forms of writing whose subject matter is no less scientific. By the same token, the medical face-to-face doctor-patient encounter is widely viewed as symbolic of spoken medical discourse. Other situations in which health issues are discussed, like conversations among physicians and medical university/public lectures, are generally less studied. This section will therefore focus on the medical encounter, aiming at providing an overall picture of the

discourse of medicine, whose extremes are the written medical research article and the spoken doctor-patient interview.

The placement of the research article and the medical interview on two extremes does not mean that they do not use similar communicative strategies to meet their goals. Certainly, persuasion is as primary to the medical encounter as it is to the research paper. Much of the negotiation taking place between doctors and patients aims at convincing each other of a specific view point. This is particularly true for doctors; as Fisher & Todd (1986) point out, their research on doctor-patient communication

suggests that persuasion is more the rule than the exception in the delivery of health care. For doctors, persuasion is often seen as part of the job they have to do. It is their responsibility to insure medical care that is in the patient's best interest.
(Fisher & Todd, 1986, p.3)

More generally, the medical encounter may be carried out under interesting configurations of context and 'participation structures' that require different ways of managing the interaction. Tannen & Wallat (1986), for instance, study a specific case where a child is interviewed across various contexts, 'i.e. involving different participants. They show that the information exchanged and negotiated were mostly of different kinds; for example, certain contexts offer the parent less opportunity to provide information, while others allow elaborate, not necessarily relevant, information to be provided.

There are, however, some aspects of communication that are more characteristic of the medical encounter. The most obvious of these is the nature of the relationship that holds between doctors and patients, which is on the whole asymmetrical. Doctors "have an institutionally based, interactionally accomplished position of authority – an authority that patients lack" (Fisher & Groce, 1990, pp.225-6). This basic feature of the medical encounter has wide ranging effects on how the participants manage their interaction. Many interactive strategies employed in such encounters, like the accounting practices analysed by Fisher & Groce (1990), are in essence manifestations of the asymmetry of the relationship. In addition, some other strategies aim at minimising the power gap by foregrounding equality and cooperation; an example of these is 'joint productions', which require collaborative contributions from both doctors and patients, and which are "characteristic of...therapeutic

discourse” (Ferrara, 1992, p.225). In fact, doctors need to establish rapport and express sympathy with their patients, since “the patient’s need for emotional reassurance is viewed as a key factor in medical communication” (Cicourel, 1981, pp.407-8). Controlling the direction and character of the conversation is another aspect of the interaction where power difference can have an obvious effect; as shown by Tannen & Wallat (1987), there is an ongoing negotiation of ‘frames’ (i.e. the type of the activity, such as the examination of the child versus the consultation with the mother) and ‘schemas’ (i.e. background knowledge) in the medical interview (see also Cicourel, 1985).

The doctor-patient asymmetrical relationship can be attributed to the institutional position of the doctor as the participant in charge of the interview. But the general interactive organisation of this interview may also explain such a relationship; “medical encounters are an interview genre characterized by questions, which the physician asks and the patient answers” (Ainsworth-Vaughn, 1994, p.194). As Coulthard & Ashby (1975) suggest, questions are initiations of requests for information, and the fact that they are more frequently asked by the doctor reflects his/her more powerful status. However, certain types of questions, i.e. rhetorical questions, can be used ambiguously – especially by patients – as “part of the power/mitigation dance” (Ainsworth-Vaughn, 1994, p.195).

This last point about mitigations of threats to the doctor or the patient’s face directs attention to the essential interactive phenomenon of politeness. Various kinds of politeness strategies are expected to be found in the medical encounter, as the topics discussed are often of personal nature, and both interactants need to be sensitive to each others’ face. Analysing a number of paediatric encounters, Aronsson & Rundstrom (1989) show that doctors use joking strategies to build an intimate relationship of positive politeness with children; on the other hand, negative politeness strategies, like indirectness, reflect the distant relationship of respect that holds between doctors and parents. Politeness strategies, such as forms of address and various requesting and questioning techniques, help negotiate social distance in medical encounters, indicating a dynamic employment of these signals that is not only an automatic result of the social statuses of the participants (Aronsson & Sätterlund-Larsson, 1987).

To conclude this section, it may be useful to comment briefly on a practice that is sometimes considered as an integral part of the medical encounter, that is the writing of the case report.

Some of the studies referred to above, i.e. Cicourel (1981) and Tannen & Wallat (1986), draw on this as an interesting aspect of the context of the medical examination of patients. Such studies show that writers of case reports generally take account of the intended reader, who is usually another doctor, and provide information that is appropriate for this particular audience. This is discussed in more detail in Hak (1992), who analyses a psychiatric interview and a subsequent case report, indicating the transformation process of the information from the interview to the written report and how the information is shaped by 'background expectancies'. Hak points out that this kind of 're-formulation' of the problem reflects shared understanding between the writer of the report and the expected professional reader.

3.3 Aspects of Interaction in Four Types of Medical Written Texts

In the previous two sections, two different types of medical discourse were introduced. As is clear from the discussion, these are not simply transactional discourses, where the participants' language is only centred around the professional topic to be dealt with. There are several broad aspects of interaction in both the scientific paper and the medical encounter. In this section, a closer look at such aspects in a number of medical written texts will be attempted. These text types – the medical research article, the medical textbook, the medical press report, and the medical leaflet – will be the focus of the study (see 5.2.1), as they will be scrutinised even more closely in terms of the management of interaction.

The medical research article is often studied as belonging to the wider practice of scientific research writing, and not as a distinct, self-contained type of text; more generally, it is sometimes regarded as an example of the genre of academic writing. On the whole then, most of what has been said about medical research papers also applies to other scientific and non-scientific academic articles. This includes linguistic aspects concerned more with non-textual, interpersonal functions. There is a good deal of research on academic writing, medical and non-medical, that elucidates the direct or indirect interactive function of a range of linguistic features (e.g. Banks, 1991 on modality; Gosden, 1993 on grammatical subjects; Webber, 1994 on questions; Hyland, 1997 on scientific claims; Kuo, 1998 on personal pronouns; Salager-Meyer, 1999 on academic conflict). A rapid look at the literature, however, indicates that it is possible to isolate three main interaction-related aspects of the language of research articles that have received particular attention: text organisation, hedging, and metadiscourse.

The analysis of the structure of academic research articles from various disciplines has been an important area of the investigation of academic discourse; the two main approaches to this analysis are either generic (following Swales, 1990) or rhetorical (e.g. Thompson, 1993; Nwogu, 1997; Williams, 1999). Organising discourse is one way of helping the reader make sense of the text, and it is at the same time a powerful strategy of persuasion; for instance, Thompson (1993, p.126), analysing the rhetorical structure of the Results sections in bio-medical articles, argues that writers do not “present results only in an expository, factual manner; they also employ a variety of rhetorical moves to argue for the validity of scientific facts and knowledge claims”. Accounts of hedging in academic writing suggest that the use of hedging “acknowledge[s] the critical role readers play in ratifying knowledge...[since] hedges signal a writer’s anticipation of the negatability of claims” (Hyland, 1996a, p.255) (see also Hyland, 1996b). The research paper is, however, less heavily hedged than other medical genres, like the editorial and the review article (Salager-Meyer & Salas, 1991). Finally, an example of the studies of metadiscourse in academic research writing is Hyland’s (1998) analysis of four corpora, one of which consists of biology articles; stressing that “metadiscourse is one indication of the writer’s responses to the potential negatability of his/her claims” (p.440), Hyland finds comparatively fewer interpersonal signals of metadiscourse in the biology corpus, which he attributes to the different context and audience of this kind of discourse. This represents one of the few analyses that draw attention to an aspect of difference between medically-related research papers and those from other disciplines.

Compared to the medical research article, the language of the medical textbook – in fact, textbooks in general – has not been extensively studied. This may reflect the relatively less important role the university textbook plays in the academic life. Nevertheless, some of the few analyses of textbook discourse clearly demonstrate traces of some aspects of the interaction it projects with the addressee. Guiding these interactive traces are a number of tensions which writers of textbooks face; one of these, as pointed out by Davies (1992), is the choice between the spoken classroom mode of expression and the more formal written mode. However, an essential feature of most textbooks is that of providing information as explicitly as possible; so they are expected to make use of several different forms of cohesive devices to help students make a coherent picture of the various information contained (Myers, 1992,

p.11). In addition, textual metadiscourse, which has a primary textual organising function, is more frequent in textbooks compared to research articles (Hyland, 1999).

The discourse of press reports and medical leaflets is no more linguistically covered than that of the textbooks. There is, however, a specific phenomenon that has attracted the attention of many linguists, and that subsumes – but is not confined to – similar discourses to the leaflet and the press report, i.e. science popularisation (e.g. Smith, 1987; Nwogu, 1990; Francis & Kramer-Dahl, 1992; Myers, 1994a). As pointed out by Fahnestock (1998, p.334), the production of popular texts boils down to two basic strategies: ‘the wonder’ and ‘the application’. The former means “attaching [something] to a category that has a recognized value for an audience” and the latter “claims that something has value because it leads to further benefits”. As a result popularised texts manifest several differences from other professional texts; there are distinct linguistic features in both types of texts reflecting their different purpose and audience, like thematic and macrothematic patterns (Nwogu & Bloor, 1991; Gunnarsson, 1993), lexical macrostructure (Phillips, 1983, pp.258ff), and metadiscourse devices (Crismore & Farnsworth, 1990) – and even in their exploitation of the persuasive function of visuals (Miller, 1998).

Unlike textbooks and research articles, much research on popularisation has focused on medicine; this is probably partly due to the fact that medical press reports represent the majority of newspaper scientific coverage (Jones *et al.*, 1978, p.1), in addition to the many popular medical books and magazines available. An important reason behind the popularity of medical stories in newspapers, Jones *et al.* (1978, p.4) point out, is that they have a ‘human interest’, since they discuss topics like birth, death, and sex. Because they are meant to be in essence some sort of ‘news’, such feature stories inevitably do not only aim at providing a pure scientific account of what has happened. The scientific content is typically presented in a journalistic style, including making clear how this content may affect the reader’s way of life and pointing to him/her the ‘newsworthiness’ of the story in an attempt to attract his/her attention to stop and read (or continue reading) this particular story (eye-catching titles are a commonly used technique). A story may be newsworthy because of a number of factors, such as controversy, surprise and wonder, adventure, timing, and people involved (Gastel, 1983, pp.30-2). Emphasising the newsworthiness aspects of the story is one way of enabling the reader to see what the story actually means to him/her; readers – non-specialists in particular –

will most likely commit themselves to reading a particular story if they can recognise its pertinence to them. Helping the reader commit him/herself to reading is largely the job of the report writer (Burkett, 1973, Chapter 9), and this can be done by, for example, relating the story to a common misconception or incorporating it with some practical advice the reader can follow.

This issue of providing practical advice is even more crucial in the case of medical leaflets; it is not merely a strategy for involving the addressee, but it represents the main reason why these *instructional* texts are being written in the first place, and it is the primary motive for reading them. So beyond questions relating to the readability (Newton, 1995) and informational content (Maat & Lentz, 1994) of medical leaflets, it is important to understand how these texts serve such interpersonal functions. Wright (1999) provides an interesting discussion of how people read health care texts and suggests ways to better accommodate their non-informational needs. She emphasises that health care material is characterised by “the importance of the reader’s emotional response to the message” (p.88). In her ‘performance-based’ approach to designing functional texts, she stresses, among other things, the significance of identifying the audience and its needs and the actions the reader can perform using the content of the text.

The above review of the various aspects of interaction in the four medical text types indicates that despite their written nature and general transactional purpose, all these forms of medical writing manifest a relatively wide range of strategies for constructing interaction with the addressee. These strategies do not stand at odds with the main transactional purpose of the text; on the contrary, they appear to assist in getting the transactional message across more successfully. Concern about the addressee’s needs and helping him/her throughout the text can make the text more effective. This, however, requires as accurate as possible a characterisation of the addressee; the following section seeks to outline some of the surface features of the addressee in each of the above text types.

3.4 Investigating Addressee Characteristics

The addressee is obviously an important factor in the management of interaction in written texts; a detailed discussion of this issue forms the main part of the introduction to interaction in the previous chapter. In addition to this in depth investigation, it may be useful to examine

some of the general external characteristics of the intended readers of the text types discussed in 3.3 above. A definite depiction of the addressee is obviously not possible; but a broad picture of each addressee may be drawn using such generalised features as equality, engagement, etc. (see Table 3-1). Guiding this admittedly idealised characterisation are arguments similar to Sinclair's:

a writer constructs for himself a target reader, often explicitly, and refers to this construct for decisions about the selection, ordering and presentation of material. Some texts make this more obvious than others, and in some the target reader is more clearly specified and identified than in others. In many he is directly addressed, at least in prefatory material.

(Sinclair, 1980, p.254)

and Jordan's (1984, p.3) "texts are written not just for specific purposes, but also for specific readers". Consequently, it is possible to delimit, in broad terms at least, the specific addressees of each of the four medical text types discussed.

The six criteria shown in Table 3-1 are some of the broadest that can be ascribed to the addressee. Equality refers to the symmetrical power relationship (e.g. in terms of knowledge) between writers and addressees, and, as indicated in the table, it only applies clearly in the case of the research articles, where the writer normally addresses his/her colleagues as equals. For the textbook and the leaflet, the addressee is typically less equal than the writer. The case is not as clear regarding the press report; the homogenous nature of the 'general public' readership of the press makes its power status unpredictable. As indicated in the table, knowledge of the addressee by the writer – not as individuals, but as a well-specified class of people – is true for all text types except the press report. Of course, readership is a way of broadly defining the addressee, but it does not make it as specific as it is in the other text types, and it does not also seem to have a strong bearing on the issue of power.

Engagement represents the extent to which the addressee is involved in the subject matter of the text; in the leaflets, for instance, the addressee is usually expected to be a sufferer of the condition described, but this is not the case for medical students when reading their textbooks. Readers of press reports may or may not be fully engaged in the topic discussed; and colleagues reading research papers are expected to be partly involved, at least in the process of research in general and its overall results. The focus on informational versus non-informational

needs (like emotional support and assurances) varies across the four text types: in contrast to the research article, there is more emphasis on the addressee's non-informational needs in the leaflet. In addition to providing information, it is as important, if not more, that medical leaflets take into account the effect of this information on their addressees' feelings; moreover, this information is not only purely scientific, as a notable portion of it is intended to offer the desired comfort and assurance. In the research article, the addressee's need for information is fairly obvious; but there are also less obvious needs relating to the sensitivity of the community to authoritative opinions and/or harsh criticisms. The predominantly informational need characterises the textbook; and finally, both needs are more or less equally important for the addressee of the press report. The fifth criterion in the table concerns whether the addressee is expected to approach the text voluntarily or involuntarily. The former is true in the case of the leaflets and the press reports, and the latter in the case of the textbooks; for the research articles, both choices may be valid, as some colleagues could be obliged by their research or some other needs (e.g. reviewers) to read a particular research paper, while some others may voluntarily (e.g. for general interest) choose to read this paper. The final criterion in the table has to do with the position of the addressee as one of the insiders of the circle of medical science or as an outsider. Addressees of the textbooks and the research articles are clearly insiders; those of the leaflets are expected to be outsiders, as is the case for the majority of the addressees of the press reports.

TEXT	Leaflets	Textbooks	Press Reports	Research Articles
ADDRESSEE	Patients	Students	General Public	Colleagues
Equal	NO	NO	Yes/No	YES
Known	YES	YES	NO	YES
Engaged	YES	NO	YES/NO	Yes
Needs	Informational / OTHER	Informational	Informational / Other	INFORMATIONAL/ Other
Voluntary	YES	NO	YES	Yes/No
Insider/Outsider	OUTSIDER	INSIDER	insider/OUTSIDER	INSIDER

Table 3-1: The general characteristics of addressee in four types of medical writing. (Capitals indicate more weightiness)

Criteria such as these six are important in helping the writer construct an addressee for his/her text. Whether or not a criterion applies to the addressee would most likely influence the writer's choice of language. For example, Myers (1989, p.3) describes two different addressees for the research article: "an *exoteric* audience involved in the ongoing research problem and an *esoteric* audience that takes an interest in some of the researchers' findings"¹. In terms of the criteria discussed here, we may consider these two types of addressee as representing two different levels of engagement. Myers points out that distinctions like this are important for understanding the writers' utilization of politeness strategies. Moreover, Allerton (1996) demonstrates that reference to people and things depends on the speaker's relative insider/outsider status (e.g. whether he/she is one of the family, a close relative, or a stranger). Finally, Pratt (1977, pp.100ff) argues that the language we use varies according to whether our addressees are expected to be voluntary or not; for example the speaker may need to construct a peer relationship with his/her voluntary audience even if such relation does not actually exist.

This last point demonstrates how the six criteria of addressee discussed are interrelated; here voluntariness leads to the establishment of an equal relationship and consequently to appropriate choices of language. Another important point about these criteria is that they are not necessarily either applicable or not, but a scale that represents different levels of, e.g., insiderness/outsiderness may be set; for instance, an addressee may be a semi-, but not a full, insider. On the whole, however, these criteria – though based on an external, superficial perception of the addressee – should provide a general idea of how each of the four medical text types may construct their addressees. The process of addressee construction (as will be discussed more fully throughout this thesis) is obviously more complex than Table 3-1 seems to suggest. However, the six surface criteria discussed illustrate at least some aspects of this complexity. More importantly, it shows that all four text types are generally distinct in terms of how their addressees are constructed.

3.5 Some Research Issues

The introduction to medical discourse presented above highlights an important fact about this kind of writing, that it is no less contextual and addressee-oriented than other discourses. The language of medicine in particular is sometimes viewed as almost exclusively transactional; however, as shown in the discussion above, different types of medical writing can exhibit

various aspects of interaction with the addressee. This raises questions about how such writing, which on the surface is concerned only with the provision of pure scientific facts, can simultaneously build some kind of a more or less overt relationship with the addressee. Most of the explanations for these aspects of interaction in medical writing relate them to context and audience.

In section 3.4 above a close examination of some of the characteristics of the addressee in four types of medical texts shows that they actually differ considerably in this respect. Variation in addressees' characteristics involves different relationships to be established with them. However, the characteristics investigated are only one of the factors influencing the type of relationship holding between writers and their addressees. In fact, texts sometimes construct their addressees in ways that are contrary to the external characteristics of the addressee, e.g. by establishing an equal relationship that actually does not exist. Also writers may – for rhetorical purposes – project different kinds of relationships with the addressee at different stages of the text. Elucidating the complex process of the construction of the addressee requires more than analysing his/her external characteristics; it may be necessary to analyse actual texts in terms of how they construct and develop an image of their addressees.

NOTES

¹ G. Myers has pointed out that the two terms *exoteric* and *esoteric* were mistakenly mixed up in this quote (S. Thompson, personal communication); the quote should therefore be like this: “an *esoteric* audience involved in the ongoing research problem and an *exoteric* audience that takes an interest in some of the researchers’ findings”.

ANALYSING INTERACTION IN TEXTS: A FRAMEWORK

In this chapter, a generalised, systematic framework for the analysis of interaction in written texts is proposed. The introductory section reviews some of the current perspectives on interaction in written discourse, suggesting the importance of establishing a unified framework of interaction that takes most perspectives into account. The next section identifies three major interactional effects and discusses their general perception in texts. These three effects are then used as a basis for the identification of three main forms of interaction and their linguistic realisations in written discourse. These forms of interaction are: Informational Interaction, which is associated with the linguistic features of signalling and organisation; Lexico-grammatical Interaction, associated with role-relationships and modality and evaluation; and Pragmatic Interaction, associated with reference and politeness. Each of these three forms of interaction and the signals they are associated with are discussed, highlighting the links holding among them. Next, a unified view of interaction will be attempted, showing how each of the three forms of interaction and their effects contribute to interaction in general. The chapter concludes by emphasising the complex nature of interactional analysis, and the need to apply the framework proposed here on actual texts.

4.1 Writing as Interaction

It is a basic assumption of the present study that writing is not only transactional, but interactional as well. It may be true that written language is generally used to serve transactional purposes, but this should not lead to the conclusion that it is not capable of maintaining relationships between the participants, or that only specific types of writing are able to do so. Being transactional is not incompatible with being interactional. The custom of opening some personal letters, for instance, with, e.g., *Dear Sir* and closing them with something like *yours sincerely* is not meant to be a representation of an object or process in the outside world; rather it is a ritual act intended to indicate a certain kind of relationship with the addressee. Indeed, personal letters – especially informal ones – do often serve interactional more than transactional purposes.

So whereas the permanent nature of written language as opposed to the spontaneity of speech and the social values associated with each medium (see Kress, 1979) make writing more suitable for fulfilling the transactional function (though speech and conversation can also perform this function, e.g. formal interviews), writers can still rely on certain resources of the written medium to convey attitudinal and paralinguistic meanings. The main point is that emphasising the transactional function of written language seems to disregard the fact that a relatively polarised view of the functions of texts is not needed, since writing – like all language use – can always inform and maintain relationships simultaneously.

The status of written discourse as a form of interaction appears to be resolved nowadays. But disagreement remains over how precisely the concept of interaction works in written texts and how far we should go in pursuing it. Most discussions of interaction range from viewing it as merely taking account of the presence of the other interactant to an explicit joint production of the message by both co-participants (see Holec, 1980). This joint production is sometimes based on the conversational model where interactants are involved in a spontaneous process of turn taking. In fact, the conception of interaction in written discourse has been largely influenced by the overt dialogic nature of spoken language which is considered more genuinely interactional. This is reflected in some analyses that highlight certain features commonly found in oral language, e.g. direct quotation and discourse markers, as indicating interaction in written texts (e.g. Smith, 1982). Most of these perspectives of written interaction seem to be applicable to a limited set of texts, like personal letters and popular writings, and fall short of accounting for the phenomenon as inherent in most types of writing.

The most generally applicable accounts of interaction in written discourse are probably those proposed by Nystrand (1986, 1987, 1989) and Widdowson (1984). These approaches consider the phenomenon of interaction as essential to all types of written discourse, and not a characteristic of certain types rather than others. Nystrand (1989) explains this generalised view as an interaction of purposes:

when the respective purposes of the writer and the reader intersect as they must when the reader comprehends the writer's text, the meaning that the reader gives to the text is a unique result – a distinctive convergence or interaction – of writer and reader purpose
(Nystrand, 1989, p.74)

Nystrand here is not only arguing against approaches that privilege the writer's purpose over that of the reader, but also pointing to the underlying negotiation taking place in both the processes of writing and reading. In a sense, therefore, interaction in written discourse is a matter of covert negotiation between writers and readers closely related to their purposes and expectations. It is essentially not different from that of spoken discourse except probably in terms of overtness (see Widdowson, 1984, pp.59ff). However, this conceptualisation – as will become clear later – still falls short of accounting for most aspects of interaction, especially because it tends to be concerned more with the informational aspect of the interaction.

4.2 Interactional Effects: Orientation, Negotiation, and Involvement

In an attempt to further elucidate the concept of interaction in written discourse, let us begin by identifying the effects that we may regard as contributing to the interactional nature of texts. Drawing upon previous research on interaction and examining actual texts for interactional features, it is possible to describe three basic kinds of effects: orientation, negotiation, and involvement. This is not by any means an inclusive classification of interactional effects; these three effects are simply the most general – yet identifiable – categories possible.

The first type of effects, orientation, arises from the fact that because writing is meant to be a form of communication, it should be oriented to a target addressee. So changes writers make to their drafts while writing them have partly to do with whether a particular point seems too obvious to mention, whether it may be ambiguous and should be clarified, whether the link between two parts of the text is not strong enough and more signalling is

needed, and so on. In fact, my personal observation suggests that changes of this kind represent a considerable part of what most writers do when redrafting.

An example par excellence of addressee-orientation is definite reference:

An important aspect of the referential function of *the* is its “hearer orientation”...felicitous use of the definite article is contingent not only on the speaker’s knowledge and (referential) intentions, but also, crucially, on the speaker’s assessment of the *hearer’s* knowledge of the referent. The hearer’s ability to successfully pick up (uniquely identify) a referent stems from that knowledge, which is acquired through previous mention, deictic presence, culturally salient shared background assumptions, etc.

(Epstein, 1996, pp.100-1, emphasis in original)

Put more succinctly, Givón (1989, p.206) argues that “definite description is inherently about knowledge by one mind of the knowledge of another mind.” Writers would not normally succeed in making a reference to something unless they know in advance their addressee’s knowledge of that referent. Knowledge of the addressee’s knowledge is crucial for the development of written texts, and it eventually leads to what may be characterised as the ‘orientation’ of these texts towards their addressees. On the level of the text as a whole, this ‘orientational effect’ is brought about by certain strategies that will organise and signal the discourse in such a way that the addressee’s expectations are met and his/her questions are answered.

The second interactional effect to be considered is ‘negotiation’. This may sound obvious since interaction in some approaches, as indicated in 4.1 above, is defined in relation to the negotiation of meaning taking place between writers and readers. According to such approaches, negotiation in writing – as opposed to that in conversations – “is more abstract: the writer must create a text that will effect an exchange of meaning in a context of eventual use” (Nystrand, 1987, p.210). From this perspective, written texts lack manifestations of negotiation, e.g. turn taking; so it is not possible to show with concrete examples how writers and readers negotiate.

However, there is a more tangible approach to negotiation in written discourse. If we make our starting point the straightforward meaning of ‘negotiation’ as synonymous with ‘an exchange’, that is an initiation followed by a response, then it is possible to come up with many examples of ‘exchanges’ or ‘negotiation’ in written texts. When a writer asks a question, for instance, this would be regarded as an initiation of an exchange. An explicit or

implicit reply to the question projected on the reader would be the response (Widdowson, 1984). The whole exchange is an exemplification of negotiation between writer and reader.

Questions and answers to them in addition to commands are only one way of accounting for negotiation in the written medium. These represent the actual mechanism through which negotiation takes place. Another way of demonstrating the effect of negotiation in writing is some linguistic choices that help create opportunities for negotiation. Examples of these include hedges and evaluations. When writers hedge or evaluate what they intend to say, they are generally inviting the reader to take a position relevant to theirs (Martin, 2000). This effect will become clearer if the point in question is expressed categorically or without the writer's judgement attached to it. Since they may encode subjective, personal values, hedged or evaluated propositions foreground negotiation with the addressee more than categorical ones; taken as initiations, a response from the addressee – normally that of acceptance – is typically assumed.

The final essential interactional effect to be reviewed here is 'involvement'. In spite of the many discussions of this phenomenon (e.g. Chafe, 1982, 1985; Gumperz, 1982; Akinnaso, 1985; Tannen, 1985; Chafe & Danielewicz, 1987; Tannen, 1989), it appears it has not been distinctly characterised. What seems to be suggested by some of the linguistic studies of involvement is that it refers to the aspect of the interactants' relationship which indicates how close or distant they are from each other. This broad, common sense of the word is sufficient for the purposes of the current discussion of involvement as an interactional effect.

Another interesting point that seems to emerge from some treatments of involvement is that it is not just a linguistic phenomenon since it is closely linked to the general context of the interaction. For example, Gumperz (1982, p.2) argues that involvement is essentially a result of the participants' "indirect inferences which build on background assumptions about context, interactive goals and interpersonal relations." Tannen (1985, p.132) also points out that involvement, by definition, is "marked by discourse that is highly context-bound." Consequently, it is largely because of the sharing of an actual (or assumed) context that involvement between speakers/writers and their addressees becomes possible. This is perhaps why linguistic features like personal pronouns and forms of address have been associated with involvement (e.g. Chafe, 1985; Chafe & Danielewicz, 1987). More than anything else, these choices are dependent on the general cultural and contextual knowledge of the interactants.

The above three major types of interactional effects indicate that a straightforward, inclusive definition of interaction is not possible. More importantly, they entail that a full analysis of interaction in written discourse should take – at least – three directions corresponding to each of these effects. This is essentially what the following section aims to establish.

4.3 Types of Interaction

Based on the above discussion of the three basic types of interactional effects in written discourse, it is possible to characterise three major types of interaction: Informational, Lexico-grammatical, and Pragmatic. Informational Interaction is concerned with how information in the text is oriented to a target addressee; it refers to the organisational and signalling techniques used by writers to trigger and fulfil their readers' informational expectations. Lexico-grammatical Interaction is concerned with the negotiation effect; it highlights choices that allow both interactants to play certain roles in an assumed process of negotiation and to convey their personal assessments and evaluations along with the message. Finally, Pragmatic Interaction reflects the interactants' relationship; choices from pragmatic systems like personal reference and politeness indicate how close or distant those interactants are from each other. A detailed discussion of each of these three types of interaction follows.

4.3.1 *Informational Interaction*

Informational Interaction concerns itself with the flow and distribution of information in texts (Bhatia, 1993, p.8), that is with the structuring of information and the signalling of such informational structures throughout the text. This approach to written texts views them “as a set of directions for conducting an interaction [from which] the reader derives what information he needs, or what information his current state of knowledge enables him to take in” (Widdowson, 1984, p.39). Readers are not therefore left alone to guess the relations that hold between the different parts of the text and to provide the necessary links that will enable them to create an appropriate meaning. It is the writers' responsibility to *interact* with their readers through informational structures and various signalling techniques to enable them to exploit the text for their own needs. As they offer information, writers simultaneously fulfil the basic interactive¹ role of signalling and structuring this information (the addressee-oriented inclusion and exclusion of certain information is in itself a more basic interactive act). Informational Interaction therefore clearly shows how writers

cooperate with their readers by anticipating their 'informational' purposes (see a list of some of these purposes in Hoey, 1988).

In what follows two main aspects of Informational Interaction will be discussed. The first is signalling which has been restricted here to that of the metadiscourse text deixis which calls the reader's attention to the text itself (for more on metadiscourse in written texts, see Crismore & Farnsworth, 1990). Another type of signalling will then be discussed as an integral part of the concept of text organisation. This is because this type of signalling is very much related to the organisation of discourse into large patterns. A common example of these patterns, the Problem-Solution pattern, will be briefly outlined. The main focus of the following two sections will be highlighting how signalling and text organisation can contribute to the interaction between writers and their readers.

4.3.1.1 *Signalling*

An essential task when communicating through writing is the "transformation" of the writer's knowledge into a form that meets the addressee's needs. As pointed out by Flower (1979), the most demanding task for writers is probably not the "expression" of ideas itself, but the "transformation" – which subsumes organisation and signalling – of these ideas so that they can be readily consumed by the reader. This is what genuine writing is actually about, and it is indeed because successful writers know how to 'transform' their knowledge and experience that they are successful. Similar ideas or information can be 'transformed' differently by different writers with varying degrees of felicity and success.

A common linguistic device through which writers achieve a successful 'transformation' is text deixis. Deictic reference is a strategy interactants use to orient each other's attention to a specific entity in the immediate situation. It is *this* and *that*, *here* and *now*, and *you* and *me* we use in our daily conversations to point to the many sorts of things that constitute the setting of the interaction. There are other non-deictic forms of reference that identify non-situational objects or individuals, e.g. third-person reference or reference to something previously mentioned or implied in the interaction. Text deixis is a subcategory of the general phenomenon of deictic reference; it is "bound not to the speech act situation as a whole, but to the text itself. Thus elements of the text are its potential objects" (Ehlich, 1982, p.331).

While the primary function of most forms of reference is textual, namely as a cohesive device that reflects the unity and continuity of texts, text deixis seems to act mainly on the

interactive plane (see Sinclair, 1981, on the planes of discourse). In written discourse in particular, the importance of text deixis to the management of interaction is paramount. As argued by Ehlich (1982, p.331), “the communicative function [of text deixis] is to make the reader focus his attention within the deictic space (text).” The peculiar nature of the written text as an interaction that takes place across situations reinforces the status of the text as a vital shared context between readers and writers. Text deixis is clearly important in steering and staging the written interaction and in signalling all this to the reader.

Some evidence of this interactive role is provided by some accounts of signalling, especially Tadros’ (e.g. 1994) research on ‘prediction’ and that by Francis (e.g. 1994) on ‘labelling’. Prediction is defined by Tadros (pp.69-70) as “an interactional phenomenon – a commitment made by the writer to the reader.” So when I write: *there are three types of interaction*, I am committing myself to mentioning them, and this is what the reader would normally expect me to do. Unlike prediction which orients the reader’s attention to what will come next, labelling, according to Francis, can either anticipate what is still to be said (‘advance labelling’) or encapsulate something already mentioned (‘retrospective labelling’) – though the latter is more common. Each of these types of labelling has a primary interactive, orienting role: an advance label “tell[s] the reader what to expect”, and a retrospective label “indicates to the reader how [a previous] stretch of discourse is to be interpreted” (Francis, 1994, p.85).

Despite the important role that such devices described by Tadros and Francis play in focusing the reader’s attention on certain parts of the text and signalling to him/her the different elements of this text as a mutual context, this is not sufficient for the ‘transformation’ of the writer’s thoughts to be successfully accomplished. Writers have also to address the reader’s informational expectations of the text by answering his/her questions which are continuously raised as the interaction unfolds. This is the function of another interactive device of signalling, that is the signalling of the text organisation. The crucial interactive role of text organisation and its signalling will be the topic of the following section.

4.3.1.2 *Organisation*

It has been suggested above that writing is fundamentally a ‘transformation’ of thoughts rather than a mere delivery of them. Central to this ‘transformation’ process is the accommodation of readers’ reactions. This is essentially what Widdowson (1984, especially

Chapter 5) believes makes writing as an activity a difficult one. Writers should play the dual role of senders and receivers at the same time. This happens throughout the whole interaction as writers continuously modify their propositions to conform with the expected responses from their readers. (This is perhaps why we frequently end up with a completely different text than we have originally planned – cf. Widdowson, 1984, p.61.)

The idea of discourse patterns (as described especially by Michael Hoey, e.g., 1979, 1983/1991, 1988, 1994, 2001) is based on this interactive endeavour of answering the reader's informational questions and accounting for his/her informational expectations. One of the patterns described by Hoey that underscores such kind of interactivity is the Problem-Solution pattern. This is a common pattern that is more complex and varied than simply putting forward a problem and then proposing a solution. The typical components of this pattern as pointed out by Hoey are: Situation, Problem, Solution/Response, Result/Evaluation. Variations on the Problem-Solution pattern are numerous. Evaluations, for instance, may be negative, which means that the reader should expect another Response to the Problem which may also be negatively evaluated, and so on. In real texts many combinations of the above components can take place; the most common modification to the pattern is probably to exclude the Situation and/or the Evaluation. Sometimes the Evaluation could precede the Solution. Even more, basic components like the Problem may be left to the reader's understanding; hence structures like Solution-Evaluation can be found (see Jordan, 1984). Despite these variations (or, perhaps more accurately, because of the flexibility offered by these variations), it is obvious that such a pattern is a useful technique through which writers may construct their texts in such a way that readers' informational expectations can be accounted for.

The Problem-Solution pattern is not, of course, the only discourse pattern available. There are other discourse patterns that can be found in texts to make up – either isolated or combined with other patterns – the structures of these texts, e.g. the General-Particular pattern (see Hoey, 1983/1991). The general important principle behind these patterns is that “it is open to the discourse to highlight certain questions as ones that it will answer...the writer may enforce a question on the reader which he or she then, unsurprisingly, answers” (Hoey, 1983/1991, pp.174-5). However, it is necessary for readers to recognise and benefit from these patterns, and this is done by means of a set of lexical items without which such patterns might not be recognised.

For example, there are several items that may signal a Problem (e.g. *problem, question, too,* etc.) and several other items that would signal a Solution (e.g. *solution, answer, come up with,* etc.). Signals of this kind are a special set of vocabulary that does not form a highly closed system, like modals and pronouns, but performs a specific shared discourse function, i.e. signalling discourse structure to the reader. Interested in their signalling of clause relations, Winter (1977) includes this group of lexical items under the term *Vocabulary 3* (where *Vocabulary 1 and 2* refer to subordinators and sentence connectors respectively) and provides a list of some items, e.g. *achieve, consequence, hypothetical, reason, problem, solution, technique,* etc. (a more extensive and focused list is to be found in Jordan, 1984, Index J). The items that concern us here are those which signal larger discourse patterns, not the relation between single consecutive clauses. The association of these items with discourse patterns shows how writers signal relations between the different parts of their texts which readers are assumed to predict and follow, and this is partly why written texts are described as generally interactive.

4.3.2 Lexico-grammatical Interaction

Unlike the patterns of presentation of information which cannot sometimes be identified without reference to the whole discourse, grammatical interaction takes place primarily at the level of the clause. It can mostly be explained through the grammar of the clause, and this is best done in the Systemic-Functional approach to grammar (Halliday, 1994). The keyword to understanding grammatical interaction is negotiation; whereas Informational Interaction is concerned with how information is presented, grammatical interaction is specifically concerned with how information is negotiated. The Systemic-Functional description of the clause pinpoints, among other things, what constituents of the clause allow for negotiation.

What makes this description especially useful for the present study is its account of the three main components that appear to be essential for negotiation to take place. First, there must be a specified and agreed upon entity (e.g. a person, a thing, a phenomenon) to negotiate about, as it is not possible to negotiate about nothing or something not known and acknowledged. This entity is what Halliday calls the Subject: “the entity in respect of which the assertion is claimed to have validity” (Halliday, 1994, p.76). And – as may be expected from its function in the negotiation process – this element normally comes first in the clause – or at least near the beginning. Second, there should be something to say about this entity or Subject, in Halliday’s terms the Residue (which

includes the main verb). Finally, there should be a space for negotiating over what has been said about the entity (i.e. what the Residue predicates about the Subject), and this element has been referred to as the Finite (i.e. operators indicating time, e.g. *is* and *has*, and modality, e.g. *can* and *must*).

Both the Subject and the Finite constitute the Mood element which “carries the burden of the clause as an interactive event” (Halliday, 1994, p.77). This crucial fact that in every clause there is an element that has the potential for interaction/negotiation has resulted in a different view of the study of language. Besides the traditional “intraorganism” perspective of language, i.e. its internal structure, there is an “interorganism” perspective that highlights the language as “the means whereby people interact” (Halliday, 1978, p.10). The following two sections will outline two main aspects of the function of language as interaction. The first, role relationships, is realised primarily through the Mood of the clause; the second, modality and evaluation, is realised mainly through Mood and lexis respectively.

4.3.2.1 *Role-relationships*

One of the major functions of language in the Systemic-Functional model is the interpersonal function. Language is not only a code by which speakers convey a particular representation of the world in a coherent and organised way, but also a means by which speakers/writers interact with their addressees. One aspect of this interaction is the exchange of roles between the interactants. In his definition of the interpersonal function of language, Halliday stresses that “it expresses the role relationships associated with the situation, including those that are defined by language itself, relationships of questioner-responder, informer-doubter and the like” (Halliday, 1978, 112). Role relationships reflect the choices from the interpersonal system making prominent much of the interactional work taking place.

According to Halliday (1994, pp.68-9), interactional role relationships can be classified according to whether it is information or goods-&-services that is being exchanged. In the case of statements and questions, the commodity exchanged is information, and for commands and offers, it is goods-&-services. Each of these roles can be expressed by unmarked grammatical mood choices: statements by declaratives, questions by interrogatives, commands by imperatives, and offers by either interrogatives or declaratives. However, this correlation is by no means absolute; commands, for instance, can be expressed by declaratives and interrogatives as well as imperatives.

Interactional role relationships are bound to the instantaneous linguistic interaction, and they represent one way through which language can reflect negotiation. They represent the basic choices that make up an exchange (see Martin, 1992, Chapter 2). By definition, they are meant to make negotiation possible as they require a response of some kind. A question is not a question if it is not meant to trigger an answer, and a command is not a command if it is not designed to evoke a response from the addressee. This is essentially why interactional role relationships are often considered fundamental interactional choices.

4.3.2.2 *Modality and evaluation*

Modality in Systemic-Functional grammar is broadly defined as the space between *yes* and *no*. It refers to those intermediate degrees where a proposition is neither totally positive nor negative (Halliday, 1970, 1976, 1994). In the model proposed by Halliday, a distinction similar to that used in interactional role relationships between information and goods-&-services is made. So modality is classified into two major types: modalisation, that is modalities related to information, and modulation, that is modalities related to goods-&-services (epistemic and deontic modalities in traditional semantics). Further classifications are made according to degree (high, median, and low), subjectivity/objectivity, and implicitness/explicitness. Modality can be realised in language in three main ways: modal operators in the finite (e.g. *will, may, can*), modal adjuncts (e.g. *probably, usually*), or both (Halliday, 1994, p.89). There are, however, many variants of this, as Halliday remarks; adjectives like *willing* and *anxious* indicate the degree of inclination, while passive verbs like *required to* indicate a degree of obligation.

It is obvious from the discussion so far that modality, unlike interactional role relationships, is not strictly realised through grammatical choices. Though it is associated with the Mood of the clause and its general discourse function, modality is not exclusively associated with formal structures, but also with a set of lexical items a subset of which is the modal verbs. This move from grammar to lexis is more evident in the case of evaluation which is determined by certain lexical choices in the clause rather than by its grammar.

Because partly of its lexical realisation, the concept of evaluation is to some extent pervasive. Attempts to analyse evaluation are consequently generally characterised by being highly elaborated and complex (see particularly, Chafe & Nichols, 1986; Biber & Finegan, 1988, 1989; Martin, 2000). Martin's approach (using the three main categories of *affect*,

judgement, and *appreciation*) will form the basis of the present analysis (see next chapter). Hunston's (1993; 1994) work on research articles also reflects this pervasiveness, especially her discussion of how a subtle analysis of evaluation can explore the ideology of science.

The speaker-oriented interpersonal function of both modality and evaluation as ways of expressing one's opinions and judgements has been the focus of many analyses of both modality and evaluation. Less studied, however, is the interactional aspect, the addressee-oriented function. With respect to modality, several studies have touched upon this addressee-oriented meaning, particularly in Coates (1987; 1990) and to a lesser extent in Guo (1995), Simpson (1990), Myers (1989), and He (1993). Similarly, evaluation is seen primarily as related to the speaker independently of the addressee – though this seems less clear than in modality. Interesting attempts to explore the addressee-oriented aspect of evaluation include Linde's (1997) argument that

evaluation is not produced by a single speaker, but must be negotiated among the participants...The speaker must obtain agreement from the other participants, or if that is not possible, at least discover the participants' opinions and how they relate to the speaker's opinion. Hence, negotiation is necessary.
(Linde, 1997, p.155)

Martin's approach also takes into account this specific function of evaluation, investigating how evaluative choices and responses to them can reflect and construct the kind of relationship holding among participants. In fact, his model of evaluation or appraisal is based on the fact that "emotions, judgements and values are sites around which negotiation might take place" (Martin, 2000, p.145). This negotiation, as demonstrated by Martin, is chiefly centred upon solidarity; interactants express evaluations hoping from others to share these evaluations and thus construct some sort of solidarity relationship.

It has been argued above that modality and evaluation are important interactional systems, especially as ways of creating more opportunities for negotiation. This means that negotiation is not only possible through an explicit exchange of interactional role relationships. It has also been noted that – with evaluation in particular – we seem to be moving from purely grammatical choices to lexical ones. So interaction is taking place largely on the level of lexis. Moreover, there is a constant move from the immediate situational context to the wider social and cultural context; understanding evaluation requires not only looking at the immediate context of the interaction (including the text and the interactants), but also "the sociocultural background and positionings of the

interactants” (Eggins & Slade, 1997, p.126). More focus on this latter broader context is the foundation on which the third type of interaction, Pragmatic Interaction, will be based.

4.3.3 Pragmatic Interaction

Pragmatics, as a branch of linguistics, sets out to provide a description of language in action. Its object of study has naturally been the basic form of linguistic interaction, that is conversation; and its focus has always been the identification of the explicit and implicit rules and expectations that (ideally) govern conversation. The scope of pragmatic analyses is obviously much broader than what this study intends to explore, but they seem to underscore in a unique straightforward way many of the interactional features to be investigated here.

The central notion underlying most pragmatic studies is that of ‘speech acts’ (Austin, 1962; Searle, 1969). These are linguistic units that are produced with the intention to communicate something. Speech act theory has originated from exploring the communicative features of conversation, highlighting aspects like cooperation and shared context (including beliefs and conventions). This suggests that their application to written discourse will undoubtedly help disclose much of the tacit interactional work taking place there. Indeed, this is what the several speech act analyses of written texts that already exist have – mostly indirectly – demonstrated.

For example, Pratt (1977) constructs highly elaborated and convincing arguments of how literary discourse can be explained in terms of speech act theory. Focusing on narrative structure, she points out that, for instance, narratives in literature function in principally similar ways to ‘natural’ narratives in conversations, and that audiences of written texts perform the basic interactionally active role other audiences – including those of conversations – perform (see also Logan, 1987). Citing examples from different types of written texts, Cooper (1982) also shows how writers can utilise ‘implicatures’, i.e. indirect communicative acts, to convey certain meanings in an indirect way. This indicates, as Cooper argues, that writers are no exception in relying on the beliefs their readers share with them to convey the intended meanings. It is such shared beliefs that justify to the readers the apparent violation of the expected Gricean Cooperative Principle² that is inevitable when making implicatures.

As these studies of the pragmatics of writing may indicate, we seem to be moving from the specifics of the discourse and the interactants characteristic of the two types of

Informational and Lexico-grammatical Interaction discussed above to some common and wide-ranging variables of the interaction. These include universal rules, wider contextual factors, cultural and social values and conventions, and so on. And this is precisely why a distinct third type of interaction should be identified, Pragmatic Interaction. The following illustrates two main ways in which Pragmatic Interaction is realised through language.

4.3.3.1 Reference

Reference has received a good deal of attention in speech act theory, and in pragmatics in general. In its original formulation, the focus within speech act theory was on reference as a propositional or locutionary act, that is how speakers succeed when making a reference in making their hearers unequivocally pick up the same real-world referent they intended (see particularly Searle, 1969, Chapter 4). This means that – like all acts – speakers conform to certain conditions or rules when making reference. The details of this should not concern us here. But the important point we need to take note of at this stage is that reference is essentially a system of use; as indicated by Searle (p.28), it is not the referring expression that performs the reference, but rather the *use* of such expression by speakers that makes it perform a particular reference. This simple fact emphasises the quality of reference as an interactional resource. Referential forms are only truly meaningful in an interactional context, and thus their use reflects various important aspects of that context.

Parallel to this interest in the locutionary meaning of reference, great attention has also been paid to the effect reference may have on the hearer and his/her relation with the speaker, something we may call the perlocutionary effect of reference. This effect is, however, circular in the sense that the addressee can also influence the form of reference chosen by the speaker. As shown by Allerton (1996), speakers change the referring expressions they use to refer to third persons and places according to addressee. So it is natural, as noted by Allerton, for someone to refer to his sister as, e.g., *Mary* when talking to his parents or cousins, as *Auntie Mary* when talking to his other brothers/sisters' children, and as *Mum(my)* when talking to *Mary's* own children. To explain such choices, Allerton contends that “choosing a mode of reference involves adopting a standpoint relative to other persons, particularly the addressee” (p.632). This is an especially interesting feature of reference as it points to the effective role addressees play in the linguistic choices speakers make.

With regard to the effects of the type of reference on addressees and their statuses relative to speakers, many studies have shown that creating such effects is an intrinsic characteristic of most, if not all, referring expressions. The focus of the majority of these studies is the sub-category of reference where the interactants refer to themselves and each other, that is address forms. For example, Brown & Gilman (1960) argue that terms of address which interactants use to refer to each other reflect their mutual attitudes and how they view their relationship, that certain referential shifts can be related to changes in the interactants' mood, and that there is a direction in European languages to use terms of address that reflect solidarity and not power relations (see also Maitland & Wilson, 1987; Pennycook, 1994; Zupnik, 1994; Fina, 1995). Murphy (1988) also demonstrates that forms of personal reference express social relations and personal attitudes arguing that "it is relatively difficult to find a referring expression that is truly neutral" (p.317).

It is clear that reference represents a strong indication of the type of relationship that holds among participants in a particular interaction. It reflects and establishes the social relations among the interactants, and it indicates their attitudes and power statuses. This is particularly more evident when interactants refer to each other, since it is their relationship that is at stake. This kind of reference will consequently be the focus of the study.

4.3.3.2 *Politeness*

Politeness is a general phenomenon of all our human social encounters, linguistic and non-linguistic. What makes it an issue for the present discussion of interaction is mainly that politeness strategies echo in almost similar ways to reference the social relations among interactants. It is one of the pragmatic rules that govern our linguistic interactions, and which we generally take care not to violate, notably in public and formal speeches and writings.

The term 'politeness' in socio-pragmatic analysis has been associated with 'face': "the positive social value the person effectively claims for himself by the line others assume he has taken during a particular contact" (Goffman, 1967, p.5). Face is one's 'self-image' he/she assumes others to respect and which can be threatened by certain devices called 'face threatening acts', FTAs. In a detailed framework of politeness, Brown & Levinson (1987) elaborate on this concept of face proposing that there are two kinds of face: positive and negative. The former refers to the desire that one's actions and general 'self-image' be respected and valued by others; the latter to the common sense of the word 'politeness', to

one's freedom of action and not to be imposed upon. Based on these two kinds of 'face', Brown & Levinson list and discuss a number of positive and negative politeness strategies. As these strategies – and work on politeness in general – have shown, there exist some interesting interrelations between language and society where it is possible to infer the crucial social values and interactional assumptions underlying many linguistic interactions through language choices.

In spite of this important advantage of politeness analysis, attempts to examine politeness strategies in written discourse have not been embarked on until recently. Myers (1989) who draws attention to this dearth of research into politeness in written texts, talks about one of the difficulties which will naturally arise when considering studying politeness in writing, that of audience. He shows, however, that a somewhat simple view of audience made on the ground of the "social context" of a particular text (p.2) would actually reveal that it is addressed to a certain kind of receiver(s) and would therefore suffice for the purposes of a politeness analysis (see the discussion of addressee in Chapter 2). Resolving this quite specific aspect of written texts, Myers goes on to illustrate the fact that many of the politeness strategies described by Brown & Levinson apply to his corpus of scientific written texts. But he interestingly concludes by stressing that his purpose was not simply this, but more importantly to show that "while writing does not involve face to face contact, it is a form of interaction" (p.30). (For examples of literary-oriented studies of politeness, see Sell, 1985 and Simpson, 1989).

Politeness as the above sketch of the concept may suggest is an intrinsically interactional phenomenon. And as Myers emphasises, one of the chief motives behind politeness analyses is to demonstrate how interaction is managed. This is specifically what the present consideration aims at, to provide examples of how politeness strategies contribute to the construction of interaction in written texts.

4.4 A Framework of Interaction

The three main types of interaction discussed in the previous section – the Informational, the Lexico-grammatical, and the Pragmatic – appear to be distinct from each other not simply because of the way they are realised in language, but also because of the interactional effect (see 4.2 above) each of them seems to be associated with. First, Informational Interaction tends to reflect more the orientation effect of the text towards its reader. It highlights the strategies writers use to orient their texts to their addressees; these

are organisational and signalling strategies that make the text correspond with the addressee's needs (or appear as such). Second, Lexico-grammatical Interaction reflects negotiation, since the linguistic aspects through which this kind of interaction is realised – i.e. questions, commands, evaluation, and modality – are primary resources for negotiation in language. Finally, systems related to the interactants' relationship like personal reference and politeness make Pragmatic Interaction more linked to the effect of involvement.

It has also been suggested above that another feature that by and large characterises each of the three types of interaction is the level of discourse each of them tends to focus on. For Informational Interaction it is the text, as this kind of interaction enables us to see how the text is constructed to be consumed by the intended addressee. Lexico-grammatical Interaction focuses on the interactants; it brings to scrutiny their intrusions in the text either in the form of playing certain interactional roles or by colouring the message with their own personal opinions and attitudes. Pragmatic Interaction, on its part, helps understand the interaction in relation to its wider context, the social and cultural framework of the interaction. Since the ultimate concern of this study – as an investigation into interaction – will naturally be the interactants, it can be argued therefore that the Lexico-grammatical Interaction is the most direct and relevant of the three, though, of course, all three forms of interaction are important for full appreciation of how interaction as a whole is managed. A consolidated view of these conclusions about the types of interaction is illustrated in Figure 4-1 below. This provides an overall picture of interaction from three main perspectives, and can represent the foundation for some extensive analyses of how interaction is managed in actual texts.

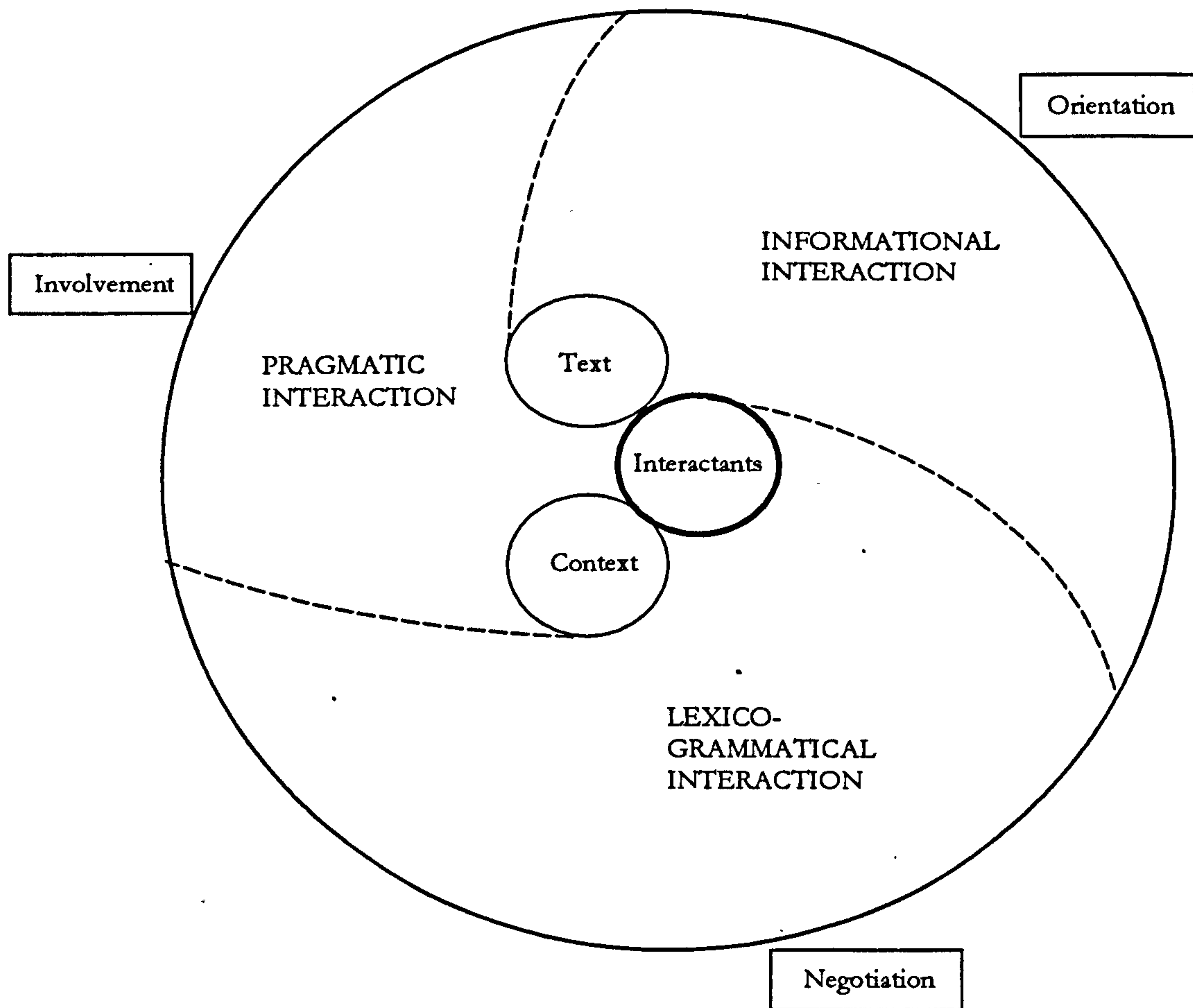


Figure 4-1: The three types of interaction and their focuses and effects.

As is clear from the discussion so far, this general framework of interaction in written discourse is essentially a combination of previous insights into the way writers and readers interact through texts. Hence, this framework does not intend to offer a new conception of interaction in writing; it is merely a way of systematically relating various existing perspectives on interaction to each other, so that a relatively comprehensive analysis of the management of interaction may be attempted. Nor does the framework claim that each of the three forms characterised is totally distinct in terms of the way they allow interaction to be performed. As indicated by the dashed lines separating the three forms of interaction in Figure 4-1, the question of overlap is currently left open. Analyses based on this framework may help shed more light on this possibility of overlap.

4.5 Some Research Issues

Analysing interaction in written texts is obviously crucial for full understanding of how these texts work. But, as the previous discussion may suggest, this is a relatively complex

job. Not only do we need to take account of the linguistic choices made within the text, but we also need to relate these choices to several other aspects of the immediate and wider context of the interaction. Many of these contextual features of written texts in particular are not clear and need to be identified. However, the framework outlined here may be useful in at least pointing to some general interactional characteristics of written discourse. Equally important, it seems that the three forms of interaction identified are interrelated in a variety of ways that cannot be identified only theoretically. Clearly, more detailed analyses of a wide range of texts is needed to further refine this framework and evaluate its reflection of interaction in written language, and this what the rest of this thesis seeks to achieve.

NOTES

- ¹ Following Thompson & Thetela (1995), the term 'interactive' is being reserved here to refer to Informational Interaction (with non-informational interaction, the term 'interactional' will be used).
- ² The Cooperative Principle (Grice, 1975) consists of four maxims: Quantity (be no less or more informative than required), Quality (be sincere), Relevance (be relevant), and Manner (be perspicuous and avoid being ambiguous).

METHODOLOGY

This chapter bridges the gap between the previous theoretical discussion of interaction and the second part of the thesis where a corpus of texts will be analysed. Since the analytical section is closely tied to the previous theoretical discussion, this chapter starts by stressing and expanding some of the points mentioned before about interaction and medical discourse in an attempt to demonstrate the rationale behind making them the centre of the analyses; this also includes spelling out the primary research questions to be answered. The next section of this chapter outlines the practical methods used to build the four sub-corpora comprising the data and the computational tools used to assist in the analysis of the signals of interaction studied. The third section will be devoted to the identification of these signals in the data, and all signals for each of the three forms of interaction will be discussed in detail. Where appropriate, a sketch of the models employed for the analysis of some signals will also be provided along with a few modifications to some of these models necessitated by the specific purposes of the present analyses. The final section will draw attention to some of the methodological difficulties encountered during the carrying out of the analyses. These are related to the data used, the signals identified, or the topic in general.

5.1 Rationale for the Study

Further to the discussion in Chapters 2 and 3 of the general importance of the concept of interaction in written texts and the overall complex nature of written medical discourse respectively, this section attempts to specifically address the reasons why this study is concerned with both interaction and medical discourse. Some practical and analytical reasons behind this will be spelt out, stressing those related to the particular purposes of this study. The final part of this section poses two major questions that the present analyses set out to answer.

5.1.1 *Why interaction?*

It has been indicated previously (see 2.3.2 and 4.1) that the concept of interaction in written discourse has now become a commonplace, though differences of opinion still exist about the way(s) in which interaction manifests itself in written texts and to what extent. It has also been pointed out that until fairly recently most attention has been given to the textual/informational rather than the interpersonal/subjective aspects of the written language. On the other hand, spoken conversations are widely considered as the genuine form of interaction through language. This trend of research is well-motivated with regard to many types of writing; specifically “expository prose is a special genre in which the message (as distinguished from the metamessage) is relatively important” (Tannen, 1985, p.129). So it is not surprising that most traditional studies of written texts do not attempt to go beyond the ‘informational message’. As discussed before, and despite calls such as that by Davies (1992, p.11), whose study of the language of textbooks suggests that “selections within the ideational and textual functions are substantially determined by choices from within the interpersonal function of language”, this aspect of written texts is still not fully researched.

Focusing almost exclusively on how interaction is managed in spoken exchanges is also a legitimate step in the search for ways to explore how language reflects/constructs interaction. Analytically, this kind of language allows the identification of the sequence of participation by the different interlocutors in the communicative event, which helps highlight the interaction taking place. This is true for some approaches to discourse analysis (e.g. Coulthard & Ashby, 1975; Sinclair & Coulthard, 1975), and especially with regard to conversation analysis, where scrutinising how contributions by various interactants relate to each other manifests the

interactional importance of many often overlooked conversational practices. Examples of these common practices include joint production (Ferrara, 1992), error correction (Jefferson, 1974), smiles (Brunner, 1979), and in particular interruption: several studies draw attention to the crucial interactional role of interruptions as a sign of conflict and dominance (e.g. West & Zimmerman, 1976; Ferguson, 1977; Roger & Nesshoever, 1987; Hutchby, 1992). Because of the system of turn organisation, where interlocutors can exchange roles and respond almost immediately to each others' contributions, most conversational exchanges clearly represent a useful basis for the study of interaction in language.

Aside from the simple, two-party conversational exchange, however, the systematic classification of the succession of utterances becomes more problematic. This is because of lengthy contributions (monologues are an extreme case) that may subsume more than one unit with fuzzy boundaries (Coulthard & Montgomery, 1981). There may also be no overt exchange as such, since the speaker/writer and the addressee only perform these predefined roles and do not exchange them in the way they do in conversations (or, at least, not as frequently). In spite of this, Coulthard & Montgomery (1981), analysing lecture discourse and using the 'rank scale' model of analysis, argue that it is possible to demonstrate how this kind of "discourse is in fact interactively designed: the discourse is 'shaped' or 'structured' with interactive purposes in mind" (p.33), and that it "attempts to take account of, and is oriented towards, possible audience reaction" (p.39). Nevertheless, they characterise this description as "somewhat pre-theoretical" admitting that the "notion of rank scale...is in this case only weakly developed" (p.39). If this is the case with lectures where the addressee is present and where 'minimal' addressee's reactions like smiles and nods are possible, we can expect that it is even more difficult to break written texts up into small sequential units of interaction.

It is clear that, though most of the studies of interaction in written discourse mentioned in 2.3.2 highlight the fact that some sort of an interaction is discernible in written texts, they leave open the crucial question of how to handle it in a systematic and generalised way. There exist, however, theoretical arguments that seek to integrate the interactional views of language in sociology, anthropology, psychology, and pragmatics into existing models of written text analysis so as to complement these models and compensate for the obvious lack of an interactional dimension (Spielmann, 1986). More importantly, there are several interesting attempts to carry out analyses of specifically how interaction is managed in written texts

(Sinclair, 1981; Widdowson, 1984; Sinclair, 1987; Sinclair, J. M., 1993; Thompson & Thetela, 1995; Hoey, 2001; Thompson, 2001). Such studies help provide practical evidence of the extended arguments for the interactive/interactional nature of writing by drawing attention to the many ways in which a text can project interaction with its addressee; nevertheless, they do not seem to provide a global view of interaction in texts, as they mostly focus on certain signals of interaction or certain types of (generally interactive) discourse, or approach the texts to be analysed from a particular theoretical perspective.

What the above discussion suggests is that, despite the wide recognition of its role and the various attempts to study how it is managed, the potential of interaction in written discourse is still not fully and systematically explored. Interaction is not only important for communication to be more successful, it is “the key to communication” (Rivers, 1990); and “language is not merely a mode of action, but a means of interaction” (Edmondson, 1981, p.32). It has been shown above that the analysis of interaction in conversations makes us aware of the complexity and multi-functionality of this mode of expression that is traditionally regarded as relatively simple and direct. But, as is clear from the framework proposed in Chapter 4, interaction is more widely embodied in the language than just in the superficial mechanism of turn taking in conversations. In fact, it is generally the absence of a similar mechanism and of non-linguistic signals in the written medium that results in the more important role the linguistic message can play as a means of interaction. Writers, like speakers, should therefore be able to construct interaction with their addressees in a systematic and effective way, and this is what this study hopes to outline.

5.1.2 Why medical discourse?

Language on the whole as an object of study can provide miscellaneous possibilities to investigate different aspects of human communication; but medical discourse in particular “offers interesting research opportunities” (Vihla, 1998, p.79). It is not possible with some other forms of discourse to study, for instance, “the way language is used to create hypotheses, the differences between professional and popular levels of language, and the relationship between linguistic form and scientific background knowledge” (p.79). The introduction to medical written discourse and the review of the relevant literature in Chapter 3 indicate its highly contextual nature and the diverse purposes of its different types. In particular, the complex variations of the characteristics of the important variable of ‘addressee’ that have

been summarised in Table 3.1 make this kind of discourse (especially the four types selected) a suitable target for the present study that seeks to show that it is partly, if not mainly, due to the utilisation of linguistic signals of interaction that these texts succeed in achieving their divergent, sometimes conflicting, goals. However, there are other more general reasons that led to the choice to use data from medical – and not, e.g., legal, political, or advertising – written discourse in this study.

The most general of these reasons is the fact that there are so many different types of medical texts. Since the aim here is to compare the management of interaction in different types of texts, it is natural to choose discourse that offers a wide variety of text types and involves various kinds of participants. Yanoff (1988, p.32) provides a list of some forms of medical writing: referral letters, consultation letters, discharge summaries, letters to the editor, case reports, reports for insurance companies, grant proposals, various school and job applications, prescriptions, essays, abstracts, book reviews, editorials, review articles, radiology reports, research protocols, the case write-up, the forms of patient information, medical records, medical textbooks, the operative report, and the scientific paper. Some of these, of course, may not even be considered prototypical writing (prescriptions, for instance); but the important aspect of this multitude of texts for the purposes of this analysis is that almost all of them have distinct addressee/purpose/context configurations. Only four of these forms are discussed here (see below), but it is the possibility of existence of all these forms that originally guided the decision to investigate this type of discourse rather than others.

Another feature of medical written discourse that is especially relevant to the four types selected for analysis in this study is that there is a spoken 'version' of each of them. For the medical leaflet, there is the face-to-face doctor-patient consultation; for the press report, there is parallel audio-visual coverage on radio and television; textbooks can be compared to lectures; and, finally, research articles are closely related to the academic presentation. The spoken and written 'versions' are not necessarily identical, but they are clearly directed to similar addressees and for comparable purposes. From the point of view of interaction, and given the overt nature of interaction in the spoken language, it seems plausible to investigate these four types of written medical discourse benefiting from the available knowledge about how interaction is managed in their spoken equivalents. For example, it is well-established that doctor-patient consultations involve a great deal of negotiation and persuasion (e.g. Fisher &

Todd, 1986; Tannen & Wallat, 1986; Fisher & Groce, 1990; Coupland *et al.*, 1994); focusing on this aspect in the analysis of medical leaflets may therefore reveal some important role played by the signals of interaction.

All the above reasons as well as the social context of scientific writing in general that has been discussed by some writers in great detail (see Chapter 3), the human-related topics medical writing is largely concerned with, and the resultant tension, in some forms at least, between the informative and interpersonal make this type of discourse, and specifically the ones chosen for this analysis, to some extent representative of many of the contextual aspects that can be found in a range of other types of written discourse. The main objective of choosing texts from medical written discourse for the present analyses is therefore to allow for the inclusion of as wide a range of contextual factors as possible so that generalisations about written discourse as a whole can be made.

5.1.3 Research questions

Discussing most of the issues raised at the end of each of the previous three chapters (sections 2.4, 3.5, and 4.5) will clearly be sought in this analysis. However, as the discussion develops to the construction of a proposed general framework for the analysis of interaction in written discourse, two main questions will be of particular concern:

- (1) Using the framework presented in Chapter 4, how far is it possible to draw a general picture of how interaction is managed in single texts or groups of texts from the same type? And what does this kind of picture tell us about what is going on in the text?
- (2) If this is possible, can this framework be used as a basis for variation between single texts or groups of texts of different types? And what does this variation tell us about what is going on in each of these texts or groups of texts?

The first question aims to put to the test the theoretical discussion in Chapter 4 that argues that it is possible to build a coherent overall picture of interaction in written texts. The first step towards this is to select data that allows for generalisation to other types of written discourse; as argued above, medical discourse and the specific types chosen for this analysis seem to cover a wide range of variations in contextual aspects and should therefore allow for some generalisations to be made. As this analysis uses a corpus of medical texts and does not

focus on just one or several texts, and as the framework proposed distinguishes between three forms of interaction, the analysis sets out to provide a detailed picture of how each of these three forms is managed in each of the four text types comprising the data. A summary of the results of the three analyses and a combined analysis of a selected text will then be attempted (see Chapter 9).

The second question seeks to show that interaction is actually managed differently in different texts. As shown in Chapter 3, the texts in the data are different in some crucial ways, notably the 'addressee', and we should therefore expect that these differences will be reflected in how interaction is projected. This question will be addressed throughout each of the three analyses of each form of interaction, but will be given particular attention in the summary of each of these analyses and in the summary of the results in Chapter 9.

Finally, as is clear from the two questions above, it is assumed that one major goal of the analysis of interaction in written texts is to make explicit most of what is going on in these texts. Purposes like negotiation and persuasion are not always overtly expressed, and an analysis of interaction may help bring these aspects of communication to the surface. Again highlighting these aspects of the texts analysed will be of particular concern throughout each of the analyses; a more specific investigation of the point will be sought in the text analysis in Chapter 9.

5.2 Data Collection and Analysis Tools

The data used in this study has been introduced as a form of discourse in Chapter 3, focusing on aspects related to interaction and addressees. The first part of this section complements the previous discussion by providing an overview of the practical steps taken to collect and organise the data; details about the sources and features of the four sub-corpora that comprise the main corpus are given. The second part discusses the computational tools used to extract and study the signals of analysis in the data. It reviews the software used and the advantages of employing such tools for linguistic research.

5.2.1 Source and scope of data

The data used for this analysis consists of four corpora corresponding to four types of medical written discourse: medical leaflets, medical press reports, medical textbooks, and medical

research articles. Each of these four corpora is about 80,000 words long – a total of almost 320,000 words. Because of the nature of the analyses conducted (see 5.4 below), and considering the time frame of the study, this size of the corpus – which is quite small by today's standards – was thought to be acceptable; practically, the corpus was to a large extent manageable, and analytically, it was big enough to highlight most of the features studied (it was even felt necessary in one case, i.e. evaluation, that the analysis should be limited to smaller subsets of each of the four corpora – see 5.3 below). The number of texts within each corpus varies, as the average length of the texts in the leaflets and the press reports corpora is typically shorter than in the research articles corpus; textbooks are obviously much longer, and although the textbooks corpus contains only extracts (self-contained sections or chapters) of full textbooks, it still has the smallest number of independent texts (see Appendix I for a list of the sources of all the texts in the four corpora used for this analysis).

A timescale for the inclusion of texts in each corpus was set. In the textbooks corpus, texts should be published within a range of the last ten years since this analysis has started; thus the oldest textbook in the corpus was published in 1989 (this is the date of the edition from which the extract is taken, and not the original date of the first edition). This timescale was reduced to five years in the case of the press reports and the research articles; so these two corpora comprise texts that are not older than 1995. The leaflets were collected sometime in 1996, but there was no way to determine the exact date they were published in; nevertheless, the fact that they were distributed at that time was taken as an indication of their contemporaneity. Putting a timescale like this does not mean that texts older than twenty or thirty years are expected to be dramatically different in terms of the management of interaction (though, of course, there might be subtle differences we are not aware of); it was felt, however, that focusing on a relatively limited timescale may help facilitate the analysis by allowing discussions of similar topics or phenomena to be captured in more than one corpus. This is particularly true in the case of the press reports and the research articles, where some press reports might deal with the results and implications of a recently published research article (this occurs clearly in the data in one instance in which the effects of salt consumption published in an article are discussed as the main topic in a more recent press report)¹.

The medical leaflets were mostly collected from GP surgeries in Liverpool. No more than five leaflets by the same publisher were allowed to be included; this is to avoid any possible

influence on the data by certain publishers' styles (a similar constraint of a maximum of three reports by the same author was also applied to the press reports corpus). The textbooks were collected from the Harold Cohen Library in the University of Liverpool, and extracts were photocopied and kept for later use. Textbooks collected were targeted at medical students; this was not only clear from the prefaces of these textbooks, but most of them were actually used to teach medical students at the University. To deal with the collected leaflets and textbooks extracts using the concordance software (see 5.2.2), it was necessary to transfer them to electronic text files. A computer scanner was used for this purpose, and each leaflet or textbook extract was saved in a separate text file.

Most of the press reports and the research articles were respectively obtained from the Internet sites of three quality British newspapers (*The Times*, *The Independent*, and *The Daily Telegraph*) and three well-known international journals of general medicine (*The British Medical Journal*, *The New England Journal of Medicine*, and *The Lancet*). One exception to this is the press reports from *The Times*, the source of which was a CD-ROM for the 1995 editions of this newspaper. Restricting the source of the press reports to quality newspapers is obviously important, as the informality that characterises the other newspapers and their different readership could influence how interaction is managed. Also, obtaining the research articles from journals of general medicine rather than the more specialised ones was intended to allow for comparisons to be made with the other three corpora; as topics studied in these journals are more likely to be of general interest to the public, they may be comparable with similar topics – though usually from a different angle – in the other three corpora. A more practical reason for this is to make it easier for the researcher to assimilate the discussions contained in these articles as fully as possible, since they are typically relatively less complicated in this type of medical journal.

The selection of the individual texts in each of the four corpora was based on the topics discussed in these texts. Topic was the main criterion used for the representativity of the data, and the aim was to build a corpus that covers as wide a range of topics as possible. As variation in topic is most noticeable in the medical leaflets, this corpus was used as the basis on which the other three are built. The texts in each of the four corpora therefore have topics related to physical as well as psychological health problems; some discuss particular health conditions, while others are related to broader health concerns; some of the topics are specific to men, some to women, and others to both; common topics like cancer, teeth problems, and

contraception are included. In addition to the topic, there are other criteria specific to each of the four text types in the data; for example, research articles include those based on experimental work and those reviewing previous results of a certain phenomenon, and press reports selected subsume reports written by both actual doctors or experts and professional journalists.

5.2.2 Using computers in language research: corpora and concordance software

Computers are increasingly becoming indispensable tools for linguistic research, especially when working with large amounts of text. Conventional methods of analysing written and spoken data are in practical terms hardly possible when the data to be analysed gets bigger than several thousand words, as going through the data manually, studying the instances one by one, and looking for lexical or grammatical patterns would take a very long time that could have been invested in interpreting and discussing these patterns. With computers getting more powerful in processing millions of words in a matter of moments and with more texts in machine-readable format becoming easily available, using computers as a research (and teaching) tool in linguistics has evolved into an active field of study in itself, Corpus Linguistics.

Two components represent the core of current Corpus Linguistics: corpus and concordance. A corpus is a specified amount of text (ranging in length from a few hundred to multi-million words) that is carefully collected for a particular purpose, the broadest of which is to more or less mirror the language. Large corpora of multi-million words, like the BNC (British National Corpus) and the Bank of English, seek to allow linguists to make reliable descriptions of the language as a whole; the main difference from previous descriptions is that these are observation- rather than intuition-based. For more precise research purposes (e.g. investigating a certain genre, comparing two types of texts, or looking for specific features), a specialised corpus may be built, either as a sub-corpus of a bigger one or starting from scratch. The corpus used in this study is an example of a specialised corpus that has been constructed for the particular purpose of investigating signals of interaction in a specific type of written discourse. The concerns discussed in 5.2.1 about size, balance, and typicality are all important issues in the design and compilation of corpora (see, e.g., Sinclair, 1991, Chapter 1; Kennedy, 1998, Chapter 2).

The term 'concordance' refers to one of the main ways in which computers may output strings of data from a searched corpus; the typical method used by concordance software is to align all instances of the search word in the centre with a pre-defined number of context words on its left and right (Figure 5-1). This makes it possible to quickly inspect the co-text of the search word in hundreds of separate texts at the same time. This is the major advantage of a simple concordance, since it makes identifying patterns much easier than manually going through each text and searching for the word in question. WordSmith Tools (Scott, 1998) is the software used to make concordances of the present corpus. It is a suite of programs for the computer-assisted analysis of texts, which can make concordances, wordlists, and keywords. This study makes use of the concordancer program (Figure 5-1) with the aim of isolating all features of interaction in the corpus (for the quantitative analysis) and then investigating them in their contexts (for the qualitative analysis).

Building corpora and using computer software was originally intended for lexicography and studies concerned with vocabulary analysis. However, this method of research is now commonly used to help study a variety of grammatical, stylistic, and syntactic aspects of the language (see Aijmer & Altenberg, 1991, Part 3). With regard to the analysis of the signals of interaction in texts, written or spoken, some studies have shown that this is an efficient and worthwhile approach. Biber (1988) uses computational tools to analyse features like personal pronouns, questions, amplifiers, emphatics, modals, private verbs, etc., in the one-million-word LOB (Lancaster-Oslo-Bergen) Corpus of Written British English and the London-Lund Corpus of Spoken English of about 500,000 words. In preparation for carrying out a computer-based study of the whole corpus, Kurzon (1985) analyses text deixis (e.g. *this [book, chapter]*, *the above [figure, example]*, *later, below, here*, etc.) in twenty-four of the 500 texts in the LOB Corpus. In another study and aiming to show the potential of computer-assisted language research, Thomas & Wilson (1996) use sophisticated computer content analysis software with large amounts of transcribed text of doctor-patient interaction in two clinics; they conclude that "Doctor A's language was interactive...interpersonally-oriented and informal; Dr B's was more 'informational'...disease-centred and technical" (p.106). Thomas & Wilson acknowledge that this is the result reached by the traditional methods of discourse and conversation analysis applied to the same data; but their point is that computer content analysis "was able to reveal

accurately and within minutes” what these traditional methods spent “months of painstaking work” to uncover (p.106).

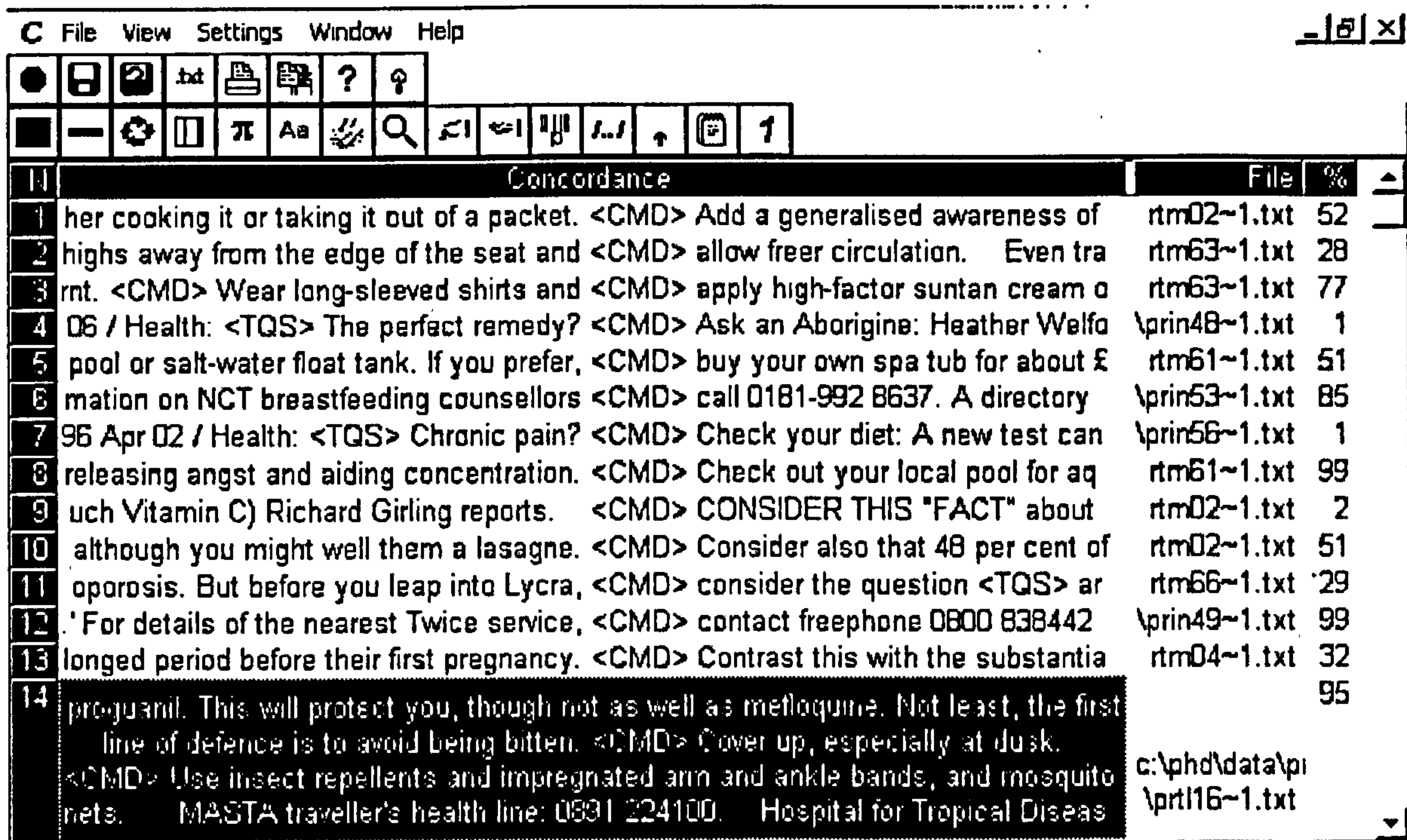


Figure 5-1: A snapshot of the concordance program used in this analysis, showing a number of the occurrences of the imperatives in the press reports corpus. (Note the tag, <CMD>, used to identify imperatives and the listing of each occurrence with a few context words on both sides. Note also in 14 how the amount of context that can be shown may be increased for more investigation.)

Nevertheless, there are aspects of the language that cannot be identified directly by computer software – at least, for the time being. Examples of these, as pointed out by Thomas & Wilson, are “pragmatic strategies such as indirectness, conversational tactics such as blocking behaviours, [and] discoursal features such as topic control and interruptions” (p.92). In the present analysis, personal pronouns and the modals, for instance, can be called up directly from the concordancer; but most signals cannot, e.g. politeness strategies, evaluation, labelling and predictive signals (it is worth noting that, though this is not the case here, computers can identify certain structures, like imperatives, using appropriate grammatical parsing tools). The only way to make these features accessible by the concordance program is by manually tagging them. Figure 5-1 provides an example of how the concordancer has been enabled to list all the occurrences of the imperatives in the press reports corpus, making it possible to analyse these occurrences in more detail.

5.3 Quantitative Analysis: Calculating 'Markedness'

For each of the four corpora comprising the data, most of the signals of interaction analysed (see 5.4 for the criteria used to identify these signals) were counted. Counting was based on the frequencies in the whole corpus except in one case, evaluation. This is because identifying evaluative items requires more careful reading of the texts analysed, taking into account the general purpose of the text and its specific argument; doing this for the whole corpus would need much more time than was available. The sample sub-corpora of 10,000 words each that were extracted from the main four corpora contained many instances of evaluation that allowed acceptable comparisons to be made. In another two cases, and for two contradictory reasons, no counting was possible: the Problem-Solution pattern was not very highly developed in all the data to the extent that permitted counting it as an overall strategy of the texts analysed; and positive politeness signals were very pervasive in two types of the data – it is often the case that positive politeness is signalled in several ways at the same time (see 8.4.2).

The frequencies were then normalised to a text length of a thousand words to be used for the 'markedness' calculation (see below) – but the raw frequencies were also noted. The following equation was used to make this normalisation calculation:

$$(\text{frequency of signal } X \div \text{length of corpus in words}) \times 1000 = \text{normalised frequency of signal } X$$

Since the four corpora analysed were of similar length, this was not aimed at standardising the length of the texts analysed, but it has a practical reason: to have smaller numerals that are easier to manage, but would highlight differences as clearly as the original ones. However, standardisation was also needed for evaluation to be compared with the other signals; although this can be done in a different way, the above method was adequate.

The ultimate goal of the counting process was to characterise the four text type corpora in relation to each signal of interaction, to identify as accurately as possible which signals have more or less weight or importance in each corpus relative to the frequency of this particular signal in the other three corpora, and in relation to the distribution of the other signals within each form of interaction. However, it was found that relying on the raw frequencies alone or the percentages of the signals across the four corpora will not lead to this conclusion; there was no threshold value above which a signal can be regarded as having weight or is 'marked' in

a specific corpus. Another problem specific to the raw frequencies was that some signals were far more frequent in some corpora than in others, more than ten times as much; when comparing signals, those with high frequencies would appear as having more weight. For example, there are only 113 questions in the press reports corpus compared to 1294 instances of modalisation (see Table 7-1); judging by frequency, modalisation would clearly be considered as having more weight in the press reports. But in terms of the percentage of each of these signals in relation to the other three corpora, it appears that questions (32.94%) actually represent more weight than modalisations (23.35%). Determining the weightiness of a signal needs to take into account both its frequency within the corpus in relation to the other signals and its proportion across the four corpora, and should also provide a borderline that separates marked signals from those that are less so.

The procedure used to solve this issue of weightiness or ‘markedness’ is adapted from Biber (1988, pp.93-97) who employs it for similar purposes, but in more complicated statistical analyses. With this method, frequencies of the signals are standardised to a mean of 0.0 and a standard deviation of 1.0. The mean is a measure of the central tendency of a particular signal in the four corpora; and the standard deviation is a measure of the variability from the mean value. A standardised value of a signal of interaction (to be called here ‘markedness’ score) means that a value is expressed in terms of its difference from the mean, divided by the standard deviation:

$$(\text{normalised frequency of signal } X - \text{mean}) \div \text{standard deviation} = \text{‘markedness’ score of signal } X$$

Thus the mean value stands for the threshold, above which a signal is said to be ‘positively marked’, below which the signal is ‘negatively marked’, and a signal whose score equals or is very close to the mean value is ‘neutral’. The scale used to measure how far a signal is above or below the mean value is the standard deviation; a signal may, for instance, be ‘positively marked’ by one or two standard deviations above the mean value. This newer value given to each of the signals of interaction analysed is more suitable in representing the markedness of the signal, since it gives each signal “a weight in terms of the range of its *variation* rather than in terms of its absolute frequency” (Biber, 1988, p.95, emphasis in original).

By way of further highlighting the usefulness of the concept of ‘markedness’ for the purposes of the present analyses, let us consider this example from the Lexico-grammatical Interaction analysis (see section 8.2). The raw frequencies, percentages across the four corpora (in round brackets), and markedness scores (in square brackets) of the commands, questions, and modalisations in the leaflets corpus are shown below.

<u>Commands</u>	<u>Questions</u>	<u>Modalisations</u>
1194	215	2383
(70.36)	(62.68)	(43)
[1.48]	[1.3]	[1.43]

Taking account just of the raw frequencies of these signals, modalisations undoubtedly stand out. They are twice as much as the commands, and about eleven times more than the questions. But when comparing the percentages of these three signals relative to the other three corpora (not shown), then modalisations – despite their high frequency – represent the least proportion of all, 43%, since they are very frequent in all four corpora. The dilemma that arises from this situation is how to treat modalisations: are they marked or unmarked in this case? In other words, do they appear more predominant than other signals within the leaflets corpus *and* across the other corpora or not? Considering just the leaflets corpus, modalisations are clearly very frequent compared to the other signals; but, taking into account the frequencies of each of these signals in the other three corpora, commands and questions are proportionally higher in the leaflets corpus than modalisations. A reconciliation of these two ways of assessing the weightiness of a signal can be done using the markedness calculation. The scores of markedness of the three signals in this example indicate less variation than might be concluded from the raw frequency or the percentage methods. It is worth noticing that although the ratio of the questions is higher than that of the modalisations, the markedness score of the questions is less. The markedness score provides more accurate assessment of weightiness because it depends on the variation of the signal, rather than on its frequency. So in this example, the extent to which modalisations are above the mean value (i.e. 1.43 standard deviations) is more than in the case of questions (i.e. 1.3 standard deviations). It might be surprising that questions which represent 62.68% have less weight than modalisations whose ratio is only 43%. But it should also be noticed that the frequency of the modalisations far exceeds that of the questions, and it would thus be equally surprising to consider questions as more predominant than modalisations. It is only through markedness calculation that an

accurate variation-based score of the weightiness of a signal may be determined, and this score can be compared with other scores for other signals.

The final stage in the quantitative analysis was to plot the different signals according to the scores they obtained from the markedness calculation, so that comparing each signal across the four corpora and in relation to the other signals would be easier. Markedness scores for the sum of the signals of each type of interaction were also calculated and plotted. This allows conclusions to be drawn about which text type corpus shows an overall markedness in respect to each of the three types of interaction.

5.4 Qualitative Analyses: Identifying Signals of Interaction

This section provides an overview of the signals of interaction considered in this study. Most of these signals have been introduced from a purely theoretical perspective in Chapter 4 and their interactive/interactional qualities have been discussed. Here, these signals are revisited from a more practical angle, focusing on how they are defined and recognised in the data. This requires going into particularities, presenting – where necessary – subtle categories and outlining relevant models and approaches of analysis.

It should be clear from the detailed discussion of the signals below that the approach used for analysing them is broadly functional; linguistic forms are complex, and signals cannot be identified by “simply counting linguistic forms without taking account of their function in context” (Holmes, 1990, p.186). Another point to stress at this stage is that signals are essentially of interest to the present study because of their contribution to interaction; this analysis does not therefore seek to provide a comprehensive description of the various functions of each of the signals discussed.

5.4.1 Informational Interaction signals: prediction, labelling, and patterning

The analysis of Informational Interaction covers three broad organisational and signalling techniques: predictive elements, nominal labels, and text patterns. Prediction (Tadros, 1994) refers to the textual expectations set up by the writer using a number of strategies: enumeration, advance labelling, reporting, recapitulation, hypotheticality, and questions. Labelling is the term Francis (1994) employs to describe those nominal groups used to encapsulate – and in the process tell the reader how to interpret – some stretch of discourse to

come (advance labelling) or a previously mentioned stretch of discourse (retrospective labelling). Patterning (e.g. Hoey, 1983/1991, 2001) is a way of looking at the overall structure of a text in terms of different parts of a recognisable pattern, e.g. Problem-Solution, by the help of several explicit lexical signals.

Tadros (1994) provides a thorough characterisation of each of her six predictive categories. The present analysis follows the criteria set by Tadros for each category as closely as possible; however, because of Tadros' strict conditions and the relatively straightforward examples she uses to demonstrate the categories, some occasional uses were found to be problematic and were therefore discarded from the analysis. Nevertheless, in one case, a frequent method for advance labelling was found to be in use in two of the corpora; the problem with this usage was that the 'predictive' member was not easily identifiable and some of Tadros' criteria of advance labelling were not straightforwardly applicable. Because of their frequency and since they are clearly intended to guide the addressee's expectations, these instances were included in the analysis as special cases of advance labelling (see examples 6-10 and 6-11, pp.111-2), and their special status was indicated.

Labelling as identified by Francis (1994) is classified into two major types: advance labelling and retrospective labelling. The former, as noted by Francis (note 1, p.101), overlaps with Tadros' prediction category of advance labels. Both perform the function of telling the addressee what to expect, but advance labelling in Francis' terms is restricted to nominal groups. In an attempt to avoid this kind of overlap which would lead to the same signal with the same interactive function being analysed twice, advance labelling was included in the analysis of prediction. The identification of the nominal groups of retrospective labelling in the corpus was based on Francis' (1994) extensive discussion and exemplifications. Although no major problems were encountered, this involved more close reading of the texts than when identifying most of the predictive categories; this is to avoid including repetitions or synonyms and to make sure each label is actually a reference to part of the previous text, something that is typically not as easily identifiable as the predictive members in prediction (see Francis, 1994, p.88, on fuzzy reference).

The analysis of discourse patterning in the data was focused on a typical pattern, the Problem-Solution pattern. This is "one of the culturally accepted rhetorical patterns for English

expository discourses” (Hoey & Winter, 1986, p.130), and it is by far the most discussed pattern in the literature and most of its modifications are very well-documented. These were important reasons behind the decision to focus on this pattern; but the main reason was that “many of its properties are shared with other patterns” (Hoey, 1988, p.64), which allows some generalisations about patterning on the whole to be made. Other patterns, like the Goal-Achievement and the Gap in Knowledge-Gap Filling patterns, were also searched for, but they were generally rare in all four corpora. To identify the Problem-Solution pattern, a list of all possible lexical signals of this pattern (e.g. *conflict*, *crisis*, *difficulty*, and *tension* to signal the Problem and *answer*, *overcome*, *surmount*, and *resolution* to signal the Solution) were drawn from previous studies, especially from Jordan (1984, Index J). The four corpora were then searched manually for any of these lexical signals or others that might not be included; when such a signal was encountered the text was read again to make sure that this particular lexical item was in fact a signal of a pattern. To make sure no lexical signals were missed during the manual search, the concordancer program was fed with the list of the signals and the contexts of these signals were studied for a possible underlying pattern.

Apart from some of the fuzzy and untypical uses mentioned above, identifying Informational Interaction signals was generally straightforward. This is mainly due to the clear and full characterisation of these signals in previous work. But a fundamental issue to be addressed here, since the strategies of prediction, labelling, and patterning are to be considered together and not in isolation, was that of the possibility of overlap of elements from one of these strategies with elements from the other. Avoiding this was sometimes possible, as in the case of advance labels in prediction and labelling (see above). But in other cases (like the signals of discourse patterns and the nominal labels – as will be discussed in 5.5), there was sometimes a total overlap that was not as easily avoidable. As will be clear from the analysis in Chapter 6, labels and pattern signals perform similar as well as distinct interactive functions, and it was therefore necessary to consider the same element as reflecting all these functions.

5.4.2 Lexico-grammatical Interaction signals: commands, questions, modality, and evaluation

As the name of this kind of interaction suggests, Lexico-grammatical Interaction is realised in texts through lexical and grammatical signals. While evaluation is only realised through lexical choices and commands and questions through grammatical forms, modalisation is in between:

it can be realised through both grammatical and lexical means. Generally speaking, grammatical signals are less problematically identified than the lexical ones, primarily due to the restricted grammatical structures used for these signals; for instance, contrary to the many lexical items that can express evaluation, there are theoretically fewer grammatical alternatives for commanding or questioning. Another problem with lexical realisation of signals is that not all the instances of a particular lexical item can be interpreted as indicative of the signal in question; a simple item like *student* may be evaluative in a particular context, but not (or at least not as clearly) in another (Hunston & Thompson, 2000a, p.15) (this is also true to some extent of grammatical forms and the signals they typically indicate, but this issue is less serious here – see below).

This is not to say that identifying grammatical signals is as simple as looking for, e.g., imperatives and blindly associating them with commands. To successfully pinpoint expressions of commanding and questioning, two points should be taken into account. First, as pointed out by Halliday (1994, pp.71ff), there is no absolute one-to-one relationship between ‘semantic categories’ (e.g. statements, questions, commands) and ‘grammatical categories’ (e.g. declaratives, interrogatives, imperatives), though there are congruent or typical realisations; a command, for instance, is typically realised through an imperative, but it could also be expressed in the form of an interrogative or even a declarative. Second, a typical realisation of a grammatical signal, like the standard realisation of commands through imperatives, does not necessarily entail that all occurrences of that grammatical form, e.g. imperatives, are to be automatically interpreted as expressions of the function it is typically linked with, e.g. commands (see Wilson & Sperber, 1988 on examples of imperatives that have no commanding force)².

In the present analysis, commands are defined in a functional and broad sense as propositions which unequivocally and literally impose some course of action on the addressee, indicating that it should be done (cf. Lyons’, 1977, p.746 and Brown & Gilman’s, 1989, p.173 definition of directives). The two typical ways of directing the addressee’s actions found in the data are unsurprisingly imperatives and modulations. Imperatives are characterised grammatically as verbs that normally “carry no overt indication of tense and person” (Lyons, 1977, p.746), and they tend to occur in the data at the beginning of sentences or phrases. Modulations are expressed using one of the modals *must* or *should* (*ought to* and *have to* were excluded from the

analysis; the former is very rare, and the latter is typically either negated or modalised and does not seem therefore to correspond to the above definition of commands). *Must* and *should* can, of course, also be used in a modalisation sense, to indicate certainty not obligation (see below), and the only way to distinguish the two meanings is by inspecting the context in which these modals are used. All occurrences of *must* and *should* were listed using the concordancer and the obligatory/modulative ones were included.

Unlike commands, defining questions is less straightforward than might be thought (see Stenström, 1984, p.24). The conventional, textbook definition of questions as utterances that request unknown information falls short of accounting for the many functions questions play in real interactions (e.g. classroom display questions to which the teacher already knows the answer). This definition can be restated more accurately as those propositions that elicit a *verbal* response (as opposed to commands that require a non-verbal response). But still there are questions that do not require any sort of verbal response (or at least when the response is absent, it would hardly be noticed as a missing pair): tag questions are an obvious example. This is why the term 'question' is used here to include all those propositions (other than commands) that are designed to elicit a response (cf. Stenström, 1984, p.24). Though rather vague, this definition would cover all instances of this interactional signal in the present data. Working on the basis of this definition, the nature of the data used makes identifying most questions relatively easy. Unlike in spoken discourse where the analyst needs to figure out what the speaker meant by his/her utterance (which cannot always be exactly known without access to the actual speaker – though certainly some prosodic features would be helpful), writers normally orthographically mark their questions, either by the question mark or (as in the leaflets corpus) by letters like *Q* for questions and *A* for answers. This is perhaps because in writing intonation and certain other strategies are not available to signal questions and hand the floor to the addressee, and writers need therefore to make explicit their questioning intention, especially if the question is not in the standard interrogative form.

Despite problems of definition, especially with questions, identification of the grammatical signals of commands and questions in the data is largely less problematic than that of the lexical signals, modalisation and evaluation. Modalisation is the part of modality that is concerned with propositions (as opposed to modulation which is concerned with proposals), and is defined as “the area of meaning that lies between yes and no” (Halliday, 1994, p.356).

The term modalisation, coined by Halliday, refers to two types of this intermediate state of meaning: probability (possibly/probably/certainly), the “equivalent to ‘either yes or no’, i.e. maybe yes, maybe no, with different degrees of likelihood attached” and usuality (sometimes/usually/always), the “equivalent to ‘both yes and no’, i.e. sometimes yes, sometimes no, with different degrees of oftenness attached” (Halliday, 1994, p.89). Since modalisation in the present analysis is discussed from the perspective of its interactional role as a hedging device (see Chapter 7), it will be limited to the signals of probability. Through scanning the signals of usuality in the data, it was found that these signals seem to typically reflect objective facts rather than the writer’s personal judgement. This, in addition to the fact that it is probability signals that are conventionally studied in most treatments of modality and hedging, led to the decision to focus the analysis on these signals. Examples of these signals in the data include (see Perkins, 1983, for more examples):

Modal verbs: *will, would, may, might, can, could, must, should*

Lexical verbs: *appear, believe, indicate, seem, suggest, look*

Adjectives: *possible, probable, likely/unlikely*

Adverbs: *apparently, certainly, perhaps, possibly, probably, undoubtedly*

Comment clauses: *I think, I believe*

As mentioned above when discussing modulation signals, *must* and *should* can be used in either a modulation (obligatory) or a modalisation (certainty) sense; both of these need to be deduced from the context. In addition, the modals *can* and *may* have two meanings: possibility and permission; the former is the one that is relevant to this analysis of modalisation (the latter will be used in the analysis of politeness/indirectness in 5.4.3). Special attention was also given to lexical verbs, as they are not always used with a modalisation/hedging meaning (e.g. *Soft corns appear between the toes where perspiration collects. [LF07]*); these non-modalised usages were eliminated.

Evaluation is a broad term that covers the writer’s views and feelings about things (objects, people, behaviours, etc.) as either good or bad. Although the commonly used term ‘evaluation’ is preferred here, the model this analysis uses is that of Martin (2000), who refers to evaluation as ‘appraisal’. One important reason behind choosing Martin’s model of appraisal for this analysis is that it does not encompass modalisation signals, as in some other frameworks of

evaluation (see Hunston & Thompson, 2000a); although both evaluation and modalisation perform closely related interactional functions, considering them separately was thought to be analytically more rewarding, so that any differences in how they work interactionally may be noted (Chapter 7). Moreover, Martin's model takes account in an explicit way of the interactional function of evaluation, and it is one of the most elaborated and highly developed descriptions (though only the main categories of this model are examined here). There are, however, certain aspects of the model that need to be revised, so that the analysis will reflect more fully the interactional function of evaluation. For example, the model suggests that evaluation can be directly expressed in the text using explicit 'evaluative' lexis (inscribed), or it may be implicated through ideational propositions (evoked); for the purposes of this analysis, which focuses on overt signals of interaction, only inscribed evaluation will be considered. Also, Martin does not discuss certain evaluative expressions that were encountered in the present data, where evaluation, though relevant to the topic in general, does not affect the course of the discussion in the text. This is similar to Thetela's (1997, pp.142ff) topic-oriented evaluation, TOE, in research articles that "works at a much lower (localized) level" than research-oriented evaluation, ROE, which contributes to the "global evaluation" (p.146) of the research process. Distinguishing the two expressions of evaluation is not a simple matter; but a clear and common example of this in the data are evaluations embedded in narration, because of which this type is referred to here as 'reported' evaluation.

The analysis of evaluation draws on sample sub-corpora of 10,000 words from each of the four main corpora. This was necessary to report on more details with as much precision as possible, particularly since, as indicated above, evaluative lexis is highly context-bound and needs more careful examination (see, e.g., Conrad & Biber, 2000, for a similar approach of analysing sub-corpora for detailed study). Signals of evaluation were manually identified and then given codes according to Martin's (2000) three main categories: affect, judgement, and appreciation; 'reported' evaluations were also marked. Despite inevitable uncertainties about the identification and coding of some lexical items, focusing on a smaller amount of text and limiting the analysis to overt, inscribed evaluations allowed for a largely satisfactory analysis to be made.

It is clear from the above review of the signals of Lexico-grammatical Interaction that these signals are more complex and extensive than the signals of Informational Interaction discussed

in 5.4.1. The definitions of the Lexico-grammatical Interaction signals were generally broader in scope, leading to more possibilities of overlap; it was even the case, as indicated above, that two signals, modality and evaluation, are treated as a single phenomenon in some approaches. Though attempting to minimise overlap as much as possible, the analysis acknowledges its existence by identifying areas where overlap is likely to happen and then looking at the actual context of usage for cues on how to interpret each particular example. Despite the fact that context is occasionally unclear, in addition to the intricacy of the meanings of the signals of modality and evaluation, the analysis undertaken encompasses most of the Lexico-grammatical Interaction signals in the data.

5.4.3 Pragmatic Interaction signals: reference and politeness

The two main signals of Pragmatic Interaction analysed here are reference and politeness. Both of these are quite complex systems, and the aspects that this analysis needs to focus on have to be defined as clearly as possible. Politeness in particular is a pervasive phenomenon that needs careful handling, since it can be expressed linguistically in a variety of ways (Brown & Levinson, 1987), some of which overlap with other signals discussed under other types of interaction (e.g. modality – see 5.5). It even subsumes certain referring expressions, especially those to do with address. Moreover, the expression of politeness depends on the communicative event and the interactants' relationships and statuses; thus decisions have to be made about which acts represent major threats to the addressee's face in each specific text type. Reference is also generally an intricate phenomenon, but the signals this analysis is primarily concerned with can be relatively less problematically identified.

Since the chief goal of this study is to examine the different ways of managing interaction in written texts, the type of reference that clearly performs such function is that of personal reference to both writer and addressee. Other ways of reference (like third person reference) are primarily used for cohesive, textual functions and are therefore not directly relevant to this analysis. Reference to the writer in the data is achieved through the pronouns *I* and *we* in subject position and *me* and *us* in object position, while the addressee is referred to through the pronoun *you*. Two other kinds of such reference were not considered here, primarily for practical reasons and to simplify the analysis; but also for other reasons specific to the data used. Nominal reference in which writers name themselves or their addressees is comparatively less frequent, and in written texts like the ones used here, this kind of reference cannot always

be objectively recognised as referring to writers and/or addressees. Similarly, possessives (*your*, *my*, and *our*) and reflexive pronouns (*myself*, *ourselves*, *yourself*, and *yourselves*) were less frequent, and they tend to be used in the same sentence as other pronouns (e.g. *Take this leaflet with you to your doctor.* [LF23]), in which case only one instance of reference is counted.

Studies of pronominal reference, as noted by Fina (1995, p. 380), can be broadly described as either socially-oriented or pragmatically-oriented. The former sets out to explain pronominal usage in terms of social parameters, such as sex, status, formality, etc. (e.g. Brown & Gilman, 1960; Duranti, 1984; Friedrich, 1986; Harré, 1988). The pragmatically-oriented studies of pronouns seek to interpret pronouns in their context taking into account the speaker/writer's pragmatic goals, such as persuasion (e.g. Watson, 1975; Maitland & Wilson, 1987; Kitagawa & Lehrer, 1990; Wilson, 1990; Myers, 1994b; Zupnik, 1994; Connor-Linton, 1995). The present analysis is generally more oriented towards providing a pragmatic account of the pronominal reference to writer and addressee in the data; but it also seeks insight from the social descriptions of the pronouns analysed.

The method used in analysing politeness is based on Brown & Levinson's (1987) detailed study of the phenomenon; Myers (1989) is also helpful with regard to aspects of politeness more specific to written discourse. Brown & Levinson's basic distinction between positive and negative politeness is adopted, leading to two types of corresponding analyses. Strategies of positive politeness were identified by manually going through the data; this was unavoidable because these strategies do not have to be associated with any particular face-threatening act, FTA, and may therefore be used anywhere in the text. However, special attention was given to the opening and closing parts of the texts, as they seem to be potential places for this kind of politeness (cf. Pilegaard, 1997, p.241). The analysis succeeded in isolating some of the common strategies of expressing positive politeness, which were identified based on Brown & Levinson's discussion. However, it was necessary sometimes to use more specific criteria to identify certain strategies; for example, a range of lexical items were associated with the strategy of exaggeration (see 8.4.2), e.g. *very*, *so*, *really*, *extreme*, *surely*, *certainly*, *undoubtedly*, *by no means*, *not only...but*, *even*, *many/a lot of/lots of*, numbers and estimations (the source of which is not provided), and comparatives/superlatives.

The analysis of negative politeness requires precise definition of the FTAs it addresses. To start with, this analysis focuses on 'specific' rather than 'global' FTAs (Johnson, 1992) (or 'shifting', not 'standing' FTAs, to use the terms proposed by Thompson & Collins, 1994). These are associated with particular possibly recurring moves, as opposed to those referring to the interaction as a whole. It is thought that global FTAs are less applicable to the present data, since intrinsic constraints on the addressees' participation, such as those in, e.g., academic presentations, are not as clear here; also writers and their addressees do not know each other, as in the data used by Johnson (1992). In any case, this kind of FTA appears to be addressed using mainly positive politeness strategies. The next step in defining the FTAs to be analysed is to study the four corpora looking for FTAs that seem to be common in each corpus. Two major FTAs were chosen for analysis: requests for action and claims.

Requests represent a basic FTA, as they impose on the addressee to take action; they are "the most common and easiest to identify" (Brown & Gilman, 1989, p.173), and a vast body of literature on politeness is based on analyses of this kind of FTA (e.g. Cherry, 1988; Hagge & Kostelnick, 1989; Pilegaard, 1997; Kong, 1998). This analysis examines two politeness strategies frequently associated with requests in the data: mitigation and indirectness. FTAs mitigated are typically expressed as imperatives; though modulations are also considered requests, they do not seem to be mitigated in the same way, as they rely on the internal degree system of the modals (e.g. *should* instead of *must*) and on modalisation. It was thought that analysing such covert ways of mitigation cannot be objectively accomplished, and that it would lead to problems of overlap with other interactional signals, especially modalisation. Consequently, since this study is concerned chiefly with explicit signals, the mitigation analysis is limited to imperative FTAs. Common signals of mitigation include: *please, just, simply, try to...*, and justification (e.g. *for more information*). Indirectness is expressed primarily using some evaluations and passivisations, in addition to ability *can*, and to a lesser extent *may* in the sense of permission; as mentioned above, these meanings of *can* and *may* need to be inferred from the context.

Unlike requests, claims are not associated with any particular linguistic form and should therefore be precisely defined before they can be recognised in texts. Pragmatically, claims are not fully delimited to the extent that allows differentiating them from other acts (see Schmidt & Kess, 1986, p.49). For the purposes of the present study, however, the working definition

proposed by Myers (1989) is fairly sufficient, particularly since it relates to claims in research articles, which is the case in this analysis. Myers describes a claim as “a statement that is to be taken as the article’s contribution to knowledge” (p.5). In the present data claims were found to be normally stated directly or indirectly in both the introduction and the conclusion sections. In addition, they were sometimes found in the abstract, which helped confirm the original reading of these claims. All instances of claims found were isolated and used for the quantitative and qualitative analyses.

One important task of the present analysis of the signals of Pragmatic Interaction, as is clear from the above discussion, is to focus attention on those aspects of the signals of reference and politeness that are more relevant to the general purpose of the study and to the nature of the specific text types analysed. Politeness in particular is a wide-ranging phenomenon that needs to be re-defined in accordance with the situation at hand. By and large, however, the above methodological overview of how the signals of reference and politeness were dealt with should allow for an adequate description of how Pragmatic Interaction is managed in the data.

5.5 Methodological Constraints

During the design of the study and the identification of the signals to be analysed, some problems were encountered. Although a great deal of effort was made to find ways of solving these problems for more accurate analyses, this was not always possible. In this section, examples of some of these constraints will be given; these examples range from those relating to the early preparatory stages of the study to those specific to the signals investigated or to the nature of the data used. Despite the fact that this analysis would have been more coherent had these issues been completely resolved, the general effect of some of these constraints on the study, as will be clear from the following discussion, could be minimised to a certain degree.

The initial design of the study included a complementary part to the one described in this chapter, where signals of interaction were to be specified using informants’ responses to prepared written texts. The aim was to check whether the elements identified here would correspond to the ones actual readers would also identify. It was not possible to be carried out this part of the study due to constraints of time, though an early informal experiment showed that this could be a plausible method of validating the present analyses. In this experiment, a native speaker who was preparing for an operation was given two texts about her specific

condition: one was an extract from a leaflet, the other from a textbook. Without knowing the source of each of these texts, the informant was asked to evaluate how 'friendly' these texts are by marking the stretches of the text that contribute to this and by answering some relevant questions. The informant's overall impression was that the leaflet extract is more friendly than the one from the textbook, and that some elements, like questions, made this friendliness more explicit. Though no general conclusions can be made from this tentative experiment, it shows, at least, that readers may be aware of the difference in how interaction is managed in texts, and that certain linguistic elements may contribute to interaction more than others.

A second time-related constraint was encountered during the stage of data collection. Building a corpus from scratch is a demanding and time-consuming process. Not only does collecting the texts to be included require a lot of time and effort, especially if they are not available in machine-readable format (like the leaflets and the textbooks), but a wide range of crucial decisions about the scope, quantity, representativeness, etc. have to be taken (see 5.2.1). To avoid this, a search was made in the early stages of the study for an already compiled, dedicated medical corpus. Unfortunately, such a corpus was not available at that time, and a decision was made to build a special corpus of a reasonable size for this analysis³. Though this proved useful in, for example, having a more focused corpus (in terms of the text types and topics included), there are some shortcomings in this corpus that it was not possible to avoid within the time frame allowed. For instance, the original goal was to have 250,000 words from each of the four text types, totalling a million words; also, the corpus is not grammatically and syntactically tagged, which would be helpful in identifying some of the signals studied.

The third example of constraints is caused by the type of signals analysed. Overlap of signals has been mentioned in more than one place above; it was sometimes possible to avoid (as in the case of advance labelling – see 5.4.1), but some other cases of overlap were inevitable: for instance, most questions may be analysed as either predictive elements (Informational Interaction) or strategies of negotiation (Lexico-grammatical Interaction), and certain items can play the dual role of a signal of a discourse pattern and a nominal label at the same time. The signals investigated here are in essence top-level linguistic categories that are normally considered broad areas of study by themselves. Politeness is the clearest example of this, as it encompasses in its realisation many other signals, such as modality and hedging in general. This quality of most of the signals considered in these analyses would of course lead to some

degree of an intersection among them. In cases of total overlap, e.g. politeness and modality/hedging, it was necessary to adhere to the initial categorisation where the signal in question is associated with a particular interactional effect. For example, since modality is associated primarily with the effect of negotiation and not involvement (Chapter 4), it should therefore be analysed as a Lexico-grammatical rather than a Pragmatic Interaction signal. This is not to say that modality/hedging is not an “extremely important resource for the realisation of politeness strategies” (Brown & Levinson, 1987, p.271)⁴; instead, it is assumed that the politeness/involvement aspect of modality actually arises from its intrinsic negotiation effect. This is also what seems to be suggested in Brown & Levinson’s model, mainly through the association of hedging with the want not to ‘coerce’ the addressee⁵ (see also the discussion of the revised framework in 9.1).

From the way the above example of overlap has been dealt with, it is clear that this analysis acknowledges that there are fuzzy areas in linguistic systems where partial or total overlap may occur. Indeed, as noted by Halliday (1985, p.54), “there are relatively few absolute and clearcut categories in language; there are many tendencies, continuities, and overlaps.” Although relatively specified and well characterised systems were opted for here rather than other more general, but less delimited ones, e.g. prediction/labelling/patterning instead of metadiscourse and modalisation instead of hedging, overlap was still unavoidable. Based on theoretical assumptions, as in the above case, these overlaps could be handled in a way that will serve the particular purposes of the analysis. Indeed, accounting for how the signals within and across the three forms of interaction are interlinked is an important goal of the present study (see 9.1). Though normally difficult to achieve satisfactorily, this involves accepting “fuzziness as an inherent and central feature of language” and simultaneously attempting to construct analyses “in as ordered and generalisable a way as is possible” (Thompson, 1996, p.224).

A final example of constraints encountered by this study is related to the nature of the data used. A basic problem with “published writing”, such as the texts used here, is that there is not “just one Hearer, there is potentially a large and diverse audience” (Myers, 1989, p.3). This issue has been discussed extensively in Chapters 2 and 3, and the concept of the reader-in-the-text (Thompson & Thetela, 1995) has been suggested as a useful way of dealing with the texts in the present data. There is, however, another more analytical problem that emerges from this issue of audience, the fact that the addressee’s responses cannot often be straightforwardly

accounted for. Though for some signals, like questions, this problem is less relevant, since a response/answer usually follows, in other cases, such as evaluation, there is no projected textual addressee reaction. In spoken dialogic encounters (e.g. Goodwin & Goodwin, 1992), such responses are important in facilitating analyses. In the present analysis, textual and contextual cues were used to help make explicit some projected addressee reactions, though these cues were not always present (this is an example where informant's responses would have been useful).

In addition to the above major constraints, there were some other less critical problems. Trying to apply systematic models of description on naturally occurring data, for instance, is not always a simple matter, and it necessitates a methodologically looser approach that can account for exceptions and extreme or less typical usages (see, e.g., the discussion of advance labelling in 5.4.1). On the whole, however, all of the constraints encountered were not difficult to overcome, and there were always strong theoretical and/or practical reasons to carry on the analyses notwithstanding these constraints. Despite this, as clear from the above discussion, attempts were made to lessen as much as possible the effect of any of these problems on the general results of each of the analyses.

NOTES

¹ It should be stressed that it is not the aim of this analysis to investigate how, e.g., topics discussed in research articles are presented later in press reports; this coincidence simply demonstrates how the time-scale set allowed comparable topics to be included in the four corpora.

² The following is a rare example of this in the data; despite the imperative form, *Have* here cannot clearly be interpreted as a command, i.e. something the addressee should do. On the contrary, it is a warning, something the addressee should *not* do.

Have one drink too many and the only things that normally suffer are your head and stomach.
[LF01]

³ It is worth mentioning here Vihla's (1998) recent attempt to compile a corpus of American medical written texts, Medicor. Similar to the one used here, Medicor covers both professional and popular texts. But it is slightly larger and includes more text types, e.g. professional editorials, professional manual texts, and popular guidebooks. As pointed out by Vihla (p.79), this is an incomplete corpus that is still not coded or tagged.

⁴ While it is true that modalised propositions can be pragmatically analysed as a politeness strategy (e.g. Simpson, 1989, 1990), on a more delicate level, the value of the modal operator used should be taken into account, since it is possible that "high value modality...also has the implications of assertiveness, decisiveness, crudeness or arrogance" (Zhang, 1991, p.301).

⁵ Negotiation is even considered a primary aspect of a whole class of politeness, off-record politeness, whose strategies allow the speaker/writer to communicate things indirectly "so that the meaning is to some degree negotiable" (Brown & Levinson, 1987, p.69) (see also Myers, 1990 for an analysis of one of these strategies, irony, in academic writing).

INFORMATIONAL INTERACTION ANALYSIS

Starting with this chapter, the signals of the three forms of interaction in the data will be both quantitatively and qualitatively analysed. Informational Interaction signals are the focus of the present chapter, which commences by a re-consideration of the effect of orientation that has been related earlier to this form of interaction. It is suggested that there are two main ways for the realisation of orientation in written texts and that certain signals of Informational Interaction can be more associated with one of these ways or the other. Building on this discussion, the next section provides a general quantitative account of the Informational Interaction signals in the data, indicating how addressees are guided in each corpus of texts. This concept of guidance is further pursued in the following sections, where the guidance effect of each of the signals is explored. Guiding expectations through prediction categories will first be discussed, focusing on the types of texts in which this kind of guidance is quantitatively more important; similarly, an analysis of the guidance of interpretations through labelling will then be attempted. Patterning, as a way of organising longer stretches of text, will be investigated separately. A concluding section will sum up the discussion, emphasising the role of guidance in the management of interaction in written texts.

6.1 Introduction

It has been indicated in the short introduction to Informational Interaction in Chapter 4 that it refers mainly to the structuring and signalling of information in written discourse and that it is generally associated with the effect of orientation. With this in mind, the present section will attempt to look more closely at the effect of orientation and the two common linguistic features that have been given as examples of how orientation – and by extension Informational Interaction – is realised in written texts, that is signalling and text organisation. The discussion here will principally seek to go beyond the basic theoretical account provided earlier of these two linguistic strategies, aiming to show how signalling and organisation actually work as interactive devices in written texts.

To start with, it is worth re-examining the effect of orientation from the perspective of how it is actually performed in written texts. In actual texts, it may be possible to recognise orientation in two different senses: guiding the addressee's expectations and guiding the addressee's interpretations. Orientation is at issue whenever the addressee is instructed to predict a particular linguistic event or is encouraged or guided to interpret a particular piece of language in a certain way. Consider this example of a newspaper headline:

- (6-1) **Should salt come with a health warning?:** Food giants say we don't need to cut salt intake.
But studies suggest such advice should be taken with a pinch of.. er.. cynicism
[PRIN39]

The three sentences comprising this headline of a newspaper report are not just ordinary simple sentences conveying some meaning that can be substituted for by the sum of their wording. The first point to notice concerning this example is that the question at the beginning is unlikely – in normal circumstances – to stand on its own as a complete discourse. This is because it raises expectations of some kind of a follow up. Furthermore, the question *Should salt come with a health warning?* has not been properly and fully answered in the rest of the headline. It may be true that the two competing answers have been hinted at, but still the question guides the addressee to expect more from the writer about these answers in the body of the article. Indeed this is what the article is chiefly concerned with, namely how harmful salt is to our health. Another signal of something to come in the text is the neutral reporting verbs *say* and *suggest*. A report of this sort indicates the writer's detachment from what is reported allowing the addressee to expect some form of relevant

comment or evaluation from the writer to follow. Again this expectation is fulfilled in the main body of the article in question.

Questions and reporting as exemplified in 6-1 above are two of six categories identified by Tadros (1994) as ways of prompting prediction in texts. Tadros (1989, p.18) defines prediction as “a definite commitment made by the writer to the occurrence of a specific linguistic event later in the text.” The other four predictive categories are: enumeration, advance labelling, recapitulation, and hypotheticality. A brief description of each of these categories follows (see Tadros, 1994 for a detailed characterisation of the six categories).

Enumeration (example 6-2) and advance labelling (example 6-3) are relatively straightforward predictive markers. They convey the interactive effect of orientation by guiding the addressee to expect what they plainly state is going to be mentioned or given.

(6-2) **There are three rates of Incapacity Benefit: a short-term lower rate, a short-term higher rate, and a long-term rate.**

[LF13]

(6-3) **At first glance, the Emotion Training parent may seem much like the Dismissing Parent because both directed Joshua to think about something other than staying home. But there is an important distinction. As an Emotion Trainer, Diane acknowledged her son’s sadness, helped him to name it, allowed him to experience his feelings, and stayed with him while he cried.**

[PRTL34]

Less explicit are recapitulation (example 6-4) which draws the addressee’s attention to some information previously mentioned in anticipation of some relevant elaboration, contrast, etc., and hypotheticality (example 6-5) in which a hypothetical world is created allowing for some fact or generalisation to come next.

(6-4) **We have already mentioned that anxiety and depression can make pain worse. People with cancer need to be able to talk about their worries and fears with those who are close to them. ...**

[LF11]

(6-5) **If the health of a group of people who shop at Sainsbury’s were to be compared in enough detail with that of a group of people who shop at Tesco’s, eventually evidence of a post-Sainsbury’s or post-Tesco’s syndrome would emerge. The search would then be on for environmental factors to explain the difference.**

[PRTL27]

The general principle that allows these six categories to be predictive is that they consist of what Tadros calls a predictive V member that creates the expectation of a predicted D member. These are highlighted in bold face in the above examples.

A similar orientational effect of guiding the addressee's expectations can be achieved through the large-scale organisation of discourse. Examples of this include discourse patterns described by Hoey (e.g. Hoey, 1979, 1983/1991, 1986, 1988, 1994, 1997, 2001; Hoey & Winter, 1986). Mention has been made in Chapter 4 of the Problem-Solution pattern. Let us now examine a simple example of this pattern:

(6-6) "*I'd love to try a new sport, but I don't have the time*"

It's a common complaint and there's only one solution – make time. You should aim to make exercise an enjoyable 'habit' so that it becomes a regular part of your life - just like cleaning your teeth. You'll soon find yourself with new-found energy which will enable you to achieve things more quickly and efficiently – in effect making more time for yourself.

[LF16]

Two parts of the pattern are included in the quoted speech at the beginning of this example: the Situation (*I'd love to try a new sport*) and the Problem (*I don't have the time*). The Problem is signalled by *don't have* – not having something wanted or required is a problem; *complaint* is another signal of the Problem. The Solution is explicitly signalled: *there's only one solution – make time*. The signals *new-found energy*, *enable you*, *achieve*, *more quickly*, and *efficiently* indicate a positive Evaluation of the Solution, which wraps up the pattern.

Discourse patterns set up predictions because each part of the pattern instigates a question that needs to be answered in the following text for the discourse to be perceived as complete¹. As pointed out by Hoey,

patterns can be conceived of as configurations of questions that a writer answers, such that the selection of one question strongly predisposes the writer to select, and the reader to expect, the others.

(Hoey, 1988, p.64)

The above example, for instance, can be represented as a sequence of questions as shown in Figure 6-1 below. So it is the occurrence of part of the pattern that naturally invokes a question about another part of the same pattern, and so on.

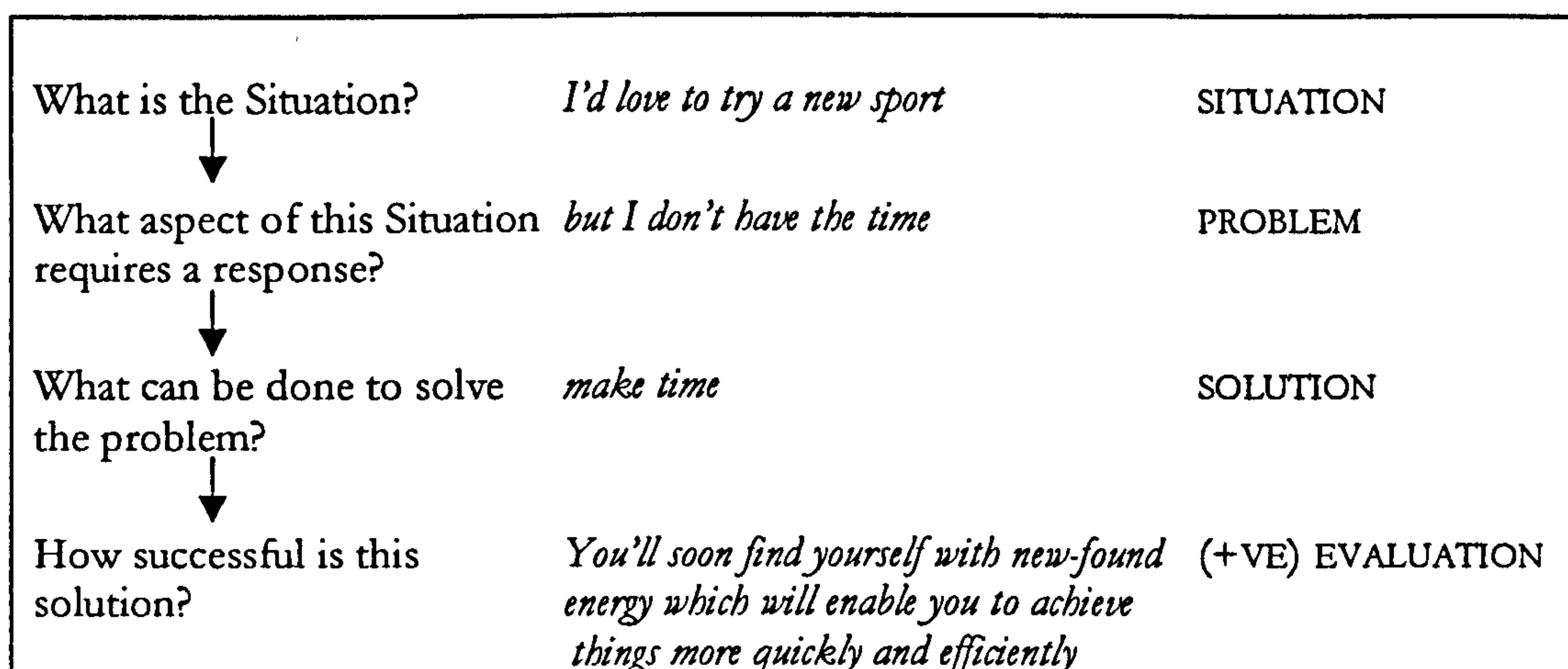


Figure 6-1: Example 6-6 represented as a series of questions highlighting the Problem-Solution pattern.

Along with guiding expectations, discourse patterns also encourage certain interpretations of parts of the text. The labels given to the different parts of an organising pattern, like 'Problem' and 'Solution', are also interpretations of that part of the text. So, for instance, 'not having time' in the example above is clearly meant to be interpreted as a 'problem'. This interpretation is reinforced by the Problem-Solution pattern underlying the text and the signals of this pattern. The interactive role of discourse patterns can therefore be conceived of as a combination of guiding expectations and guiding interpretations.

Guiding the addressee's interpretations is generally less salient than the guidance of expectations. This is probably caused by the fact that devices which guide interpretation may well add up to, or at least not contradict, the interpretation the addressee would have come up with anyway, especially since they often follow the discourse labelled. I would argue that these devices still guide interpretations; neutral devices share with the addressee the logical or expected interpretation of a preceding part of the text. For instance, the label *advice* in 6-1 above is a substitution for the *food giants'* statement that *we don't need to cut salt intake*. Interpreting this statement as *advice* may not be unexpected; the label therefore supports and confirms an interpretation that is likely to exist.

On the other hand, there are sometimes labels that seem to influence the interpretation of a particular part of the text in a rather explicit way. This is mostly done by either using inherently evaluative head nouns in the label or by modifying a neutral head noun. Evaluative labels are those that indicate either positive (e.g. *fact, improvement*) or negative (e.g. *claim, nonsense*) attitudes towards the labelled proposition. An example of modification

occurs in 6-6 above in which the quoted speech is encapsulated as a *common complaint*. The head noun *complaint* may not add more to the interpretation of the preceding text; the textual modification with *common*, however, gives the label as a whole more interpretive force, that is the addressee is not alone in this complaint.

Having illustrated how the various Informational Interaction devices work in texts, the picture we have come up with of these devices and their interactive rôle is more or less similar to Figure 6-2. Prediction helps in guiding the addressee's expectations; labelling guides interpretations; and text patterning helps with both types of guidance (though it could be argued that the guidance of expectations takes precedence over that of interpretations). The diagram also indicates that labelling can guide expectations just as prediction can guide interpretations; nevertheless, these are secondary functions of both devices and will not be central to the present analysis.

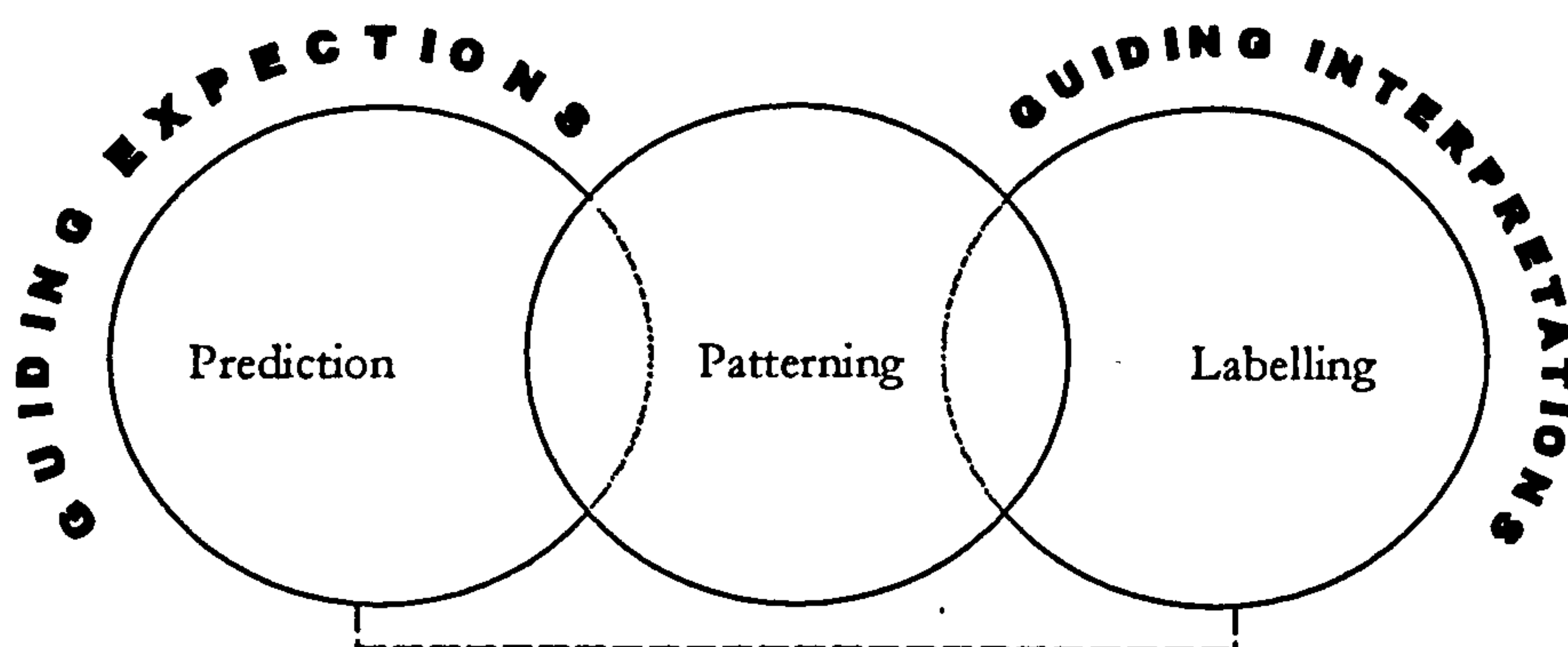


Figure 6-2: Guidance of expectations and interpretations through text prediction, labelling, and patterning.

It is fairly obvious from the above discussion and from Figure 6-2 that prediction, labelling, and text patterning have some connections both in how they are linguistically realised and in their interactive function in texts. In spite of this, studies of these phenomena have mostly focused on one of them or the other in isolation (on prediction see, e.g., O'Brien, 1987; Tadros, 1989). J. M. Sinclair (1993) is an exception, at least partly; he examines the interactive use of what he calls "encapsulation" and "prospection", which are in essence the equivalents of labelling and prediction, though much broader in scope. In accordance with the discussion above, J. M. Sinclair (p.6) commences his treatment of these phenomena with the assumption that "we can expect *guidance* in the text to both what has gone before and what is yet to come" (my emphasis). Guidance is therefore what essentially makes prediction and labelling – in addition to text patterning – important interactive strategies.

The following analyses, it is hoped, will further illustrate this guidance interactive effect in the data. The first part of the analysis provides a brief quantitative overview of the different linguistic elements of Informational Interaction. In the light of this quantitative analysis, a more thorough investigation of some examples of prediction, labelling, and text patterning will be sought. The aim will mainly be highlighting the orientation effect and further examining the two perspectives in which it can be realised, guiding addressee's expectations and guiding addressee's interpretations.

6.2 Quantitative Overview

The aim of this section is to analyse in quantitative terms the management of Informational Interaction in each type of the data, and to investigate any similarities and/or differences that may exist. The findings will hopefully help us understand the way these texts construct Informational Interaction with their addressees, leading to some general useful insights into the kind of addressee of each of these texts. Table 6-1 below summarises these findings by showing the frequencies of the signals of Informational Interaction analysed in the four corpora at hand.

SIGNAL CORPUS	Enumeration	Advance Labelling	Predictive Questions	Prediction SUBTOTAL	Interpretive Labelling	OVERALL
Leaflets	93 (35.77)	33 (32.35)	190 (66.43)	316 (48.77)	59 (14.97)	375 (35.99)
Textbooks	103 (39.62)	27 (26.47)	9 (3.15)	139 (21.45)	106 (26.9)	245 (23.51)
Press Reports	25 (9.62)	2 (1.96)	82 (28.67)	109 (16.82)	109 (27.66)	218 (20.92)
Research Articles	39 (15)	40 (39.22)	5 (1.75)	84 (12.96)	120 (30.46)	204 (19.58)

Table 6-1: The frequencies of the Informational Interaction signals in each corpus of the data. (Figures in brackets are percentages of the same signal across the four corpora down a column).

First, it should be noted that only three strategies of prediction have been included in the table. The other three – reporting², hypotheticality, and recapitulation – are very rare in all four types of the data and have therefore been regarded as having a relatively limited role in the management of Informational Interaction in the present corpus. However, this does not mean that these three predictive devices are in any way less predictive than the ones included in the table (see 6.1 above for some illustrative examples). It appears that writers of the types of texts analysed here rely predominantly – though variably – on advance labelling, enumeration, and predictive questions to guide their addressees. Reasons behind the preference of certain predictive categories rather than others in certain texts may be

related to the nature of the topics discussed (cf. Tadros, 1989, p.29), the genre conventions, and the expectations of the addressee and his/her familiarity with the predictive signals used.

The right-hand most column of the table shows the overall frequencies of both prediction and labelling in each type of the data. This makes it possible to draw general conclusions about the extent to which writers exploit Informational Interaction. With 375 instances of prediction and labelling, medical leaflets clearly utilise Informational Interaction more than the other three types of texts which are more or less similar in this regard. As such, it could be said that the evidence from this data suggests that writers of medical leaflets use Informational Interaction signals more than those of the medical textbooks, research articles, and press reports.

Though interesting, the fact that in medical leaflets there is comparatively a lot of guidance taking place does not actually tell us much about how Informational Interaction is managed. In the other three corpora of texts as well, the abundance of guidance is still obvious. If we examine as a first step the figures of both the subtotal of prediction and that of labelling, and then those of the three signals of prediction included, it becomes apparent that there are sharp differences in the way Informational Interaction is managed in each of the four types of texts.

Most of the guidance in medical leaflets is done through prediction (316 instances) rather than labelling (59 instances). Prediction is also more frequent in the textbooks (139 instances), but it is not that marked; and in the press reports, the guidance is equally accomplished by prediction and labelling. It is only in the research articles where most guidance is made through labelling (120 instances) rather than prediction (84 instances). In terms of Informational Interaction, these results indicate that there is more guidance of expectations in the leaflets and the textbooks; equal guidance in the press reports; and more guidance of interpretations in the articles. The guidance of expectations in the leaflets in particular is the most obvious of all.

Furthermore, the guidance of expectations in the data is not uniformly performed using the same predictive strategies. In the medical leaflets and the press reports, guiding expectations is mostly done through questions; in the textbooks through enumeration; and in the research articles through both advance labelling and enumeration. It is worth noting that these results are only true within each type of texts. The clearest example of this in the

table is enumeration which occurs more often in the leaflets than in the articles; despite this, the role it plays in guiding expectations appears to be more important in the articles than in the leaflets.

The above observations provide a useful overview of the Informational Interaction signals that tend to be used more frequently than others in each of the four corpora analysed. However, another essential aim of this analysis is to identify more accurately those signals that seem to be markedly used in each corpus relative to the other three corpora. This can be achieved through the calculation of the 'markedness score' of each of the signals in each of the four corpora (see 5.3). These are presented in Table 6-2, and are diagrammatically plotted in Figure 6-3, so that any patterns of distribution can be easily identified.

Some of the tendencies noted above are confirmed by the 'markedness' calculation. For example, the leaflets are clearly positively marked in terms of the role played by predictive questions (and prediction in general) and the overall utilisation of Informational Interaction signals; in contrast, leaflets are negatively marked as far as interpretive labelling is concerned. Another observation not obvious from the above discussion is that the textbooks corpus is not marked with regard to the overall Informational Interaction signals, but its position very close to the neutral separation line in Figure 6-3 indicates that there is some kind of noticeable role played by these signals in this type of text (the same could also be said about prediction signals). More importantly, however, the 'markedness' calculation indicates that some of the signals considered important above are not necessarily positively marked. Enumeration in the research articles, for instance, is actually negatively marked; also, while predictive questions are clearly marked in the leaflets, they are close to the neutral line in the press reports, despite the fact that they are quite frequent in both corpora.

An interesting observation that the plotting of the 'markedness scores' in Figure 6-3 makes clearer is the pattern in which both prediction and labelling are distributed across the four corpora. It appears that where prediction is positively marked in a particular corpus, labelling is negatively marked (with almost the same degree), and vice versa. This is most obvious in the case of the leaflets characterised by positively marked prediction (a score of 1.47) and negatively marked labelling (a score of -1.44). This is probably not surprising, as it underlines what has been suggested so far in this chapter about the complementary interactive/guidance roles played by both prediction and labelling.

SIGNAL CORPUS	Enumeration	Advance Labelling	Predictive Questions	Prediction SUBTOTAL	Interpretive Labelling	OVERALL
Leaflets	1.16 (0.73)	0.41 (0.45)	2.38 (1.36)	3.95 (1.47)	0.74 (-1.44)	4.69 (1.46)
Textbooks	1.29 (1)	0.34 (0.1)	0.11 (-0.72)	1.74 (-0.22)	1.33 (0.29)	3.06 (-0.2)
Press Reports	0.31 (-1.04)	0.03 (-1.45)	1.03 (0.12)	1.36 (-0.51)	1.36 (0.38)	2.73 (-0.54)
Research Articles	0.49 (-0.67)	0.5 (0.9)	0.06 (-0.77)	1.05 (-0.75)	1.5 (0.79)	2.55 (-0.72)
TOTAL	3.25	1.28	3.58	8.1	4.93	13.03
Mean	0.81	0.32	0.9	2.03	1.23	3.26
Standard Deviation	0.48	0.2	1.09	1.31	0.34	0.98

Table 6-2: The calculation of the 'markedness' of the Informational Interaction signals in each corpus of the data. (Figures are per 1000 words; figures in brackets represent the score of 'markedness' for each signal as calculated from the mean and standard deviation).

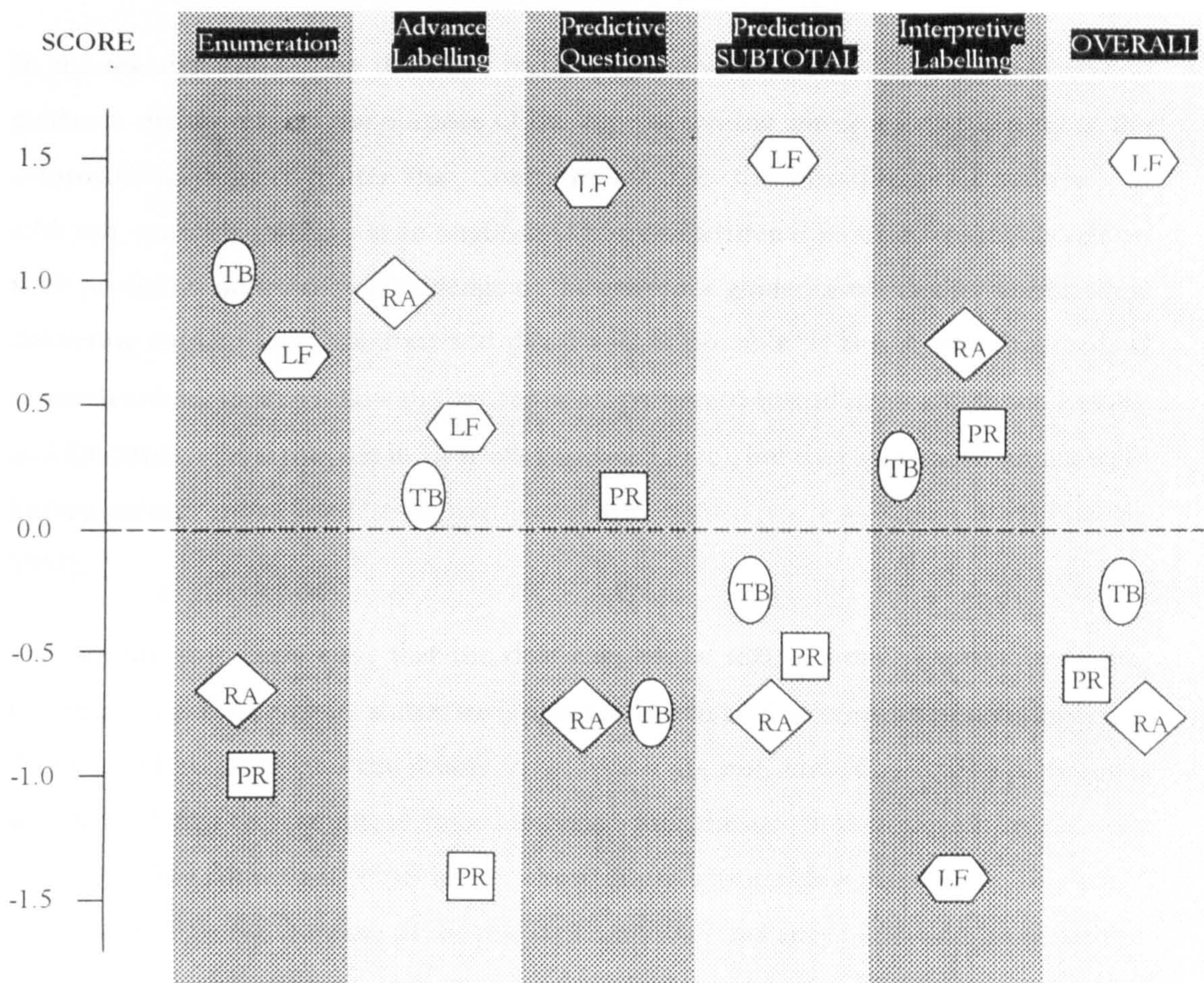


Figure 6-3: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Informational Interaction signals.

Key:

LF (Hexagon)	= Medical Leaflets	PR (Square)	= Medical Press Reports
RA (Diamond)	= Medical Research Articles	TB (Oval)	= Medical Textbooks

Interpreting the above results reflects much of what we expect each type of text is doing and the characteristics of its addressee. One broad distinction indicated by these results – that there is more guidance of expectations in the textbooks and in the leaflets – reflects the unequal expert/learner relationship between writer and addressee in these text types. The status of the addressee makes the writer assume more guidance is needed here than when he/she is writing to peers. Classified broadly as educational material, textbooks and leaflets require the writer to adopt the role of the ‘interactive facilitator of learning’ (Davies, 1992). This involves not only knowledge of addressee predictions, but also utilising the means that help control and fulfil as overtly as possible these predictions. In the leaflets, the addressee’s questions and concerns are unequivocally tackled through question/answer pairs; and in the textbooks, the need to “arrange facts in order” (Myers, 1992, p.13) and memorise them is being fulfilled primarily through enumeration.

In the research articles, on the other hand, the relative prevalence of the interpretation guidance signals reflects the purpose of this type of writing where it is the density of the informational subject matter that counts rather than the metadiscoursal content³. In addition, research articles – as an established genre of written discourse – probably rely on their proficient addressee’s knowledge of the genre for guidance with expectations while delivering content in as compact and direct way as possible. It is not only that medical research articles mostly follow the conventional pattern of Introduction, Methods, Results, and Discussion (as is the case in all articles analysed here), but they also utilise certain well-known generic ‘moves’ and ‘steps’ to organise information (see, e.g., Swales, 1990; Nwogu, 1997).

To sum up, it is fairly clear that the dual role of the text in simultaneously providing information and guiding its addressee is always there in all four corpora of texts analysed. The type of guidance and the means to achieve it are not, however, equally distributed across the data. For example, in some contexts – as is the case in the research article – the role of guiding addressees’ expectations through prediction is less prominent. This could be due to the general purpose of the text itself and the familiarity of the addressee with its generic conventions. Notwithstanding these variations, the important conclusion to be made then is that written discourse, mainly through Informational Interaction mechanisms, guides its addressee to expect and interpret information in a certain way that accords with both his/her and the writer’s purposes of the text.

6.3 Guiding Expectations

Predictive signals – enumeration, advance labelling, questions, reports, hypotheticality, and recapitulation (Tadros, 1994) – have been associated earlier in this chapter with the specific interactive function of guiding the addressee's expectations. This section sets out to demonstrate the role of the first three of these signals in the guidance of expectations. Reports, hypotheticality and recapitulation, as mentioned in 6.2 above, are not frequent in the data and will not therefore be considered. Another aim of this analysis is to highlight any differences and/or similarities in the choices from these signals across the four types of texts comprising the data.

6.3.1 Enumeration

Enumeration is perhaps one of the most basic strategies of signalling to the addressee what to expect from the text. In its most simple form, it tells the reader to expect a list of a precise number to be immediately mentioned:

(6-7) **Two** types of non-union are seen: **(1) hypertrophic** and **(2) atrophic**.
[TB05]

In this example, not only an exact number of what to be mentioned is given (*two*), but the items mentioned – *hypertrophic* and *atrophic* – are further numbered. For most addressees, this might be regarded as 'over-guidance'; but in the context of this particular example, which is taken from a medical textbook, guidance of this sort is the norm rather than the exception. Making explicit guidance and showing the reader how the predicted element is related to the predictive one is a feature of the textbooks that is not as frequently encountered in the other types of data. However, examples of less marked guidance are also frequent in the textbooks, as in this example where the predicted element is not given numbers:

(6-8) There are **four** types of ischaemic stroke: **large vessel**, **small vessel**, **venous** and **global**.
[TB04]

Inexact numerals like *many*, *a number of*, and *several* also exist in the predictive part of enumerations, though they are almost always accompanied by either numbered or bulleted list of items in the predicted part. But the general tendency in textbooks is to give exact numerals with numbered or unnumbered lists.

Contrary to this, the tendency in medical leaflets is to use inexact numerals, usually with unnumbered items in the predicted element. In the next example, the predictive part includes an inexact numeral (*many*) and the factors mentioned in the predicted part are not numbered:

- (6-9) Yes, but the success depends on **many factors: type of epilepsy, accuracy of diagnosis, accuracy of treatment, compliance, associated handicaps and social problems.**
[LF21]

This difference between the textbooks and the leaflets in how things are numbered may be related to the function for which writers of both types of texts use enumerations. In example 6-9 not all the 'factors' listed are discussed further in detail, while in 6-8 each of the four 'types of stroke' mentioned are then discussed specifically in some depth. So in terms of the presentation of information, in 6-9 it is the enumeration *per se* that is intended; but in 6-8 the enumeration is only a way of setting the scene for further focused discussions.

As is obvious from the above examples, it seems that the predicted member in enumerations is potentially composed of two parts: the primary part is the one labelled in the predictive member, the *types* in 6-7 and 6-8 and the *factors* in 6-9; the secondary part is represented by the details of the elements of the primary part that follow. While the prediction of the primary part is the result of the existence of the predictive member, prediction of the secondary details is not as straightforward. A number of possibilities for this prediction can be mapped as shown in Figure 6-4. First, where the V member consists of a definite number, e.g. *four, five*, etc., it is most likely that details about each of the elements of the D member will follow, regardless of whether the D member is numbered or not. Second, where the V member consists of an indefinite number, e.g. *many, several*, etc., then it depends on the predicted member: if it is numbered, details are likely to follow; if not, there are normally no details. Examples of the first possibility are frequently encountered in the textbooks. The second possibility is common in the leaflets normally with no numbering or details provided.

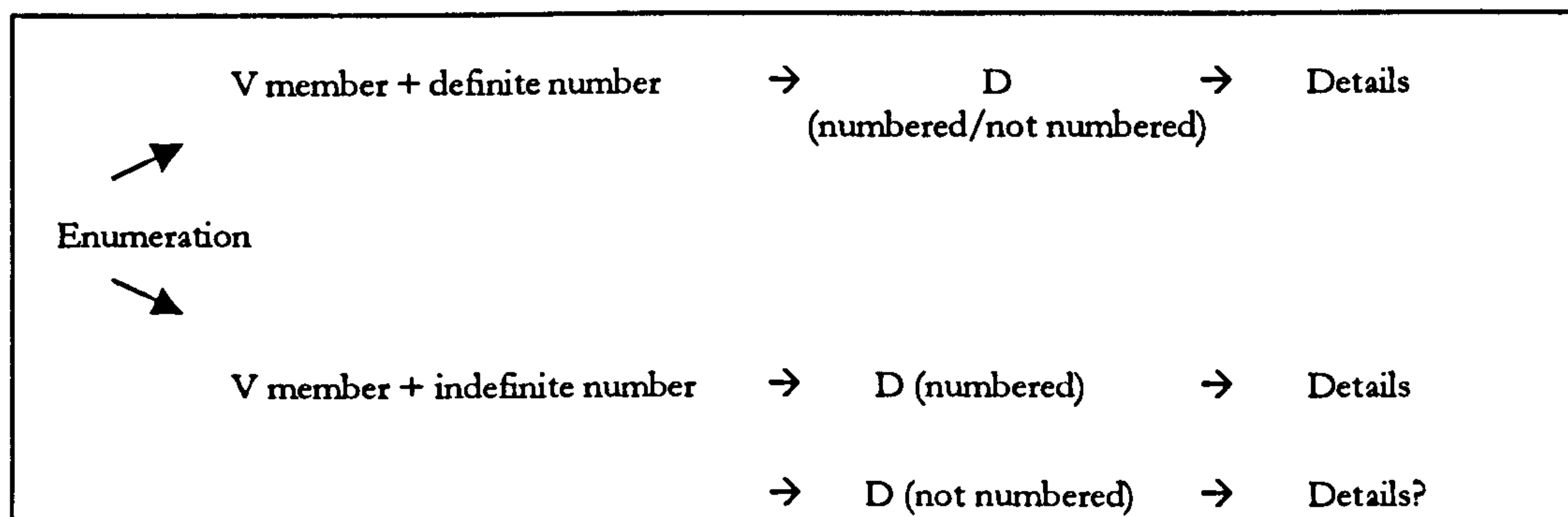


Figure 6-4: Mapping the possibilities of the prediction of details of the predicted member in enumeration.

Overall, enumeration is clearly a powerful expectation guidance device in both the textbooks and the leaflets corpora. In the textbooks corpus in particular, as indicated by the analysis above, enumeration has a far-reaching predictive function. It does not only help organise information and create expectation of the predictive member, but it seems also – under the conditions spelt out above – to consistently guide expectations of more details of the elements of the predictive member to follow. As such, enumerations can both organise and introduce information at the same time. This is one reason why they are crucial to the management of Informational Interaction in the textbooks, as has been shown also by the quantitative analysis in 6.2.

6.3.2 Advance labelling

Advance labelling, as shown in 6.2, is clearly positively marked in the research articles and the leaflets corpora. In both the research articles and the leaflets corpora, it appears to work in similar ways. A common feature of advance labelling in these two types of text is that it is most likely to be used to indicate to the addressee at some point at the very beginning of the interaction what to expect the whole leaflet or research article is going to inform or do for him/her⁴. The majority of advance labels in these two text types are of this kind, though they may occasionally occur in the body of the text.

The first example below is taken from the first paragraph of a medical leaflet, whereas the second represents the last two sentences of an introduction to a research article:

- (6-10) **This leaflet will help you decide** on the method of contraception most suited to you. **It shows** all the available methods, **explains** how they work, how reliable they are and the main advantages and disadvantages. **It also tells** you where you can go for contraception.
[LF02]

(6-11) **We undertook a prospective study of patients who presented with a first seizure, to assess the diagnostic use of early EEG, sleep-deprived EEG, and MRI. We aimed to devise an improved strategy for the clinical and laboratory investigation of patients with this common problem.**
[RA07]

In as much as they guide the addressee's informational expectations, and given their position at the start of the text, both examples are clearly similar. But in terms of how they perform this interactive function and the purpose of this, some critical differences have to be noted. The first thing to note is that the participants in both examples are not the same: in 6-10 it is the *leaflet* and *you*, and in 6-11 it is *we*. These two examples are typical of almost all the other instances of such advance labelling in both the leaflets and the research papers. For the leaflets, *leaflet* or the pronoun *it*, as in this example, are typically opted for as a participant; for the research papers, it is *we* that is normally chosen in this sort of advance labelling.

Another distinction to note is that while the research article promises to provide information to the addressee based on work done by the writer, the leaflet undertakes to do more than just providing information, that is to *help the addressee decide on a suitable method of contraception*. This has of course to be done through some informational input to the addressee, but it is interesting that the leaflet is declaring that the reader should expect actual help with contraception and not just some general information about it.

What these points of difference between these forms of advance labelling in medical leaflets and research articles indicate is that it looks as if there is advance labelling that is addressee-oriented, as in the leaflets, and advance labelling that is writer-oriented, as in the research articles. In the leaflet the writer detaches him/herself and the leaflet and the addressee become participants; and in the research article the writer – rather justifiably – is stressing him/herself as the only participant who has discovered the information the addressee should expect.

6.3.3 Predictive questions

As discussed in 6.2 above, predictive questions are not prevalent in all types of the data. They are encountered in high frequencies in the leaflets and to some extent in the press reports. However, the way predictive questions work in the leaflets appears not to be the same as that in the press reports – at least in some respects. The most noticeable difference is that in medical leaflets predictive questions occur overwhelmingly as section headings or

sub-headings. Their role in this case is to introduce topics in a logical sequence. Consider the following example which introduces the topic of ‘the different types of Epilepsy’:

(6-12) **Are there different types of Epilepsy?**

Epilepsy may take many forms...

[LF21]

Such heading-positioned predictive questions are not as frequent in the press reports. The only possible resemblance to these questions are those that form part of the headline of some press reports and are then dealt with throughout the whole text:

(6-13) **How safe are supplements?:** The benefits of high-dose nutrients are being called into question

[PRIN37]

(6-14) **Is God good for your health?:** Prayer, say the scientists, may actually heal the sick

[PRIN38]

These are issue-raising questions (see Thompson, 1997, p.162). They are often discussed in great detail, but – unlike those in medical leaflets – no definite answer is offered. Nevertheless, this does not make them any less predictive, as usually not only one answer but many are proposed.

It is worth noting that the two questions above from the press reports are different in their orientation; while 6-13 is information-oriented, 6-14 is addressee-oriented through the personal reference *you*, i.e. it addresses the reader directly. This type of predictive question occasionally occurs in the press reports, but it is much more frequent in the leaflets. Not only this, but a more direct addressee-orientation is also frequent:

(6-15) **WHERE DO YOU GO FOR FAMILY PLANNING?**

You have four choices:...

[LF14]

(6-16) **Who will care for me?** Your GP is the doctor who will have overall responsibility for your care,...

[LF12]

The last example above is a question that is being put in the reader’s mouth. It is possible that further orientation of questions to the addressee will make him/her expect a definite and direct answer to follow, as is typical of this kind of question; this is in contrast to the less addressee-oriented questions, e.g. issue-raising, where a definite answer is not necessarily provided. This is probably why extreme examples like 6-16 are absent in the

press reports data, since an important role of the questions there is to raise topics rather than provide definite answers.

In conclusion, predictive questions in both the leaflets and the press reports clearly have an important expectation guidance function. This is particularly true in the leaflets, where the addressee-orientation of predictive questions allows for a definite answer to be predicted. Such a conclusion is supported by the quantitative overview in 6.2 about the major role played by this predictive device in the leaflets. Overall, the different functions predictive questions perform, as demonstrated above, are more evidence of their general importance to the management of Informational Interaction.

6.4 Guiding Interpretations

Labelling performs a number of functions including cohesion and organization. The focus of the present analysis is on the specific function of the guidance of interpretation. It should be noted that these functions are not necessarily mutually exclusive. For example, the textual cohesive function of reiteration (Halliday & Hasan, 1976) is almost always there, while the guidance of interpretation may not be obvious in some instances. There is at least one case where no guidance of interpretation appears to be involved, that is the case of unmodified 'text nouns':

- (6-17) We aimed to develop a comprehensive, rapid diagnostic strategy for patients who present to hospital emergency departments with an **unprovoked first seizure**. This **term**, as commonly used, refers to a first tonic-clonic seizure, which is the dramatic and generally recognised type of seizure that usually brings a patient to medical attention.
[RA07]

Text nouns, as identified by Francis (1994), are a subgroup of metalinguistic labels which refer to the formal structure of texts. They represent the extreme case where a label functions primarily as a cohesive device and "there is *no* interpretation: they simply label stretches of preceding discourse whose precise boundaries they define" (p.93, my emphasis). So the label *term* in 6-17 is simply a way of referring back to previous discourse avoiding the necessity of repetition. In the data, only nine instances of two such text nouns, *term(s)* and *questions*, are encountered. It should be noted, however, that though they do not in themselves involve interpretation, this is still possible by using evaluative modifications with them (e.g. These **vital questions**... [PRTM11]).

It is obvious from the above that the interpretive force of labelling depends to a great extent on the evaluative nature of the head noun and/or its modification. These are clearly important aspects of how labelling guides interpretation as will be demonstrated later, but it is also important to stress that even where no direct evaluation is involved labelling can still function as an interpretation-guiding device. This is brought about by the fact that labelling is intrinsically a choice from alternatives each of which guides interpretation in a certain way. In example 6-18 below, the writer uses the label *obligation* to align the preceding discourse which contains the lexicalisation of this label, i.e. *to recognize foreign material and render that material harmless*, with what follows. To compare the work of the body immune system with that of the national defence, using the label *obligation* is perhaps more forceful and fitting than say *function* or even *task*.

(6-18) The immune system is a wonderful and complex defensive system designed to **recognize foreign material and render that material harmless**. This **obligation**, as you will see, is more involved and demanding than national defence.
[TB08]

Appropriately labelling prior text is important in establishing a shared appreciation of the significance or otherwise of that text to the extent that such appreciation may act as an excuse for further elaborating on the topic or not. In 6-18 the strong label the writer uses for the function of the immune system in the body – among other things – makes it legitimate to devote the whole chapter from which these two sentences are the first to the discussion of this complex system. This is clearly not the case with the label *preventive measures* in 6-19 below. Here the textual modification *preventive* guides the addressee to interpret the measures mentioned before as irrelevant to the present textbook about ‘operative’ dentistry and thus accept the fact that they *will not be discussed further*.

(6-19) Theoretically a plaque-free tooth surface will not decay, but complete elimination of plaque is not possible in some areas (e.g. fissures) and not always practical in other areas (e.g. approximally, where plaque elimination requires the skilful use of floss). However, **in other areas (e.g. cervically) effective plaque control will prevent caries**.
Since this is a textbook of operative dentistry rather than preventive dentistry, these **preventive measures** will not be discussed further.
[TB09]

These two examples demonstrate how labelling is used in the data to influence interpretation even when the inherent meaning of the head noun or its modification are not explicitly evaluative. But as indicated above, inherently evaluative labels are more direct

in guiding interpretation. Examples of such labels in the data include *bias*, *lack*, *hurdle*, *problem*, and *complication* as negative evaluative labels, and *finding*, *result*, and *improvements* as positive evaluative ones.

(6-20) Sisters and daughters of women with Li Fraumeni syndrome can already opt for genetic analysis of their own DNA. Half of them will be reassured that their risk of cancer is no greater than that of the general population; **the other half will have seen the likely wording of their own death certificates and, more chillingly, they will have a fair idea of the date on those certificates.** Because of the complexity of the BRCA1 coding region, genetic screening for a defect at this site would involve not one but several DNA tests...Women undergoing the test will need to be provided with more details than “yes, there is an abnormality” or “no, there is not”...Clearly, women at low risk of the defect should be spared these **traumas.**

[PRTM06]

(6-21) Data presented here indicate that a sodium intake lower by 100 mmol - for example, 70 instead of 170 mmol/day - **could result, in adults (average age 40) in systolic pressure lower by 3-6 mm Hg and in slope in systolic pressure from age 25 to age 55 less by 10 mm Hg.** Extensive data from prospective population studies indicate that such **improvements** in average systolic pressure levels could substantially reduce rates of major cardiovascular diseases and mortality from all causes.

[RA05]

The label *traumas* in the first example above strongly shows how unpleasant are the feelings of the women who have been told their risk of the disease is high. The writer devotes the paragraph that follows (not shown) to the necessity of providing these women with the psychological support they need. Thus, it is perhaps not accidental that the writer chooses a label with negative connotation in this example and not, e.g. a neutral one like *feelings*. The label *improvements* in the second example, on the other hand, indicates the writers' positive evaluation of the preceding discourse. Again alternatives like *change* or *decrease* could be used. But the writers are attempting to stress in this concluding paragraph of their study their main message, that low intake of salt leads to lower blood pressure preventing death from many cardiovascular diseases. It seems natural at this final stage of their paper to evaluate the implications of their findings positively.

Despite their obvious role in guiding interpretations, such evaluative head nouns are not common in the data. Relatively more common are evaluative modifiers of neutral head nouns as shown in these two examples:

(6-22) When, and ONLY when, these plasma products are surplus to UK requirements, they will be offered abroad to those countries that are unable to meet their own needs. Under such circumstances, any revenue generated is ploughed back into the NBS to help subsidise blood collection and research into future products and therapies.

This judicious use of plasma products is preferable to simply destroying surplus plasma...

[LF17]

(6-23) The only successful way to reduce weight is to eat less. Patients are usually reluctant to accept this comfortless doctrine, hoping for magic tablets or injections.

[TB01]

In the first example taken from a leaflet explaining how donated blood is treated, selling blood to other countries is being labelled as *judicious use*. The positive modifier *judicious* guides the addressee to interpret that use as something good. It seems that the writer is concerned with how the addressee is going to interpret this use of his/her blood. This is why he/she feels important to positively comment on this use by using the modification *judicious*. On the other hand, the label in the second example is negatively modified: *comfortless* is a negative modification of the head noun *doctrine*. In accordance with its context this labelling emphasises the patients' feeling about diet as a way of losing weight.

As may be obvious from the examples above, in qualitative terms, there are no significant differences in the way labelling works as a device of guiding addressee interpretation across the four corpora comprising the data. One way of attempting to highlight such differences as well as similarities, if any, is by comparing the choices of labelling head nouns across the data, as shown in Table 6-3 below. At first glance, it may be thought that there is something distinct about leaflets as they exhibit the smallest number of unique head nouns. But if this is combined with the quantitative analysis in 6.2, it becomes clear that the proportion of unique items to the total number is more or less the same in all types of the data, that is 1:2. So it appears that the four types of texts are to some extent similar in terms of the variation in the head noun labels.

Leaflets (31)	<i>area - cases - changes - complaint - condition(s) - costs - decision - emotions - factors - fear - features - matters - precautions - problem - procedures - questions - reaction - reason(s) - remedies - routine - services - situation(s) - stage - suggestions - symptoms - tasks - techniques - things - types - use - way(s)</i>
Textbooks (47)	<i>activity - advice - aims - association - attempts - approach - beliefs - cases - cause - change(s) - complication - concept - condition(s) - constraints - cues - doctrine - events - evidence - facts - factors - features - findings - figures - function - group - information - issue - labels - matter - measures - obligation - observations - pattern - possibility - problem(s) - process - reason(s) - requirements - rule - situation - skill - step - system - task - technique - term(s) - type(s)</i>
Press Reports (59)	<i>abnormalities - advice - ailments - application - <u>approach</u> - assessments - <u>attitudes</u> - beliefs - <u>conclusion</u> - condition(s) - confusion - debate - <u>difference</u> - <u>effect</u> - [chain of] <u>events</u> - experience - <u>explanations</u> - <u>findings</u> - <u>forms</u> - gamble - <u>idea(s)</u> - hurdle - <u>improvements</u> - ingredients - innovations - <u>issue(s)</u> - kind - lesson - line(s) - matter - methods - news - <u>part</u> - <u>pattern</u> - <u>problem</u> - procedure - process - <u>questions</u> - <u>reason</u> - recommendations - response - <u>results</u> - revolution(s) - scheme - <u>situation</u> - statements - step - success - suggestion - stuff - <u>techniques</u> - term - theory - thing(s) - thoughts - traumas - version - <u>way(s)</u></i>
Research Articles (64)	<i>analysis - <u>approach</u> - aspects - association - assumption - <u>attitude</u> - bias - calculations - categories - changes - characteristics - circumstances - cohort - collaboration - concept - <u>conclusion(s)</u> - criteria - data - decrease - details - development - <u>difference(s)</u> - divergence - <u>effects</u> - efforts - <u>events</u> - <u>explanation</u> - factor(s) - <u>finding(s)</u> - <u>forms</u> - <u>idea</u> - <u>improvements</u> - information - interventions - <u>issue</u> - lack - link - measurements - measures - mechanism - models - opinion - outcomes - <u>part</u> - <u>pattern</u> - phenomenon - possibility - potential - <u>problem(s)</u> - <u>questions</u> - rates - <u>reason</u> - reduction - relations - <u>result(s)</u> - sets [of data] - <u>situation</u> - strategy - <u>techniques</u> - term - trigger - trend - views - <u>way</u></i>

Table 6-3: Labels used in each type of the data.

More subtly, research articles and press reports have the highest number of head nouns in common (underlined in Table 6-3); there are twenty such shared labels. This observation is important because it indicates that there is something common about how certain phenomena is encoded in both types of texts. This may be partly due to the fact that some press reports originate from actual research articles either directly or indirectly. However, there might also be more less obvious implications of this observation, as will be illustrated by the following two examples from a research article and a press report respectively:

- (6-24) Do so many people really regard antidepressants as addictive? Many lay people may have been extrapolating from what they had heard about benzodiazepine tranquillisers. Nevertheless, whatever its origins, this attitude could have very important implications for doctors when they treat patients with antidepressants.
[RA19]
- (6-25) Many people wrongly believe that acne is caused by an unholy trinity of causes – a greasy or unhealthy diet, too much sex, poor hygiene – none of which is true. But such attitudes may cause some to wait too long before seeking medical help.
[PRTL28]

In accordance with the discussion so far of the generally highly sensitive meaning of labelling, it is possible to argue that to a certain extent every label highlights aspects of the phenomenon it refers to differently from other labels. So, as in the above two examples,

when a label is chosen to refer to similar phenomena in two texts, this may be taken as a reflection of the shared assumptions about addressees that the two texts embody. Holding wrong beliefs is being referred to above as *attitude(s)*. There are, of course, other options to refer to this kind of phenomenon, e.g. *misconception(s)* or *wrong/false belief(s)*, but I think these alternatives draw attention to the falsity of these opinions more than, as *attitude(s)* does, to the fact that they are established or settled opinions. So using the label *attitude(s)* draws attention to this latter aspect of the labelled discourse, assuming it is the one the addressee is more interested in. At the same time, the falsity meaning is not pursued further; since the addressee is assumed to either already know or agree that these beliefs are untrue, no enforcement of this meaning is needed. On the other hand, it is probably more likely that, in the medical leaflets, for instance, such beliefs will be labelled with something similar to the above alternatives rather than *attitude(s)*, so as to guide the addressee's interpretation in a way that reflects understanding of his/her needs. There are no more similar examples as the above in the data to support this conclusion; but given that there is high number of shared labels between the research articles and the press reports corpora, this is possibly a reflection of similar ways of guiding addressee's interpretations based on projected common interests.

Another observation about the lists of head nouns in Table 6-3 is related to the subgroup of 'general nouns' (Halliday & Hasan, 1976, pp.274ff) frequently encountered in spoken conversations, e.g. *thing(s)*, *stuff*, *issue(s)*, *matter(s)*. These, as pointed out by Halliday & Hasan (p.276), are important in the expression of "a particular attitude on the part of the speaker...the attitude conveyed is one of familiarity [which] may be either contemptuous or sympathetic" – though this attitude is not "always present" (p.277). In the data *thing(s)* in the leaflets and the press reports is particularly used to convey this attitudinal expression fairly clearly.

- (6-26) As recently as the Sixties, all you had to do to prove the health-giving properties of a product was to stress its **oatiness**, its **beefiness** or its **milkiness**. Common sense, in one of its earlier manifestations, held that such **things** were in some unspecified but obvious way "good" for you, and no more need be said.
[PRTM02]

In this example from a press report, the features of the product in the first sentence are labelled *things* in the second one; the label is in line with the writer's attitude towards these features as not necessarily "good". Attitudinal expression of familiarity through these labels in the press reports and the leaflets may indicate some common ground between these

types of texts and the spoken language. It is difficult therefore for the writers of the research article to employ such 'general noun' labels. In the textbooks, as shown in Table 6-2, these labels may be used, but they do not generally seem to indicate a familiarity meaning.

The tentative conclusion that can be made from the discussion above of the list of the head nouns in Table 6-3 may be summarised in two points. First, there seems to be some sort of common ground in how things are labelled in the research articles and the press reports. The evidence of this in the table is the shared head nouns used in both types of texts. As mentioned above, this is not surprising as some press reports originate directly or indirectly from research papers; but this may also indicate some common characteristics of how these texts manage to guide addressee's interpretations. Second, the use of some general nouns in the leaflets and the press reports suggests that this may be a way of making these text types less formal, bringing them closer to the spoken mode of the language. Again, this is not surprising given that these are popular texts aimed at less specialised addressees.

The general conclusion concerning the overall use of labelling in the data is consistent with the remarks made in the introduction section of the chapter: the guidance of interpretation through labelling is generally less explicit than the guidance of expectations through prediction. Meaning and interpretation are delicate subjects and the effect labelling has on them is not necessarily always clear. Nevertheless, the examples discussed in this section should demonstrate the broad potential of labelling as an Informational Interaction, guidance device.

6.5 Text Patterning

Text patterning organises discourse by showing how several blocks of information relate to each other in a recognisable pattern. So a pattern can organise full texts in a way not possible with any of the guidance strategies examined so far. There are, however, many other ways in which texts can be organised, e.g. by dividing information into small sections with meaningful headings or, as in some manuals, by outlining data using drawings and diagrams.

In the present corpus, press reports are relatively frequently organised using a common pattern, the Problem-Solution pattern. This pattern is also sometimes used in the leaflets and the textbooks, but it is not as developed as it is in the press reports, as it consists

mostly of just the two main components: the Problem followed by the Solution (with implied positive evaluation). In addition, its scope is generally rather limited as it only organises small parts of those texts; an example of the Problem-Solution pattern in the leaflets (example 6-6, p.101) has been discussed previously. Against this example, the following press report shows how a full text is patterned:

(6-27) <1> The days are drawing in, the school term has started – and it won't be long before your children are coming home with runny noses. <2> But you won't necessarily catch their colds, says Malcom Newell, an Australian health writer who reviewed a vast body of medical research for his new book, *The Cold War* (Rosendale Press, pounds 8.95). <3> Newell – who says he has not had the sniffles for many years – argues that we are culturally conditioned to expect to catch colds from each other. <4> Yet, citing work carried out at the Common Cold Research Unit in Salisbury as far back as the Fifties, he is convinced that cross-infection is largely a myth. (3 sentences omitted)

...

<5> Apart from developing a healthy way of life (getting fit, eating a well-balanced diet, stopping smoking, coping with stress and taking a positive approach to life), Newell suggests three specific anti-cold strategies.

...

<6> The first involves exposure to full-spectrum light. (5 sentences omitted)

...

<7> Second, he recommends a daily glass of fresh orange juice to maintain the body's levels of vitamin A, C and E. (1 sentence omitted)

...

<8> Third, he advises against the use of over-the-counter medicines to relieve cold symptoms such as a sore throat or fever, and – unless essential to treat a secondary infection – antibiotics. (1 sentence omitted)

...

<9> Newell is also convinced that whether you develop a cold depends on your initial response to symptoms. (2 sentences omitted)

...

<10> So is this the answer: suntans, orange juice, no 'cold cures' – and a positive mental attitude? <11> Dr Ron Eccles of the Common Cold and Nasal Research Centre in Cardiff is not convinced. <12> 'Ultraviolet light – which is found in sunlight – does kill off viruses and that may be one reason why we get more colds in winter. <13> There is evidence that aspirin can affect viral shedding, so taking it may mean a cold hangs around a bit longer. <14> But one study on flu found that taking aspirin did not affect the immune response.' <15> The cold, he adds, 'is a herd disease. <16> The only sure way to avoid catching one would be total isolation from other human beings.'

[PRIN44]

The Situation expressed in sentence <1>, though it does not necessarily guide the addressee's expectations in a specific way, it does at least limit those expectations to something to do with the widespread of the cold. Sentence <2> indicates the Problem, i.e. catching cold, in an untypical way by asserting its non-existence. This is more effective in

guiding the addressee to expect a description of the method that solved this well-known problem. Sentences <3> and <4> elaborate on a particular aspect of the Problem, suggesting that it is because we believe we can catch cold that we become more susceptible to actually catching it, and hinting that it is here where the solution lies. This Solution is provided in sentence <5> and the twelve sentences that follow (some of them are omitted above). It is lexically signalled in <5> as *anti-cold strategies*. At this stage the text assumes the addressee expects an Evaluation of the Solution postulated. A strong indication of this is the explicit use in sentence <10> of the question the pattern assumes the addressee would ask after learning about the Solution. This sequential relation between the Evaluation and the Solution is manifested by *So* at the beginning of the question. Despite some concessions (sentences <12> and <13>), the Solution is generally negatively evaluated, as signalled by *not convinced* in sentence <11> and *But* in sentence <14>. This opens up the expectation for another Solution which has been met in sentence <16> with the signals *way* and *avoid*. The lexical signals *only* and *sure* indicate a positive evaluation of this latter Solution; so a third solution is not required/expected.

From the above sketch of the Problem-Solution pattern underlying example 6-27, two observations can be made. First, the patterning of this example as such helps organise the information it contains and guides the addressee to follow this organisation. The text can be conceived of as a 'book review', and it would be plausible to find a review of the same book in another context (e.g. a scholarly journal) that is organised differently. What the pattern in example 6-27 does is present information in a way that controls the addressee's expectations and responds to them as appropriate. Second, though all parts of the Problem-Solution pattern have been mentioned in the text above, the focus is mostly on the Solution and the Evaluation. The Solution is apparently what the book is largely about, and the Evaluation is a response to what addressees of press reports expect; in most of the reports comprising the data, providing what 'experts' think of the things reported seems an essential task; this is consistent with the established journalistic tradition of providing the reader with the two sides of the 'story' told.

Having demonstrated the importance of text patterning in guiding addressee's expectations in press reports, let us finally turn our attention to the other three types of texts in the corpus. It has been indicated above that text patterning is frequent in the leaflets and the textbooks, though in a limited and basic way, in the research articles patterning is generally infrequent⁵. This does not, however, mean that these three types of texts are not organised.

In fact, they rely on other means of organisation. Research articles follow their generic conventions, leaflets use the question/answer sequences, and textbooks use sections and subsections for this purpose. Nevertheless, these strategies fall short of guiding addressees' expectations in the interactive way text patterning does in the press reports.

6.6 Summary

The discussion of Informational Interaction signals in this chapter has been generally based on the crucial concept of *guidance*. The subsequent quantitative and qualitative analyses show that guiding the addressee throughout the text is an important aspect of how interaction in written texts is managed. It is clear that different texts construct different kinds of addressees and project an appropriate kind of guidance/interaction with them. The specific signals of Informational Interaction analysed in this chapter allow texts to guide their addressees in sometimes unique ways useful for the specific purposes of each of these texts. But the analyses also show that there are certain patterns of guidance that appear to be shared between text types, indicating some sort of a common ground between them.

The quantitative analysis leads to the conclusion that the leaflets and the research articles in particular are quite distinct in terms of how their addressees are guided; guidance is on the whole a positively marked feature in the leaflets, but not in the research articles. However, the main way of guidance in the leaflets is that of expectation, not interpretation. On the other hand, guidance of interpretation is positively marked in the research articles, while guidance of expectation is negatively marked. This suggests that these two text types are clearly different in terms of their management of Informational Interaction and in how they construct their addressees. This alternation of markedness between the two ways of guiding addressees is actually an overall pattern in all of the four corpora, reflecting the complementarity of prediction and labelling as signals of guidance.

The analysis above demonstrates that texts employ various prediction signals to guide addressees' expectations. Obvious examples of this are questions in the leaflets and enumeration in the textbooks. Analysing both of these signals in these text types shows that they are not only quantitatively salient, but they also seem to play this guidance role more clearly than in other texts. On the other hand, analysing labelling does not appear to indicate major differences in how the four text corpora project guidance of interpretation, though the leaflets in particular appear to utilise this strategy to further enhance familiarity

with the addressee. Text patterning on its part characterises the press reports corpus by enabling writers to draw their addressees' attention to key areas of the text.

Overall, the signals of Informational Interaction are clearly obvious choices for writers to guide their addressees within the text. The fact that such signals are not equally distributed across the four corpora of texts comprising the data indicates that usage of these signals is dependent on the purpose of the text and its specific addressee. A careful, informed selection among the available signals will most likely help texts, writers, and their addressees project interaction more successfully. The management of Informational Interaction and orienting the text to its addressee are obviously an important aspects of the general construction of interaction in written discourse.

NOTES

- ¹ It is worth noting that, unlike the other parts of the pattern, the Situation does not necessarily raise a particular question about the Problem. In other words, with regard to the Situation and the succeeding Problem, “there appears to be a less clearly defined sequential meaning” (Hoey, 1983/1991, p.43). However, the Situation can still guide expectations through its sequential meaning that is derived, as noted by Hoey (p.45), “from its position in the overall discourse pattern”, not least because “introductory information limits and guides the type of information that follows” (Jordan, 1984, p.29).
- ² Reporting is considered here from the perspective of its guidance function (following Tadros, 1994). So despite the fact that there are many reporting verbs in the press reports corpus in particular, they do not seem to perform the crucial function of guiding expectations. Except for a few occurrences in the very beginning of some press reports (including the title – see example 6-1, p.99), most reporting is clearly not indicative of some writer’s evaluation to follow. This is because this reporting either indicates the writer’s averral of what is reported or is part of a complex series of arguments and counterarguments by various participants, where the writer’s own view is hardly evident, making pinpointing a predictive member virtually impossible. This latter kind of reporting appears to be specific to press reports as a text type, allowing them to *objectively* report what people think of the topics discussed – especially since the neutral, non-interpretive reporting verb *say* (Thompson & Ye, 1991, p.373) is the one commonly used here. Also, in the present corpus of medical research articles, reporting verbs are not as infrequent as they are in the leaflets and the textbooks corpora (though they are still less common than one might expect). However, the majority of these do not constitute examples of reporting in Tadros’ terms, as they typically indicate writer’s averral, and are not therefore included in this analysis.
- ³ It may be necessary here to stress that being interactive generally requires “sacrificing brevity, not least because it tends strongly to be accompanied by relatively congruent – i.e. unpacked – wordings” (Thompson, 1996, pp.219-20). In the case of the research articles, brevity and directness are less endangered by interpretive labels than by predictive signals. Moreover, for cohesive purposes, it is sometimes necessary to encapsulate preceding discourse in which case labels are unavoidable.
- ⁴ This type of advance labelling does not conform strictly to the criteria set by Tadros (1994). It has been included here because of its overwhelming frequency in both the leaflets and the research articles, and because it creates the same expectational effect created by those types identified by Tadros (see also 5.4.1).
- ⁵ This might be unexpected, since research articles are normally associated with the Question-Answer or the Problem-Solution patterns. In this analysis, however, an important condition for a pattern to be identified (and thus achieve its guidance function) is that it should be clearly signalled, since it is the case, as pointed out by Hoey (1983/1991, p.178), that “signalled relations are relations given focus by the encoder and are therefore those most readily decoded by the reader/auditor.” Such clearly signalled patterns do not appear to be characteristic of the present corpus of medical research articles.

LEXICO-GRAMMATICAL INTERACTION ANALYSIS

The focus of this chapter is on the signals of Lexico-grammatical Interaction: commands, questions, modalisation, and evaluation. The first section attempts to explore the way in which such signals project interaction/negotiation with the addressee, providing examples that demonstrate how each of these signals specifically project negotiation. The section draws attention to some possible distinctions among the signals in terms of their projection of negotiation and concludes by placing them on a proposed theoretical scale of negotiation. The following section analyses the data in quantitative terms, inspecting those signals that seem to be more important in certain types of texts and grouping the texts accordingly. Based on the previous discussion of negotiation and the results of the quantitative analysis, the functions of the four signals of Lexico-grammatical Interaction in the data are then investigated. First, commands and questions, as strategies of overtly projecting negotiation, are discussed, emphasising the different ways in which these signals establish negotiation in different text corpora. Then, modalisation and evaluation are analysed to show how they work as strategies of making room for negotiation between writer and addressee. The final section consolidates the findings obtained from the quantitative and qualitative analyses.

7.1 Introduction

As has already been discussed in Chapter 4, Lexico-Grammatical Interaction can be related to the interactional effect of negotiation. In this section, some demonstrative examples from the data will be used to highlight more this basic interactional effect. Specifically, the distinction made between those interactional devices that reflect the actual mechanism of negotiation, that is commands and questions, and those whose primary interactional function is to create opportunities for negotiation, that is modality and evaluation, will be further pursued. A more detailed treatment of each of these aspects of negotiation will be carried out in 7.3 and 7.4.

Commands and questions perform negotiation by creating a relationship of interactional roles between writer and addressee. The assignment of roles corresponds to the speech function (Halliday, 1994, p.68) in play; for example, when demanding information – typically through a question – the writer is adopting the role of questioner and assigning the role of answerer to the addressee and vice versa (for more on role-relationships, see Thetela, 1991; Zhang, 1991). These roles are interchangeable throughout the whole interaction, allowing for dynamic negotiation to take place; so both the questioner and the answerer do not only play these fixed roles, but they can alternate between them as appropriate.

In written texts, this negotiation and role assignment is in fact projected or assumed rather than performed. In example 7-1 below, the demanding projected on the addressee is not equivalent to what takes place in a spontaneous face-to-face conversation. The response to this command in the context of writing is obviously not meant to be equivalent to that in a spoken exchange. Similarly, the question in 7-2 assigns the role of questioner to the addressee and that of answerer to the writer; however, this is what the text assumes, and not necessarily what an actual reader happens to ask.

- (7-1) What to do if you think you have ‘flu
Go to bed, tell your friends or neighbours that you are feeling unwell so that they can check you are OK and give you any help you need.
[LF06]
- (7-2) **Do herbal remedies work?** In the eyes of many doctors, they certainly have more credibility than other alternative treatments, not least because so many successful drugs derive from them.
[PRIN43]

Notwithstanding this, both commands and questions reflect negotiation in a rather explicit way. They represent two basic speech functions that require some sort of an exchange between, at least, two participants. More precisely, both choices are interactionally salient because the view of the world they present is packaged in a negotiable form – it is the responsibility of the other interactant to render this view true or not by responding to a command or answering a question.

In the two examples above, commanding and questioning are projected using an imperative (*Go* and *tell*) and an interrogative respectively. These are the unmarked linguistic forms of performing each of these speech functions; and, as shown above, the role of these functions in projecting negotiation is fairly obvious. There are, however, marked or untypical forms of realising the same function in language; a command, for instance, may be performed using a question. One such marked form of commanding which is relevant to the present analysis is that of modulation:

- (7-3) Continue to take your pills normally but **you must** also use another method, such as the condom, for the next 48 hours.
[LF14]

Though modulations convey information rather than demand goods-&-services, they “do not thereby lose their rhetorical force” (Halliday, 1994, p.89) of commanding. Despite the fact that *you must...use* in 7-3 is a statement offering information, i.e. that another method of contraception is necessary, it is clearly no less demanding than *Continue*. Context plays an important role here; the modal *must* is preceded by *you* and it follows directly an imperative. Also the relation that exists between writer/speaker and addressee would influence the demanding force of the modal *must*; a *must* statement issued by a teacher to his/her students is definitely a command, and this is the case here with an expert-layman relation. Finally, the modal itself is crucial, as *should*, for instance, would make this command slightly less demanding.

Negotiation is performed through modulation in a rather indirect way, as the commanding process is itself indirect, i.e. projected through statement. So the assignment of roles is not as clear; but the achievement of what the writer thinks should happen (i.e. using another form of contraception) is represented as the responsibility of the addressee. As will be discussed later,

because of this, it could be argued that modulation exists somewhere in the middle of the scale of negotiation. To complete the picture of this scale the discussion will now turn to modalisation, the other type of modality, and evaluation.

Modalisation is viewed here from the perspective of the wider phenomenon of hedging. Hedging is one way writers use to tentatively or cautiously indicate their assessment of the truth of their propositions. Hedges may be genuine, i.e. “they correspond with what is believed to be true in the world” (Hyland, 1996b, p.436), what Hyland referred to as ‘content-oriented.’ Or they may be related to “reader considerations” (p.436), i.e. a proposition is hedged though it could be objectively asserted, which Hyland referred to as ‘reader-oriented’. It is this latter type of hedging/modalisation that will be of more interest to this analysis (though the former is still relevant as it is important in making the writer’s proposition more likely to be accepted). The following is an example of a reader-oriented modalisation:

(7-4) This **may seem** extraordinary in the context of our ‘one shot and you’re hooked’ anti-drug propaganda. But it is not as contradictory as it sounds.
[PRIN54]

Here, the writer is modalising the first part of the message to incorporate the other’s view. Concessions like this demonstrate how modalised propositions do not always indicate genuine uncertainty; they could be used as a way of showing consideration for the other. This is an extreme case in which the other’s view is being explicitly mentioned and the negotiation is overtly expressed. In general, modalisation can be used to make room for alternative views by not imposing the writer’s own view, however objective it is, on the addressee.

Evaluation reflects negotiation in a similar way to modalisation, though it is more purely speaker/writer-oriented, that is extreme cases of accounting for the other’s perspective as in 7-4 are not normally possible. Evaluation is merely a way of inviting the addressee to share certain aspects of the writer’s point of view. Martin (2000) discusses evaluation as an extension to dialogue and negotiation, demonstrating that it is used by interactants to ‘negotiate solidarity’ between them.

(7-5) Obesity tends to run strongly in families due to a hereditary tendency. Additionally, some families make a habit of *overeating* and may take *less exercise*. Many people turn to food for **solace** when they are **anxious**, **unhappy** or **bored**. There are strong sociological pressures with obesity *stigmatized* in some cultures and situations but *normal* in others. Sometimes women put on weight excessively during pregnancy, perhaps because they think *mistakenly* that they must eat enough for two. Obesity occurs in some patients with **depression** but weight loss is more common in this condition.
[TB01]

The evaluations made by the writer in 7-5 fall within the three major categories of evaluation identified by Martin (2000): the lexical items in bold are examples of ‘affect’ as they refer to people’s emotions; those in italics are ‘judgement’ evaluations, since they are related to positive or negative social norms; and the two items underlined demonstrate the category of ‘appreciation’, indicating that something is important and is worth being discussed. What all these evaluations represent in terms of negotiation is inviting the addressee to share them with the writer; as this example is taken from a textbook, it is not surprising to find such messages as they are essential part of the learning process.

This last observation about how evaluations represent negotiation makes it possible to tentatively place the different lexico-grammatical signals discussed above on a theoretical scale of negotiation (Figure 7-1). This is certainly not intended to be a categorical depiction of how each of these devices reflect negotiation; rather it is a way of giving a general idea of how negotiation is managed by means of these various strategies. The positioning of each of these strategies on the scale is justified by what has been noted above about how each of them represents negotiation. Based on the above discussion, the diagram also shows how these signals are related to addressee- or writer-orientedness. In a similar way, the three types of evaluation described above can also be positioned on this scale of negotiation: affect evaluations are generally regarded as universal and can therefore easily project agreeable addressees; as judgements, by definition, rest on social grounds, they would be expected to be less straightforwardly accepted, especially by addressees from a different cultural background; and negotiation is most clearly at issue in the case of appreciations, since they typically represent the writer’s personal judgements (see also 7.4.2 below). Eggins & Slade (1997, p.126) point out that “grammatically, lexical items of Appreciation tend to fit into cognitive mental process structures such as: *I think/know/understand/believe that it was*”, and that a particular dimension of appreciation, ‘reaction’, is more related to the interpersonal metafunction, as it

encodes “the speaker’s interpersonal response (whether it was liked)” (p.128). Not only this, but Martin (2000, pp.160-1) also remarks that specifically the dimension of ‘valuation’ (‘was it worthwhile?’) is very much ‘field-specific’, i.e. “the criteria for valuing a text/process are for the most part institutionally specific”; so what is ‘good’ in a particular field or school of thought may not be so in another, highlighting some sort of a ‘personality’ for each field. Such field or personal idiosyncrasies do not as strongly influence judgement or affect evaluations.

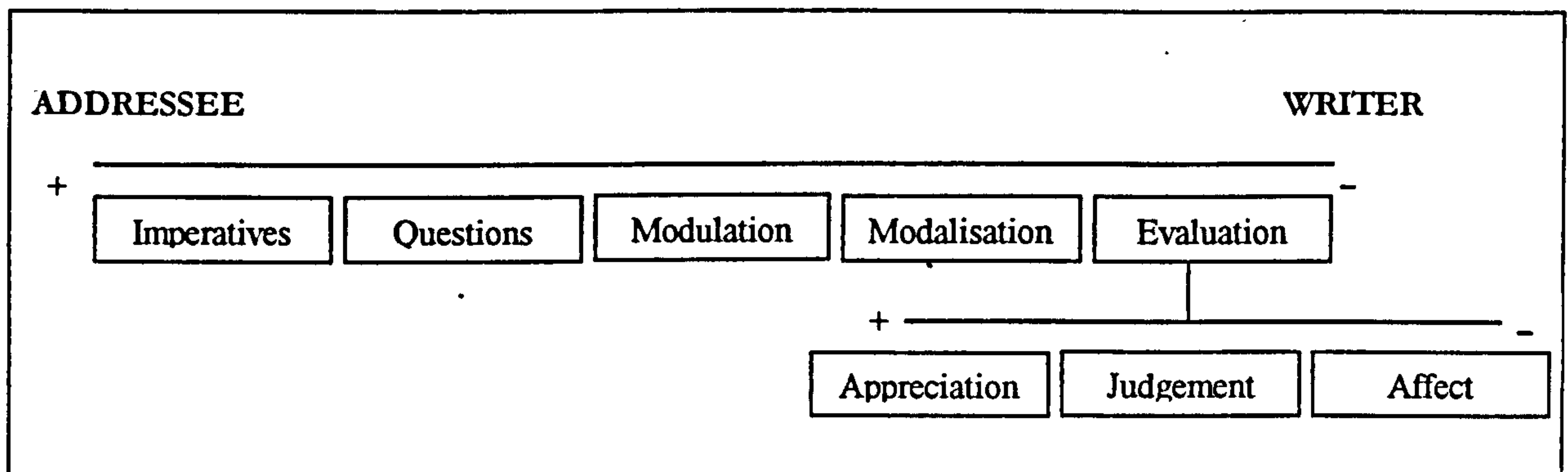


Figure 7-1: Signals of Lexico-grammatical Interaction on the scale of negotiation.

The crucial link between the devices of Lexico-grammatical Interaction and negotiation that this section has argued for is not only evident from the representative examples above; it has also been noted by several other studies of each of these devices. Role relationships through commands and questions are considered, as mentioned before, as basic strategies for the exchange of meaning within the Systemic-Functional Grammar (e.g. Martin, 1992; Halliday, 1994); they are related to the Mood, which is the element of the clause that is responsible for negotiation. The link between negotiation and modality and evaluation is also acknowledged, though it is under-researched. This is especially true with modalisation, which has received great attention in relation to its role in expressing the speaker/writer’s attitude and as a politeness strategy, but not as a way of projecting negotiation with the addressee (though see Coates, 1987, 1990; Al-Sharief, 1996; Hyland, 1996b; Thompson, 2001).

The following analysis will hopefully help make this link more explicit. Section 7.2 will provide a general quantitative overview of the different devices of Lexico-grammatical Interaction discussed above. The aim will be isolating those signals that play the primary interactional role in each of the texts types analysed. This will make it possible to investigate how negotiation is managed in each of these text types. The following sections will attempt to separately analyse

each of these devices with the general goal of exploring how negotiation is projected in each type of text.

7.2 Quantitative Overview

This section provides a general quantitative overview of the signals of Lexico-grammatical Interaction discussed above. This will allow us to identify those signals that have more influence on the projection of negotiation in each type of the four corpora comprising the data. Later in the section some initial observations about the relation of these results to the role of each text type and the characteristics of its addressee will be made. To start with, the frequencies of the signals of Lexico-grammatical Interaction, that is commands (imperatives and modulations), questions, modalisations, and evaluations, are presented in Table 7-1.

SIGNAL CORPUS	Imperatives/ Modulations	Questions	Modalisation	Evaluation (per 10,000 words × 8)	OVERALL
Leaflets	906/288 (70.36)	215 (62.68)	2383 (43)	1760 (26.25)	5552 (38.86)
Textbooks	82/153 (13.85)	10 (2.92)	1072 (19.34)	1440 (21.48)	2757 (19.3)
Press Reports	82/133 (12.67)	113 (32.94)	1294 (23.35)	2664 (39.74)	4286 (30)
Research Articles	1/52 (3.12)	5 (1.46)	793 (14.31)	840 (12.53)	1691 (11.84)

Table 7-1: The frequencies of the Lexico-grammatical Interaction signals in each corpus of the data. (Figures in brackets are percentages of the same signal across the four corpora down a column).

From a quick look at the table it will be immediately clear that the leaflets stand out in their utilization of this type of interaction. Except for evaluation (26.25%), there are obviously high frequencies of the resources of Lexico-grammatical Interaction, especially commands (70.36%) and questions (62.68%), in the leaflets corpus compared to the other three corpora. The proportion of modalisation in the leaflets, though not as much as commands and questions, is still comparatively high (43%); the second highest proportion of modalisation in the press reports (23.35%) is nearly half that of the leaflets corpus. Even the proportion of evaluation in the leaflets corpus (26.25%) is only second to that in the press reports (39.74%). Overall, the corpus of medical leaflets exhibits a remarkably high utilisation of Lexico-grammatical Interaction signals; this observation is reinforced by the leaflets corpus having the comparatively highest proportion (38.86%) of the overall utilisation of these signals.

In contrast to this ubiquitous use of Lexico-grammatical Interaction signals in the leaflets corpus, the table indicates that these signals are much less frequent in the research articles corpus (11.84%); in particular, commands (3.12%) and questions (1.46%) are the least used. The picture is not as distinct concerning the textbooks and the press reports corpora. It is important, however, to note the high proportion of evaluation signals (39.74%) in the press reports corpus – the highest in all the data. Also there is relatively high proportion of questions in the press reports (32.94%). The general picture we can make from these observations is that there are two extremes: at one end, the leaflets utilise Lexico-grammatical Interaction signals rather ubiquitously; at the other end, such utilisation is much less frequent in the research articles; press reports and textbooks are somewhere in between these two extremes.

This general organisation of the four corpora in terms of the management of Lexico-grammatical Interaction is in fact what can be quickly identified by looking at the ‘overall’ column, which shows that the utilisation of the signals of this type of interaction is common in the leaflets corpus (38.86%), but quite rare in the research articles corpus (11.84%). Press reports are second to the leaflets in this regard (30%), followed by the textbooks corpus (19.3%). So it could be said that the press reports are closer to the leaflets, while the textbooks tend to be on the side of the research articles. It is also interesting to note the consistent pattern of the increasing utilisation of the signals of Lexico-grammatical Interaction of about 10%, moving from the research articles corpus to the leaflets corpus.

The calculation of the markedness scores of these signals presented in Table 7-2 and Figure 7-2 provides a more precise way of measuring the weight of each signal in each text type corpus and ranking the four corpora accordingly. Commands, questions, and modalisation and to a lesser extent evaluation are markedly frequent signals in the leaflets corpus; similarly, evaluation and to a lesser extent questions are markedly frequent in the press reports corpus. Overall, leaflets and to a lesser extent press reports are marked by high frequency of Lexico-grammatical signals. On the other hand, research articles and textbooks are marked by infrequency of these signals.

SIGNAL CORPUS	Commands	Questions	Modalisation	Evaluation	OVERALL
Leaflets	14.93 (1.48)	2.69 (1.3)	29.79 (1.43)	22 (0.11)	69.41 (1.17)
Textbooks	2.94 (-0.36)	0.13 (-0.76)	13.4 (-0.45)	18 (-0.31)	34.47 (-0.48)
Press Reports	2.7 (-0.40)	1.41 (0.27)	16.18 (-0.13)	33.3 (1.3)	53.59 (0.42)
Research Articles	0.65 (-0.72)	0.06 (-0.8)	9.91 (-0.85)	10.5 (-1.1)	21.12 (-1.1)
TOTAL	21.22	4.29	69.28	83.8	178.59
Mean	5.3	1.07	17.32	20.95	44.65
Standard Deviation	6.5	1.24	8.7	9.5	21.22

Table 7-2: The calculation of the 'markedness' of the Lexico-grammatical Interaction signals in each corpus of the data. (Figures are per 1000 words; figures in brackets represent the score of 'markedness' for each signal as calculated from the mean and standard deviation)

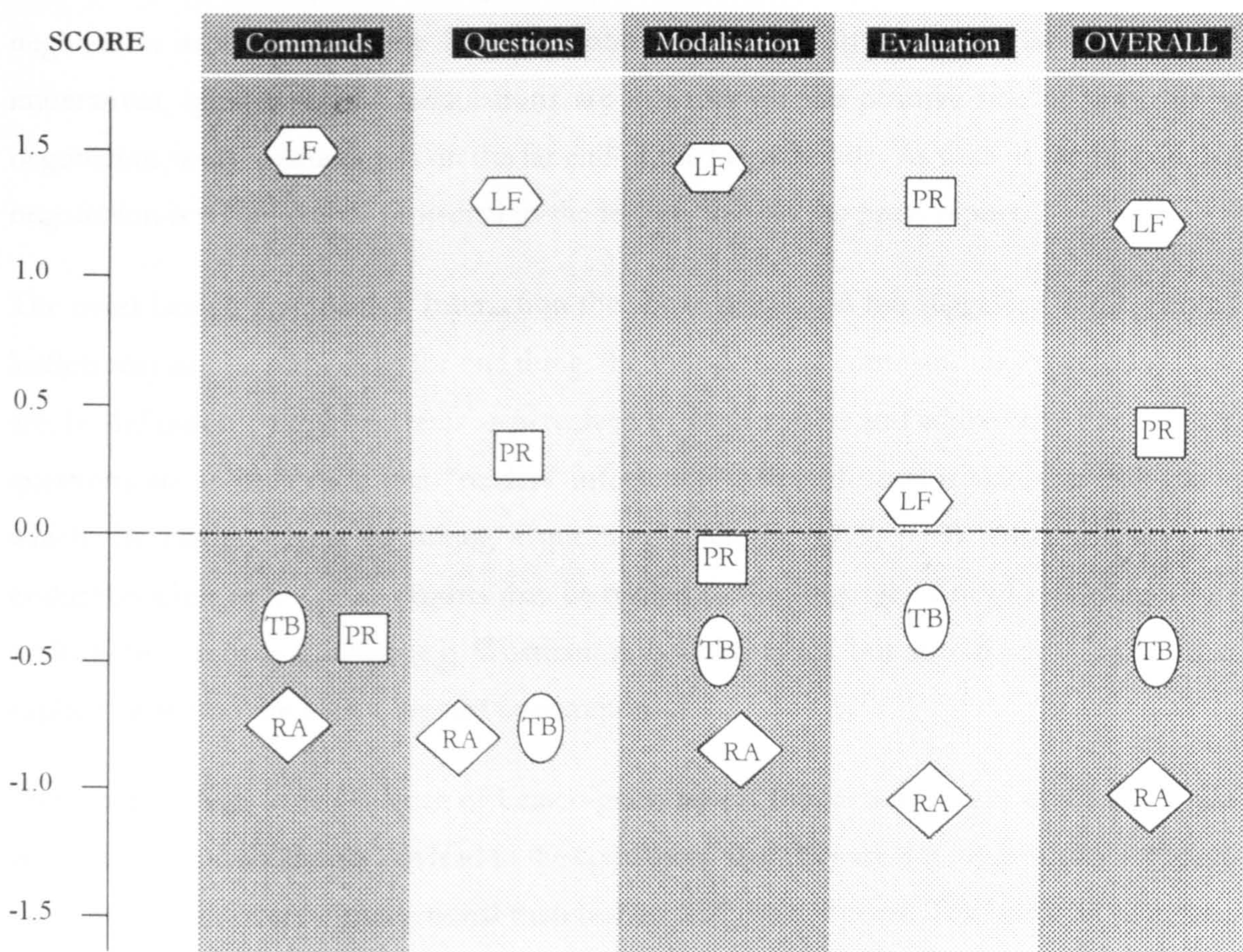


Figure 7-2: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Lexico-grammatical Interaction signals.

Key:

- LF (Hexagon) = Medical Leaflets
- PR (Square) = Medical Press Reports
- RA (Diamond) = Medical Research Articles
- TB (Oval) = Medical Textbooks

The overall arrangement of the four types of texts in Figure 7-2 is by no means unexpected. Research articles and textbooks are texts representing ‘proper’ science, and leaflets and press reports are texts of science popularisation (see Chapter 3 for more on this distinction). So the analysis above is consistent with the conventional view that popularised texts are more friendly and informal – that is more interactional – than genuine academic ones. However, the analysis indicates that there is an important difference between how leaflets and press reports project interaction with their addressees. The devices that play the major role in the projection of interaction in the leaflets are commands, questions, and modalisation (and to a lesser extent evaluation). In the press reports, evaluation (and less markedly questions) is the device that endows them with this interactional status.

This distinction is of particular importance as the devices used in the leaflets help project negotiation in a different way from evaluation. As argued in 7.1 above (see Figure 7-1), imperatives, questions, and modulations are in order on the positive side of the scale of negotiation, while evaluation is on the far end of the negative side. As such, it can be said that negotiation is more overtly projected in the leaflets than in the press reports.

The overt Lexico-grammatical Interaction the above discussion has suggested in the medical leaflets may not be surprising; for one thing, the abundance of commands is expected as these are, by definition, *instructional* texts as perceived by both writers and addressees. For another, questions are an indication that “readers’ interaction with such texts is akin to a dialogue in which the reader begins by asking a question” (Wright, 1999, p.89). Also, the key role evaluation plays in the press reports may be related to the language of news reporting where evaluations – mostly implicit (e.g. Wortham & Locher, 1996), but also in some cases rather explicit, as is the case here – are not uncommon.

The comparatively little evidence of Lexico-grammatical Interaction signals in the textbooks and research articles should not lead to the conclusion that they are not interactional – though they are still less overtly interactional than leaflets and press reports. Textbooks in particular tend to show some of the more overt signals of interaction/negotiation; they utilise commands in a proportionally more or less similar way to press reports. This may not be significant in comparison with the other three corpora, but within textbooks this is an important

observation. This and other more specific characteristics of each text type will be further analysed in the next sections.

7.3 Negotiating it Together

It has been indicated in 7.1 above that commands and questions allow for the projection of negotiation in written discourse in a fundamentally different way from modalisation and evaluation. While the latter devices are simply “sites around which negotiation might take place” (Martin, 2000, p.145), commands and questions represent the actual implementation of negotiation within texts. This is so because a command or a question is inherently and overtly a joint linguistic event that in principle requires at least two participants for its realisation. When a question is asked or a command is issued by one interactant, the response is handed over to the other interactant, and thus negotiation manifests itself.

7.3.1 *Commands*

As shown above, commands (imperatives and modulations) are markedly frequent in the leaflets corpus. This does not, however, mean that they are of no interactional importance in the other three corpora. This section will try to demonstrate that commands are ubiquitous in the leaflets mainly because commanding is an integral part of the message. On the other hand, commands in press reports and textbooks¹ appear to be strategic choices aimed at creating specific interactional effects.

The simplest and most direct way of projecting interaction/negotiation through commanding is through commands to do with material, real-world instruction, what Myers (1989) calls ‘cookbook-like’ imperatives. An instance of this type of commanding demonstrating both an imperative and a modulation has been discussed before (see example 7-3, p.128), where the imperative *Continue* and the modulation *must...use* are employed. These depend for their realization in the real world on the addressee actually performing them, and this is essentially how negotiation is projected through such choices. Modulations in the data appear to generally perform negotiation in this basic way. This is not the case, however, as will be clear from the following discussion, with the imperatives (though in the leaflets imperatives are mostly of this sort).

Another case of commanding with imperatives is common particularly in the textbooks corpus (almost the half of all the imperatives in the textbooks corpus)². This involves the perception verb *see*.

- (7-6) Some have associated Arnold-Chiari malformation (see page 420), and some are inherited as an X-linked trait.
[TB04]

The imperative *see* in this example is similar to *Continue* in 7-3 in that it depends on the addressee for its realization. But it is different in that it seems to be motivated not by the subject matter, but by the addressee's response at this particular point of the text. The text here assumes that the addressee may want to know what *Arnold-Chiari malformation* is, and it thus directs him/her to where relevant information can be found. This is in a sense a 'meta-linguistic imperative' with a function that is more or less similar to the guidance of addressee discussed in the previous chapter, at least in as far as it accommodates his/her responses to the text. But it is also crucially different in that this is *ad hoc* guidance; it does not appear to be intended as a pre-arranged organisational strategy, but as an 'on the spot' response to some assumed need on the part of the addressee.

A third kind of imperative that is relatively frequent in the press reports and the textbooks corpora is intended for argumentative purposes; it is used to signal a turning point in the argument. Such usage is clearly meant to engage the addressee in the process of argumentation in an attempt to convince him/her of a particular viewpoint. So imperatives of this kind may also be considered 'meta-linguistic' in the sense that they do not relate to 'real-world' actions, but aim at helping the addressee follow the development of the argument within the text. Verbs used with this kind of imperative are mental processes verbs, e.g. *consider*, *contrast*, *imagine*, and the verb *let us* (*let's*):

- (7-7) Now, **let's pull this together...**
[TB08]

- (7-8) **Contrast this with the substantially reduced risk of cancer of the ovary in Pill takers...**
[PRTM04]

The imperatives discussed so far commands the addressee to 'do' something. But commanding could also be used to tell the addressee 'not to do' particular actions. This distinction is

important because negation has an implicit bearing on the context of the interaction; negation may be based on presupposition about the addressee rather than on a previous mention in the text of something opposite (Jordan, 1998). This is actually often the case with negated imperatives, as they are typically not preceded by their opposite, the 'do' version of the imperative. Imperatives in the data are negated with, e.g. *not*, *never*, and *avoid*.

(7-9) Hot or cold? Hot-water bottles and ice-packs can be effective pain relievers. **Don't** place them directly on bare skin but wrap them in a towel or piece of material.
[LF11]

(7-10) **Never** wear wet shoes – you can dry them out by packing them carefully with newspaper before drying them in gentle heat.
[LF07]

Negation of imperatives is particularly relatively frequent in the leaflets corpus (accounting for more than the tenth of all imperatives in this corpus). As the two examples above demonstrate, the text assumes knowledge about what the addressee may do and goes directly to tell him/her not to do it. There is nothing in the text preceding the imperative in 7-9, for instance, that indicates that people put hot-water bottles directly on their skin. This kind of negation of imperatives brings to the surface the texts' assumptions about its addressee, highlighting more the negotiation taking place within the text.

With this note about the role of commands, particularly imperatives, as a negotiation signal, it may be appropriate to conclude this section by summarising the range of interactional functions that commands perform in the data (see also Swales *et al.*, 1998 on the use of imperatives in academic writing). From this analysis, it is possible to characterise two broad types of commands: 'real-world' and 'meta-linguistic'. The former corresponds to the normal use of imperatives in most aspects of our social life, where addressees are instructed to perform some real-world action. In the present data, commands using modulation belong to this kind, as well as most imperatives in the leaflets corpus. The latter type of command involves imperatives only, and is common in the textbooks and press reports corpora. It operates within the text by referring the addressee to some part of it, or by directing his/her attention to how the discussion is being developed. Commands, especially imperatives, are therefore clearly important interactional signals that help make explicit some crucial aspects of the negotiation taking place in the text.

7.3.2 Questions

As has been indicated in 7.2 above, questions are a popular choice in the leaflets and to a lesser extent in the press reports. Both of these types of text share the quality of being comparatively less formal than the other two corpora comprising the data, the research article and the textbook. The relation between this quality of both the leaflets and the press reports and the use of questions is circular: it could be that questions are widely used because the communicative purpose and the context of use of these texts allow for this; and it is also possible – as will be discussed later – that questions, among other things, contribute to this familiar style that characterizes these two types of texts. In other words, this is a clear case in which language both constructs and reflects context at the same time. Nevertheless, a cursory look at the leaflets corpus and that of the press reports will show that projection of negotiation/interaction through questions is done in the leaflets in an essentially different way from the press reports.

In the leaflets corpus, questions are often used to ‘introduce information’ (Thompson, 1997, pp.163ff). This type of question is an open wh- or polar interrogative that is instantly answered in the text. The addressee is projected as the questioner and the answer is provided by the ‘knowledgeable’ writer. This type of question represents what we typically call a question with regard to both form (a wh- question word, polar interrogative structure, and the question mark) and function (requesting unknown information). In the leaflets, it is the norm to present information as a series of addressee’s assumed questions, each followed by the writer’s answer:

(7-11) Can I bring a friend?

Yes, of course you can. Your friend may be interested in giving blood too, and we are always keen to recruit new donors. In fact, many donors are introduced by people who already give blood.

When can I give blood?

How often?

Usually 2-3 times a year – normally not more often than once every 16 weeks. This is to allow your body some time to build up its stores of iron between donations.

What about holiday times?

Donations are often scarce during holiday periods. But patients are still in need of blood at these times. So if you are invited to give blood over the holiday period, please make a special effort to attend.

[LF19]

The function of such sequences of questions as the above in *introducing* information is fairly obvious. But focusing on the text as a whole, it becomes clear that this is by no means the only function these questions perform; after all, the writer could well have opted for the less interactional choice of providing the information as statements only, without making use of questions. One basic interactional outcome of this choice is the allocation of roles: addressees seek information (questioners) and writers provide requested information (answerers). Though this is also possible with the statements choice (writer states and addressee acknowledges), the questioner/answerer roles are interactionally more effective as they allow both interactants an equally active and dynamic role – the role of acknowledging statements is less active than that of raising and responding to questions (and it is also difficult to introduce acknowledgements explicitly in the text). One aspect of this in the leaflets is the important role of the addressee-as-questioner in initiating the interaction (symbolising the addressee's need to get answers to questions he/she already has), with the role of the writer dependent on this initiation. But at the same time, questions allow the writer more control over the flow of the interaction, making it possible to respond to the addressee's reactions and worries in a natural way. For instance, the third question in the above example emerges from the answer to the preceding one, as the addressee is projected as being worried about the problem that might be caused by the clash between the donation and holiday times. Questions allow the addressee's responses to be projected in the text, giving the writer the opportunity to respond to them in turn.

In addition to role assignment and control of interaction, questions have a basic function of creating dialogue. In particular, questions from the writer seem to primarily perform this dialogic function, allowing negotiation to be projected in a more conversation-like manner:

(7-12) **Q. Do many of my friends wet the bed?**

A. Think of your class at school. How many are in the class – 30 or 40? If there are forty and they are all ten years old then there will be two children who wet the bed. They could be friends but they never tell each other about wetting the bed.

[LF39]

Here the first question is similar to the ones above: the addressee is a questioner seeking information and the writer provides the answer. But the second question is different both in terms of the roles played by the interactants and in terms of the purpose of the question. First, there is an interchange of roles: the questioner here is the writer while the assumed answerer is

the addressee. The position of this writer question within an answer to a projected addressee question suggests that the aim of questions in the leaflets is not only that of introducing information, but also crucially to establish and maintain negotiation between writer and addressee. The writer does not simply answer the addressee's question with just a series of statements; he/she also seizes the opportunity to engage in a 'mini-dialogue' with the addressee. This brings us to the second difference in the purpose of the question; the writer's question is not as clearly an information-seeking question as the one before or those in 7-11, at least the nature of the answer is not as important as the construction of the dialogue and the carrying on of the negotiation/interaction process. This suggests again that the function that this question plays, I think, is in creating 'mini-dialogues' with the addressee, apparently, in this case, for the purposes of persuasion and assurance.

Exchanges like the one in 7-12 are not common in the leaflets, but they demonstrate the general function of questions in this corpus, that is "simulating the process, structure and dynamism of everyday conversation" (Frank, 1989, p.255). The addressee's question/writer's answer sequence characteristic of the leaflets corpus is the basic structure leaflets use to simulate conversation. The occasional alternation of roles such as the one exemplified in 7-12 is one way of reinforcing and enlivening this simulation.

Less typical questions (in the traditional sense of relating questions to seeking specific information), more or less like the writer's question in 7-12, are more the rule rather than the exception in the press reports corpus. One remarkable difference between questions in the leaflets and those in the press reports is the way they are distributed in each individual text. Since almost all leaflets are structured as question/answer pairs, questions are distributed evenly across the whole leaflet text. On the other hand, there is a notably large cluster of questions in the first tenth of the press reports; this accounts for 40% of all the questions in the press reports corpus (only 30% of the questions occur in the second half of the press reports). Questions in this cluster are located either in the title of the report or in the first few lines of its body. These are clearly not projected as asked by the addressee since, though they are always discussed in the body of the report, they are frequently left unresolved; and it is not possible to ascribe them with certainty to the writer, as they are not directed to the addressee who often does not know the answer – perhaps they are simply 'posed' *not* 'addressed' (Lyons, 1977, pp.753ff).

- (7-13) Mad cows and odd needles
Can acupuncture detect BSE in cattle before the disease spreads? Ross Clark checks out an unusual theory
 [PRTL21]
- (7-14) **How safe are supplements?**: The benefits of high-dose nutrients are being called into question
 [PRIN37]

The questions in these two examples are asked not to elicit information, but rather to elicit the addressee's attention and commit both writer and addressee to the topic. They can be called *topic-opener* questions: they are used to announce a topic to be discussed (cf. 'issue-raising' questions in Thompson, 1997). I use the term *topic-opener* because of the location of these questions at or near the opening of the text and because of their indication of the topic of the report. Such questions seem to be different from those discussed earlier not only in terms of the roles played by the interactants or the fuzziness of the answer, but also in terms of the interactional effect they create. Part of this originates from the very nature of questioning which "binds two people in *immediate* reciprocity" (Goody, 1978b, p.23, emphasis in original). But contrary to the leaflets where writers and addressees are engaged in a multi-turn mimicked conversation, here the picture is more of an interactional narration in which *topic-opener* questions are analogous to the 'you know what' questions in the opening of personal narratives. These questions engage the addressee and attract his/her attention by introducing the topic in a *dramatic* and *involving* way that is otherwise not possible. Compare, for instance, replacing *How safe are supplements?* in 7-14 with *The safety of supplements*. These are two more clear examples of this dramatisation of the openings of press reports:

- (7-15) Prostate Cancer
To screen or not to screen? Annabel Ferriman reports on the division between doctors
 [PRTL29]
- (7-16) **Will your spring end in tears?**
 For one person in 10, this time of year brings misery. But there are remedies which prevent hayfever, reports Barbara Lantin
 [PRTL26]

In the first example, the analogy with Shakespeare's 'to be or not be' is clearly intended. The question has no formal interrogative signals except for the question mark and, it could be said,

the parallelism with Shakespeare's famous question. In 7-16 it is worth noting the use of the personal pronoun *your* which is not infrequent in this type of question. (The use of personal pronouns as an involvement strategy will be discussed in more detail in the next chapter.)

The second type of the questions that are less clearly information-seeking is *agreement-elicitation* questions. These, as the name suggests, seem to mainly request agreement from the addressee, not information. Of course, the interaction proceeds as if an agreement has been obtained. This is because the issues to agree upon are normally presented as facts of life that the addressee is assumed not to dispute:

(7-17) **Is there a less heartbreaking time for a child to die?** I doubt it.
[PRTM59]

(7-18) **Everybody knows what's good for them, don't they?**
[PRTM02]

This kind of question is more likely to be used in conversational exchanges, and is relatively uncommon in writing. This is also the case in the present corpus of press reports; but considering comments like Fowler *et al.*'s (1979, p.50) remark that tag-questions "never occur in writing (except of course in the reporting of speech)" and the subsequent comments about their relation to "the mechanics of interpersonal relations, establishing rapport, seeking confirmation, eliciting support, and so on", the interactional role of the few tag-questions and those with comparisons, such as 7-17, or negatives in the press reports corpus becomes more important. They appear to help project 'mini-dialogues' between writer and addressee in similar way to writer's questions in the leaflets (see example 7-12 above); as they seek agreement, they are typically employed to persuade the addressee of the writer's viewpoint.

Press reports *agreement-elicitation* questions are clearly asked by the writer, and although 7-17 is immediately answered by the writer, this is only apparently the writer joining the addressee in confirming what the question proposes. There are, however, questions in the press reports that are clearly coming from the addressee, and they are instantly followed by the writer's answer/response. These may request some specific information; but they are also useful in accommodating the addressee's assumed reactions to the information just given:

- (7-19) The doomed cows would be instantly slaughtered and, assuming it worked, no case of mad cow disease would ever be recorded again. **An idle dream?** Not according to Dr Siegfried Trefzer a homeopathist in London.
[PRTL21]
- (7-20) **What's this? A trade organisation putting public health above self interest?** It should be nice to think so, and Lander exudes nothing but warmth and beefy goodwill.
[PRTM02]

Again, like in the leaflets, these questions project a particularly well organised tripartite 'mini-dialogues' in which the writer says something, the addressee reacts, and the writer in turn comments on this reaction. A conversational feature that is common with this type of questions is ellipsis, as is clear from both examples above. It is also important to stress that these questions are not only concerned with information-seeking. *An idle dream?* is not a question projected on the addressee to which an informational answer may be supplied; instead, it is a way of incorporating into the text the addressee's assumed responses to the information provided. The addressee is projected as casting doubt over the statement that *no case of mad cow disease would ever be recorded again*; this reaction is re-iterated by the writer in the form of an elliptical question, which the writer then responds to. Similarly, the question in 7-20 brings to the surface the addressee's assumed astonishment at what has just been said before.

The above analysis of the interactional use of questions in the leaflets and the press reports can be consolidated in a general conclusion similar to that reached after the commands analysis in 7.3.1. On the one hand, questions in the leaflets are very much tied to the content; one piece of evidence of this is that the majority of these questions are information-seeking questions with explicit information-rich answers. It is clear that the choice of presenting information using questions and answers is not contingent on the moment by moment development of the interaction; rather, it is a deliberate, fundamental choice with a cumulative effect that is motivated by the very nature of medical leaflets as instructional texts whose aim is to trigger their addressees to perform some physical action. On the other hand, questions in the press reports corpus generally have less bearing on the content; it should be noted that the categories identified above have a manipulative and attitudinal function, mostly exclusively, but sometimes with a less crucial information elicitation function. Still, however, the concept behind using questions in this way "lies in the assumed and hidden question-answer interaction that is evoked in a given context" (Maynard, 1995, p.503).

7.4 Opening it up for Negotiation

As pointed out in 7.1 above, modality and evaluation contribute to Lexico-grammatical Interaction by simply making room for negotiation between writer and addressee. This is not to say that they are of less interactional value, though of course they cannot construct reciprocity in overt ways similar to commands and questions (but, with evaluation in particular, it is sometimes possible to project a more or less equally overt negotiation). Nonetheless, as shown in 7.2, in terms of frequency, these signals are understandably more ubiquitous than commands and questions (a ratio of 6:1), and they can therefore mark the text with a relatively conspicuous interactional character. In addition, making room for negotiation reflects, as will shortly be discussed, a number of crucial interactional assumptions about the text, and it allows for the accommodation of certain assumed addressee responses in a way not possible using commands and questions.

7.4.1 Modalisation

The quantitative analysis of modalisation in 7.2 above has shown clearly that modal elements are generally common in all four corpora comprising the data, but they are considerably more frequent in the medical leaflets corpus. Because of this, and because an extensive comparison of the concordance lines of the modal elements in all four corpora has revealed that they contribute to interaction in more or less similar ways, the following analysis will chiefly draw on the medical leaflets corpus.

The first point to consider then is the conspicuous frequency of the elements of modalisation in the medical leaflets. There are several explanations of this phenomenon that might not be regarded as directly interactional. For example, linguistically, modalisation can inherently be expressed in a variety of ways, most of which are considered in this analysis (see Chapter 5). Less clearly, however, are reasons related to the content of the leaflets where commenting on the possibility of things happening is a major theme, which fosters – if not compels – the adoption of a modalised style of writing (this is also true to a certain degree of the press reports and the textbooks). In addition, contextually, a primary purpose of most leaflets is to provide addressee-related information that needs to be completed/certified by him/her, hence modalisation becomes necessary (conditional *if* constructions are another way of doing this). Nevertheless, it is difficult in practice to make a clear-cut distinction between interactional and

non-interactional motivations behind specific instances of modalisation, and it often seems that a number of factors are at play. The following example illustrates these possibilities:

- (7-21) Will I still be protected in my next pregnancy? **Almost certainly** yes. But the only way to be really sure is to ask your GP to check your immunity to rubella before you get pregnant again.
[LF05]

A clear indication of the addressee-relatedness of this example is the personal question projected on the addressee. It seems obvious that both the content and the context do not allow for a categorical answer even if the writer is a hundred percent sure of this answer. First, the conveyance of the fact that the questioner will be protected is very much a possibility is apparently an essential part of the message (note that this is partly a prediction of something to happen in the future); second, as the remaining part of the answer indicates, a definite answer is not possible unless the addressee/questioner actually takes the required test. As such, this can be considered as an example of 'content-oriented' hedging (Hyland, 1996b) or modalisation, which is motivated by "the writer's focus on propositional accuracy or on self-protection from the consequences of poor judgement" or "an element of both" (p.439). Another type of modalisation³ that is more clearly interactionally related is 'addressee-oriented' modalisation (cf. Hyland's 'reader-oriented hedges'):

- (7-22) What are 'good' children? **Perhaps** children who: don't do as they shouldn't; do as they should; are cheerful, pleasant and polite; can adjust their behaviour to our moods; don't let us down in public.
[LF42]

The question and its answer in this example are clearly different from those in 7-21. All the possible content/contextual motivations for modalisation noted in 7-21 do not seem to apply here. The question is a more general one, not addressee-specific; and the answer is so obvious that it does not need to be hedged/modalised in any way. *Perhaps* could have been replaced with an accentuating modal element like *certainly*, *definitely*, etc., or even disposed of altogether yielding an appropriate categorical statement that indicates the writer's certainty in the truthfulness of the answer. But, as argued by Hyland (1996b, p.446), "categorical statements leave no room for negotiation"; on the other hand, modalisations/hedges "mark claims as provisional, they invite the reader to participate in a dialogue". So the modalisation of the

answer in 7-22 appears to be clearly brought about by the interactional attempt to make this statement open for negotiation, and not because of primarily content/contextual factors as in 7-21.

As an expansion to this creation of projected opportunities for negotiation with the addressee, modalisation can sometimes be used to bring to the text the addressee's point of view in order to negotiate it (Thompson, 2001). This occurs in the leaflets (and the press reports) mainly to argue against the projected addressee's misconceptions/misbehaviours.

(7-23) It is now thought that diet is in no way linked with acne. There is **certainly** no scientific evidence that chocolate or fatty foods contribute to the problem.
[LF33]

(7-24) You **may** be against your child's behaviour but you're never against your child.
[LF42]

In the first example, *certainly* suggests that the statement is in fact a response to some projected common misconception on behalf of the addressee; it seems that it is not simply intended to indicate the writer's confidence in the correctness of the proposition, since a categorical statement would in fact be as strong in indicating this, if not more, than a modalised one⁴. The *may...but* pattern in the second example is known for performing the interactional function of foregrounding the addressee's assumed argument in the text. Patterns like this have been identified by Stoll's (1998, p.568) informants as "being diaphonic: they were read as either repeating or rephrasing the intended reader's assumed discourse" (see also Azar, 1997; Thompson, 2001). The modal *may* itself is sometimes correlated with concession as one of its main functions (Huddleston, 1971, pp.297-304)⁵. So, in a sense, though it lacks the interactional reciprocity inherent in question/answer sequences, this pattern works in a similar way to the prediction of addressee's questions discussed in the previous section. Instances like the above represent interactional *hot spots* where the possibilities of negotiation are at their maximum.

Having demonstrated the interactional potential of modalisation with examples from the leaflets corpus, it should be stressed that examples as clear as the above are very infrequent in all data. It should, however, be clear now that the rationale behind the role of modal elements in offering prospects of negotiation is that they are expressions of "affinity – or lack of it – of

speaker with hearer“ (Hodge & Kress, 1988, p.123). Since “modality in general establishes the degree of an authority of an utterance” (Hodge & Kress, 1993, p.122), speakers/writers can lend higher or lower authority to their propositions through their choice of degrees of modalisation (or non-modalisation); this constitutes and reflects the power statuses of the interactants at that particular moment of the interaction⁶. Also closely related to the concept of ‘affinity’, modalisations are aspects of dialogic interactions where potentially divergent opinions have to be expressed and some sort of a consensus has to be reached (see, for instance, the remarks regarding highly modalised discussion sections versus modal-free narrative sections of conversations in Coates, 1987). The abundance of modalisations in the medical leaflets corpus can therefore be explained as a means of disguising power in an attempt to get the addressee on the writer’s side, and as a way of facilitating the projection of dialogue so that the addressee’s point of view can be accounted for in the text.

7.4.2 Evaluation

Evaluation, as noted in 7.2 above, is clearly characteristic of the press reports corpus. It is also relatively, but less distinctly, common in the leaflets. This pattern of distribution of evaluation in the press reports and the leaflets is almost the opposite to that of modalisation, which is characteristic of the leaflets and common, though not as characteristic, in the press reports. Such observations may indicate some complementary role played by both modalisation and evaluation. Indeed modalisation and evaluation can be viewed as two sides of the same coin; they are sometimes, quite rightly, treated as a single phenomenon (e.g. Hunston & Thompson, 2000b), and, though they are considered here separately, the analysis assumes they are basically doing the same thing: ‘opening it up for negotiation’ – but in rather different ways, as will be discussed.

Modality makes room for negotiation because it is, by definition, an intermediate, non-determinate area between *yes* and *no* (Halliday, 1994, p.356), resulting in modalised expressions being viewed as personal, subjective opinions. In the case of evaluation, however, there is no such semantically inherent grey area of negotiation; quite the opposite, genuinely evaluative lexis – which represents most of that identified in this analysis – may be used to express highly intense, sometimes extreme meanings, e.g. *terrifying*, *powerful*, *stupid*. But, at the same time, evaluation renders a proposition, perhaps more directly than modalisation, as a personal subjective view: it is typically the writer’s own judgement more than an objective

representation of the way things are in the real world. The combination of these two points about evaluation leads to the conclusion that evaluative propositions are likely to be subject to negotiation.

(7-25) A Mars a day helps you work, rest and play. Heineken refreshes the parts other beers cannot reach. Flora cuts the risk of heart disease. Butter is better for you than margarine...
Facts, fictions, slogans, culled from more than a century of British advertising. Some of it is pure baloney. Some of it is scientific half-truth. Some of it is fact.
[PRTM02]

In this example, the writer questions the honesty of some advertising slogans that evaluate certain products as 'good'. The writer points out that some of these slogans are not based on scientific examination and are simply untrue. I believe that what makes the writer feel comfortable to subject these slogans to scrutiny, among other things, is their evaluative nature that 'opens them up for negotiation'. Although the lexis in these slogans is not as extreme as the examples given above, the evaluations, as the writer indicates, are still individual opinions about these products and are not based on compelling scientific evidence. It is also interesting that this example demonstrates rather clearly the negotiation brought about by the use of evaluation. The evaluative language of the advertisements is not intended only as a description of the advertised products; rather, it aims at directly eliciting agreement from the possible customer, and most texts (certainly advertisements) proceed as though such agreement has been obtained from the addressee in the text. But even so, evaluation could in theory lead to confrontation and counter-evaluation, as is the case in this example.

It is clear from the above that evaluative propositions could naturally create more possibilities for negotiation than factual, non-evaluative ones. However, the present data seems to suggest, as argued in 7.1, that the extent of this depends to a certain degree on the type of evaluation invoked; while appreciations – the most dominant type of evaluation in the data – are sometimes intensified (e.g. *pure baloney* in 7-25) or hedged (e.g. *quite simple* in 7-26 below), judgements are normally not. This indicates that appreciations are probably viewed by writers as more prone to negotiation, since they draw on egocentric, personal opinions rather than, like judgements, on shared social norms; so they need to be backed up by either intensification or hedging, as necessitated by the context. Affect evaluations on their part can only be reacted to, as the context of their use depicts them as perfectly natural feelings that call for sympathy

and understanding. In the context of the present data, affect – especially when ‘reported’ (see below) – is mostly concerned with external subjects to whom the addressee has no access (in the press reports) or with feelings he/she may have (in the leaflets), and thus the only viable response would be that of being sensitive to the emotions described/expressed.

(7-26) It can be quite simple, like a decision to join a yoga class or go for a walk every day.
[PRIN45]

(7-27) Only an idiot would believe that the part-reaching ability of lager should be taken literally, as a measurable physiological effect.
[PRTM02]

(7-28) When Diane tells him that is not possible, Joshua falls to the floor. Feeling sad and angry, he starts to cry.
[PRTL34]

The first example contains a positive appreciation, *quite simple*. This is clearly what the writer personally thinks of the acts of ‘joining a yoga class’ or ‘going for a walk every day’. However, evaluating a physical exercise as simple or difficult is very much dependant on the person involved. Although the writer’s evaluation of these sorts of exercises as simple can undoubtedly be accepted by many outside the text, at least from the perspective of their being less strenuous than other exercises, a lazy or busy person may still find them not simple. (Of course, the text here projects an addressee who is willing to accept this kind of evaluation; and despite this, the appreciation is modalised to reduce its force.) Compare this to the expected actual readers’ response to the pronounced negative judgement in 7-27 of the person who faithfully believes in advertising as an *idiot*. I think that this evaluation is possibly less likely to be rejected than the one in 7-26. It is true here that the writer’s judgement may be thought of as relatively harsh, but in any case, it may be difficult to counter the argument that there is an element of idiocy in someone who believes everything. I believe that it is because judgements draw on what is socially accepted/unaccepted in identifying certain behaviours as good or bad that they are not as liable to be rejected as the purely individualistic appreciations – though, of course, judgements can still be negotiated in terms of their magnitude, as could be the case in 7-27.

The example of affect in 7-28 is different from the previous two in that evaluation is reported rather than direct. The evaluation of Joshua’s feelings is presented in the framework of a

narrative; so it is most likely to be read as 'this is how the story goes' than 'this is what the writer thinks'. This kind of reporting of evaluation is more associated with affect, and this is especially true in the press reports where there is more reported affect than direct. In terms of negotiation, affect, whether reported or not (but more obviously if reported), seems to play an indirect, supportive role. The following is an example of non-reported affect:

(7-29) Parents are often **anxious** about the use of topical steroids, but these **worries** stem from the misuse of the very strong steroids...
[LF28]

Affectual evaluation in this example, *anxious* and *worries*, is apparently not an issue of negotiation here (all parents are concerned about their children's well being); rather it is the use of *very strong steroids*. Affect signals help raise this issue, allowing the expression of a negative judgement, *misuse*. This kind of role for affect evaluation is even more clear when affect is embedded; in 7-28, the evaluation of Joshua's feelings is used to create an emotional atmosphere so that the strategy used to deal with him can then be appreciated (not shown). So the role of affect that emerges from this data is more of helping the writer express his/her judgement or appreciation evaluations⁸.

To sum up, one of the major outcomes of evaluation indicated by the analysis is that of highlighting negotiation. This is because evaluative language is "not treated simply as a description, but rather as something that can be responded to, and participated in, in a special way" (Goodwin & Goodwin, 1992, p.157). It has also been shown that the relation between evaluation and negotiation can be affected by the type of evaluation. To add to this, it should also be emphasised that statuses of the interactants and the 'reading position' (Martin, 2000) can determine how evaluations are responded to. For example, the addressee in the research articles would be less flexible towards the evaluations in the text than, e.g., the addressee of the textbooks. Nonetheless, regardless of the type of response evoked, evaluations constitute key places where interactants express and negotiate their views of things that are mutually relevant.

7.5 Summary

The starting point of this chapter has been the effect of negotiation that the signals of Lexico-grammatical Interaction analysed here are more associated with. This effect reflects interaction in a clearer way than orientation/guidance discussed in the previous chapter, as it allows both

writers and addressees to be overtly projected as negotiating inside the text. However, the discussion above distinguishes between a strong and a weak sense of negotiation; the former is realised through questions and commands, and the latter through modalisation and evaluation. These two senses of negotiation, unlike the two aspects of guidance (see previous chapter), do not alternate between positive and negative markedness in single texts and seem to operate together, suggesting a dependency rather than complementary relationship.

The quantitative analysis suggests a similar contrast to the one noticed in the previous chapter between leaflets and research articles, which are respectively positively and negatively marked. In fact, this contrast is broader in the present analysis: leaflets and press reports as a group may be contrasted with research articles and textbooks as another group. The analysis, however, indicates that while most of the signals are positively marked in the leaflets, only evaluation is highly positively marked in the press reports. This is another evidence of the generally more overt projection of negotiation characteristic of the leaflets corpus.

The investigation of how the signals of Lexico-grammatical Interaction actually project negotiation in the data points to some interesting variations. An example of these is the different functions of the imperatives in the medical leaflets and the textbooks; in the former, imperatives are largely content-related, while in the latter they are meta-linguistic. This highlights more the importance of guidance in the textbooks (as pointed out in the previous chapter), since these meta-linguistic imperatives seem to primarily aim at directing the addressee to related information at specific points of the text. A specific function of imperatives particularly relevant to the leaflets corpus is that of making explicit through negation certain assumptions about the addressee.

Making explicit the presence of the addressee inside the text is indeed one important function of the signals of Lexico-grammatical Interaction, and a basic way in which negotiation can be projected in written discourse. This is certainly what most questions in the data do; they overtly project the addressee into the roles of either questioner or answerer, and the text proceeds as if these roles are being fulfilled. This is also the case with regard to modalisation, which allows addressee's responses to be projected in the text. Unlike questions, however, which are normally used more generally for persuasion/assurance purposes, modalisation seems to be particularly useful in arguing against the addressee's assumed misconceptions. Finally,

evaluation is typically employed to project the writer's point of view, not that of the addressee; however, the text normally continues as if these evaluations are shared.

Lexico-grammatical Interaction signals represent some of the most powerful ways in which written language can project negotiation. They do not only make it possible to highlight the addressee's presence, but they also construct – with varying degrees of explicitness – an equal reciprocal relationship between writer and addressee. This is clearly a strong projection of interaction in written texts that brings them closer to the spoken exchanges, demonstrating that the difference between the two modes in terms of interaction is probably only a matter of overttness.

NOTES

- ¹ Commands in the research articles in my corpus are very infrequent and are not therefore considered in this discussion.
- ² The only imperative in the research articles corpus is also of this kind.
- ³ It should be stressed, as noted by Hyland (1996b, p.439), that these types of modalisation (hedging) are not necessarily mutually exclusive.
- ⁴ Indeed, categorical statements represent the strongest value that can be ascribed to a proposition, and no modal element will strengthen the degree of commitment to a proposition beyond that. For example, Stubbs (1986, p.7) points out that what such elements “do is perform the discourse function of responding to a previous utterance, by countering a previously expressed uncertainty” (see also Lyons, 1977, p.809; Halliday, 1985, p.340).
- ⁵ It is important to note, however, that other modal elements, not only *may*, can also be used with such concession pattern, e.g. *perhaps* and *can*.
- ⁶ Power and solidarity are being considered here from the particular perspective of their influence on negotiation: minimisation of power differences allows for more possibility of negotiation. The more general pragmatic/involvement role of power will be discussed in the next chapter.
- ⁷ Of course, in the real world advertisements use different strategies to construct a more cooperative addressee than this critical reporter, e.g. by assuming “shared opinions which are not shared” (Cook, 1992, p.175). For instance, the advertisement for Mars referred to in 7-25 can seek to build an addressee who wants to *work, rest and play*, so that he/she would be more inclined to accept the evaluation expressed in the slogan (see also the comments at the end of this section about the effect of the ‘reading position’ on negotiation).
- ⁸ Having said this, it should be noted that, even in this role, affectual evaluations are still open to negotiation in themselves, as some affectual values can be seen as inappropriate (in which case, the subsequent appreciation/judgement may not succeed). It is, however, extremely unlikely – as long as it is made natural by the text – that an affect evaluation will be challenged, since emotional responses do not normally need to be justified.

PRAGMATIC INTERACTION ANALYSIS

To conclude the analysis of the data, the signals of Pragmatic Interaction are investigated in the present chapter. The concept of involvement associated with this kind of interaction will first be reviewed, and then some illustrative examples from the data will be used to demonstrate how involvement can be projected with the help of the two strategies of personal reference and politeness. The next section provides a general quantitative overview of most aspects of these signals and comments on their importance in each of the four corpora comprising the data. Drawing on the quantitative analysis, the rest of the chapter discusses the signals of Pragmatic Interaction in greater detail, attempting to highlight how they project distance from or closeness with the addressee and the role context plays in this. First, personal reference is discussed in terms of writer- and addressee-reference; these two ways of reference are analysed separately and the differences and similarities between them in construing involvement are demonstrated. Second, the analysis of politeness shows that negative and positive politeness are not employed equally in the text types included in the data, as these two ways of projecting politeness relate differently to involvement. The chapter concludes by summarising the results obtained from the various analyses of the Pragmatic Interaction signals.

8.1 Introduction

From the introduction to Pragmatic Interaction in Chapter 4, it is obvious that the projection of this type of interaction is crucially different from the previous two in that it involves looking at the text in its surrounding wider social context, and does not only focus on the text and the interactants. This important observation about Pragmatic Interaction is underscored by associating it with two strategies that are often considered basic indexes of the social relationship among interactants, i.e. reference (e.g. Duranti, 1984; Allerton, 1996) and politeness (e.g. Goody, 1978a; Aronsson & Sätterlund-Larsson, 1987). Equally important is the interactional effect of involvement which has been linked to Pragmatic Interaction. This effect will be briefly reconsidered in the following discussion before proceeding to demonstrate how it is constructed/reflected using the strategies of reference and politeness.

Involvement has been broadly defined in Chapter 4 as simply indicating how close or distant the interactants in the text are from each other. For the purposes of the earlier discussion, this definition was adequate. But as we look at actual examples in this chapter, this general definition needs to be further refined and supplemented by details of the processes of projecting a close or distant relationship¹.

It should be clear that involvement is used here to refer exclusively to writer/addressee involvement², not to the writer/speaker's involvement with him/herself or with the topic, as in some previous considerations (e.g. Chafe, 1985; Fina, 1995). It is assumed that the writer is always present in the text (with varying degrees of self- and content-involvement), and that it is the way in which the addressee's presence is projected that has the real effect on the closeness of the relationship. It is also assumed that writers and their addressees in the data used here come to the text as strangers – they are distant from each other, both physically and socially. So if the message of the text requires that similar “unmarked set of initial assumptions” (Scollon & Scollon, 1995, p.41) about the interactants' relationship be altered, the text “is likely to begin with the assumed relationship, but then [it] will begin to negotiate a closer or more intimate relationship” (p.35). Otherwise, the text will convey its content message with no involvement signals, keeping the relationship as distant as it is.

The first strategy this analysis considers as a primary resource for writers to manifest and construct the type of relation with their addressees is through personal reference, that is

reference to the writer or to the addressee in the text. In the present data, this is mainly done by using the pronominal system, where *you* is used for the addressee and *I/we (me/us)* for the writer. There are obviously some restrictions on the writer's ability to fully exploit the potential of the system of reference as an interactional/involvement strategy, not least because of the mode of expression where personal reference is expected to be generally less common than in speaking (Poole & Field, 1976) and because of certain broader constraints inherent in the English language, such as the absence of a dual system of honorific address forms, like, e.g., *tu/vous* in French (Harré, 1988). Nonetheless, reference is still an important mechanism the writer can use to express "both his own presence in discourse, the presence of others and the relationship he/she entertains with these others" (Fina, 1995, p.384). In the following example, the inclusive *we* (that includes in its referent both writer and addressee) is used to express a general fact about calcium in the bones.

(8-1) We constantly shed calcium from our bones, replacing it with fresh supplies taken from our diet.
[PRTM60]

The writer could have expressed this meaning with a more impersonal referring expression, like *people*, or could have removed him/herself and the addressee altogether from the reference signal through passivisation: 'Calcium is constantly shed from the bones...', which is a common device in pure scientific writing, like research articles. However, by choosing to identify him/herself with the addressee, the writer is indicating a close relationship between them in the text. Indeed, as shown by Duranti (1984), when using personal pronouns to refer to other people, writers/speakers normally seem to display sympathy and closeness with those others. This effect of personal pronouns becomes clearer if we contrast them with other ways of reference that convey virtually the opposite effect, like the demonstratives; these extend "from indicating relative physical distance to expressing relative emotional distance" (p.279) (see also Maitland & Wilson, 1987).

Apart from this frequently employed intrinsic social meaning of the pronominal system, it is also quite common that writers/speakers exploit the various referents of personal pronouns in the same text and alternate between them or between them and other ways of reference to pragmatically evince distancing or involving effects (see, e.g., Widdowson, 1993). The

following is a simple instance of this, where there is a shift from *you* as a direct form of address to *us* to include the writer and others in the referent along with the addressee.

- (8-2) If **you** are under 50, particularly if **you** are male, **you** may think **you** have nothing to fear from osteoporosis. Many of **us** associate the disease with dowagers' humps and old ladies undergoing hip replacement operations.
[PRTM60]

This is a frequent pattern of pronominal switch that is intended to involve the addressee and indicate common ground with him/her. Clearly part of the effect is inherent from the social meaning of the pronouns *you* and *us* as shown above. But the switch itself is interesting as it indicates that the manifestation of involvement is apparently crucial at this point of the interaction: despite the direct address, the addressee is not isolated from the writer and the others. Perhaps the writer is trying to create a balance between endangering the relationship with the addressee by contradicting a belief the latter is probably in favour of and, at the same time, stressing involvement and commonality through the switch to *us*. To highlight this point, consider replacing *us* with *people* or proceeding with *you*; similarly, consider using *one*, for instance, instead of *you* in the first sentence. All these choices will most likely have a less involving effect than *you/us*.

In the example above, indicating common ground with the addressee is obviously important as it concerns a mistaken belief; hence advancing this belief as common is one way of saving the face of the addressee, so that it would not be interpreted as a criticism or an attack on the addressee. The pronominal system can be used as a politeness strategy (see Brown & Levinson, 1987); but it is considered here as an involvement device in itself, and not because of its contribution to politeness, though – as in example 8-2 – this is usually quite noticeable.

Politeness is a rather pervasive phenomenon, and there are many linguistic ways in which politeness can be expressed, including some that have been discussed before, e.g. modality. In the following example, modality/hedging and conditionals are used to minimize the obligation on the addressee; in Brown & Levinson's categorisation, this is the strategy of avoiding 'coercing' the addressee into doing some action.

- (8-3) **If you can, it may be helpful** to tell them this at a time when you are not feeling quite so angry or **if you would find that difficult, perhaps you could** show them this section of the booklet.
[LF13]

The writer is obviously in favour of the addressee performing these actions, but he/she is aware of the fact that they may not be easy, and that asking the addressee to do them bluntly would appear impolite. So he/she opted to express this advice, but redress it so as to minimise the imposition.

The above is an example of Brown & Levinson's negative politeness, which is intended to save the addressee's face that is threatened by a face-threatening act (FTA). Linguistic signals of this type of politeness are "likely to be used whenever a speaker [or writer] wants to put a social brake on to the course of his interaction" (Brown & Levinson, 1987, p.130), that is they normally have a distancing effect by showing deference. On the other hand, positive politeness strategies are not only used to redress FTAs, but are generally employed "as a kind of social accelerator, where S [speaker], in using them, indicates that he wants to 'come closer' to H [hearer]" (p.103). In the following example from the opening of the same leaflet, the writer indicates the co-operation with the addressee by using the positive politeness strategy of 'being optimistic'.

- (8-4) We hope this booklet answers some of the questions you may have about their diagnosis and treatment.
[LF13]

There is no FTA here that this expression of hope redresses, and the writer could have aptly proceeded without making explicit what he/she hopes the addressee will get from the leaflet. But it is a way of emphasising co-operation, which is here done through what Brown & Levinson calls 'claiming reflexivity', i.e. the speaker/writer wants what the addressee wants for him/herself (and vice versa). So in this example the writer is 'claiming reflexivity' and co-operation/closeness by indicating that he/she wants what the addressee wants for him/herself, that is getting questions answered.

The simple analysis of the illustrative examples above of personal reference and politeness supports what has been argued before about the role of personal reference and politeness in reflecting/constructing involvement. More importantly, it suggests that we may expect key

differences and similarities in the way involvement and Pragmatic Interaction is managed in the four types of texts comprising the data. Since Pragmatic Interaction is closely linked to the wider context of the text, and since the texts considered here exhibit a complex network of differences and similarities in their addressees, contexts, and purposes (see Chapter 3), parallel complex configurations of Pragmatic Interaction are therefore predictable.

8.2 Quantitative Overview

Analysing pragmatic features, especially if the aim is to shed light on the management of interaction, requires knowledge of the communicative purposes of the texts analysed. Drawing on the discussion in Chapter 3 of the different text types considered in this study, it is clear that research articles in particular are generally characterised by not being concerned with informing the addressee of things, physical or otherwise, he/she is supposed to do. On the other hand, this is an essential pragmatic objective of the medical leaflet and the textbook, and to a lesser extent of the medical press report. This observation is relevant to the present analysis of politeness, since this kind of communicative act represents a strong infringement of the addressee's freedom of action, constituting a basic face-threatening act, FTA. This FTA is therefore a suitable target for the politeness part of the analysis, which focuses on two main ways of redressing this FTA: mitigation through markers like *please, just*, etc. and indirectness through, e.g., modalisation (see Chapter 5 for more on the identification of these two strategies of redress).

In the case of the research articles, the analysis focuses on another kind of FTA, "claims and denials, the necessary FTAs of scientific writing" (Myers, 1989, p.17) – see 5.4.3 for more on claims in research articles. Following Myers, a range of politeness strategies, as identified by Brown & Levinson (1987), have been associated with this FTA in the medical research articles corpus, e.g. impersonalisation and pessimism (see 8.4.1 below). Redressing of FTAs to minimise their effects and signal deference towards the addressee, as in both of these two kinds of FTAs (requests and claims/denials), is an exemplification of negative politeness. This quantitative overview does not consider the other type of politeness, positive politeness, since it is typically employed only in certain text types, the medical leaflets and the press reports, and not the others (see, however, 8.4.2 for a qualitative analysis of this type of politeness).

The analysis of reference to writer and addressee is relatively more straightforward, at least in terms of the signals of this personal reference in the data. Though writers and addressees are sometimes referred to using third person constructions, most of the third person reference refers to outside people/entities. The prevalent choice of reference to writer and addressee across the four corpora (though with a remarkably uneven distribution, as will be shown) is the pronominal system. Consequently, the analysis focuses on this use of pronouns, dividing them into two main groups: one referring to the writer, *I/me* and exclusive *we/us*, and the other referring to the addressee, *you* (in subject and object positions) and the inclusive *we/us*. The raw frequencies of these pronouns along with those of the strategies of negative politeness considered in this analysis are presented in Table 8-1. (But note that mitigation is presented in percentage form, as it depends on the usage of the imperatives in the corpus; the two figures inside the brackets are the total number of imperatives and the number of those mitigated; from these two figures the percentage outside the brackets has been calculated.)

SIGNAL CORPUS	Negative politeness		Reference			
	Mitigation %	Indirectness	To writer		To addressee	
			<i>I/me</i>	Excl. <i>we/us</i>	<i>you</i> (subj./obj.)	Incl. <i>we/us</i>
Leaflets	16.1 (146/907)	173	2	61	2125*	66
Textbooks	6 (5/82)	211	5	22	16	5
Press Reports	21.7 (18/83)	2	80	147	295	147
Research Articles	39		0	224	0	0

Table 8-1: The frequencies of the Pragmatic Interaction signals in each corpus of the data.

*This figure includes 138 occurrences of the pronoun *I*; since these instances of this pronoun are located in quoted speech or questions projected on the addressee, they actually refer to the addressee rather than to the writer.

The table provides an interesting picture of how Pragmatic Interaction and the management of involvement is done in the different text types analysed. In spite of this, it is not possible to make a general quantitative comparison between the two signals of negative politeness and reference. This is because pronouns can co-exist in a single sentence while, say, a mitigation normally cannot; while it is feasible to find several different forms of pronouns in one sentence, this is normally not the case for mitigated imperatives. Still, however, the table enables us to draw some conclusions about how each signal is employed in each of the four corpora.

Mitigation is represented in Table 8-1 in percentage form; this is so as to avoid the raw frequency that is dependent on the number of imperatives in each corpus. So while there is comparatively much more mitigation in the leaflets compared to the press reports, 146 and 18 respectively, the representation of this relation in percentage form indicates that there is actually slightly more focus on mitigation as a politeness strategy in the press reports than in the leaflets, 21.7% and 16.1% respectively. Mitigation in the textbooks is apparently a marginal strategy of politeness; only 6% of the imperatives in this corpus are mitigated, though they are as frequent as in the press reports. This does not mean, however, that textbooks tell their addressees to do things without redressing this FTA; but this is mostly done in an indirect way. Indirectness, as the table indicates, is a major politeness strategy in the textbooks (211 instances), and to a lesser extent in the leaflets corpus (173 instances), but not in the press reports (only 2 instances).

Although the FTA in the research articles is of a different kind from that in the leaflets, textbooks, and press reports corpora, it is still possible to compare the ways of redressing these two FTAs as broadly locations for negative politeness. It is clear, for instance, that there are more occurrences of negative politeness in the research articles than in the press reports, almost twice as many. This suggests more concern with negative politeness, that is with showing deference towards the addressee, in the research articles than in the press reports. Compared to the leaflets and the textbooks corpora, however, negative politeness in the research articles is relatively infrequent.

While some of the above observations about the management of negative politeness in the four text type corpora comprising the data are to some extent unexpected, like the high frequency of the negative politeness strategies in the textbooks compared to the press reports and the research articles, some are in fact not surprising. For example, the comparatively minor role mitigation plays in the textbooks is probably related to the type of imperatives used; as noted before (see 7.3.1), almost half of these imperatives involve the perception verb *see*, which is meant to guide the addressee; so the infringement is not regarded as strong as it is in the case of verbs with physical processes (see also 8.4.1 on the types of imperatives that lend themselves most readily to mitigation). Also the frequent use of indirectness to indicate things that should be done in the textbooks is probably required to convey the message in as an impersonal and information-focused way as possible through the utilisation of statements

instead of imperatives; in other words, textbooks foreground the predicted function of providing information, but covertly fulfil the other necessary function – especially for medical textbooks – of ‘telling’ the addressee what to do in particular situations.

Against the above relatively complex configuration of how politeness is employed in the four corpora analysed, the case is more straightforward with regard to reference. As shown in the table, it is possible to distinguish between leaflets and press reports on the one hand and textbooks and research articles on the other, as the former pair of texts exhibits more reference to addressee and the latter makes more reference to writer. On the whole, reference in this latter group, particularly in the textbooks, is less conspicuous than in the first one. Moreover, there is a particularly interesting observation concerning research articles, that they make no reference to the addressee; all reference made is exclusively to the writer. In the first group, there is a predominantly more frequent reference to addressee in the leaflets (97%) than to writer; the contrast is not as sharp in the press reports, though it still there: about 66% of reference made is to the addressee. Finally, the distribution of exclusive versus inclusive *we/us* is also interesting, as it correlates with the above grouping of texts; while *we/us* tends to be used more in its exclusive sense in the textbooks and the research articles, it is as much used in its inclusive sense in both the leaflets and the press reports.

The distribution of reference to writer and to addressee allows the separation of the four corpora in hand along similar lines to the Lexico-grammatical Interaction analysis carried out in the previous chapter. Popularised texts, that is medical leaflets and press reports, have a pattern of reference that is distinct from the more specialised scientific ones, textbooks and research articles. The most remarkable feature of this pattern is the frequent reference to addressee in the popularised texts. This is probably not surprising, as these texts tend to communicate their message in a personal way, bringing the addressee closer to the text (see Chapter 3). By the same token, giving less priority to reference in general, as in the textbooks, or restricting it exclusively to that which refers to the writer, as in the research articles, is expected from these kinds of scientific writing, which, as indicated earlier, are more inclined to be more impersonal and to stress the role of the writer, sustaining the distant/formal relationship held with the addressee.

It has been mentioned at the beginning of this section that an absolute comparison between negative politeness and reference based on their frequencies in Table 8-1 is not possible. Nevertheless, a better understanding of the management of Pragmatic Interaction can be accomplished if the patterns of occurrence of both of these signals can be matched against each other. This is possible through a calculation of the relative 'markedness' (see 5.3) of these signals across the whole data, as shown in Table 8-2 and Figure 8-1.

The impression we can get from Figure 8-1 is largely compatible with the above analysis based on the raw frequencies of negative politeness and reference. Negative politeness is a marked choice in the textbooks, reference to writer is marked in the research articles (but, interestingly, also in the press reports), reference to addressee is marked in the leaflets (but, interestingly again, not in the press reports), and reference in general is unequivocally a negatively marked, less important option in the textbooks. What is interesting about these observations is that considering press reports along with the other text types brings up a different pattern of reference than if we focus attention on the press reports alone; in the latter case, it is clear that there is more frequent reference to addressee than to writer, whereas in the former, as shown in Figure 8-1, writer reference is the marked choice. This is probably an indication of the heterogeneous nature of the press report as it strives to maintain a balance between the impersonality of science and the informality of public discourse. In contrast to the leaflets where reference on the whole (and the overall Pragmatic Interaction) is an important feature, reference in the press reports (and the overall Pragmatic Interaction) is very close to the neutral separation line between positive and negative markedness.

SIGNAL CORPUS	Negative politeness	Reference			OVERALL
		To writer	To addressee	SUBTOTAL	
Leaflets	2.36 (0.7)	0.79 (-0.69)	27.39 (1.13)	28.18 (1.45)	30.54 (1.47)
Textbooks	2.71 (1)	0.34 (-1.03)	0.26 (-0.75)	0.6 (-0.75)	3.31 (-0.63)
Press Reports	0.3 (-0.9)	2.84 (0.88)	5.53 (-0.38)	8.37 (-0.13)	8.67 (-0.22)
Research Articles	0.49 (-0.8)	2.8 (0.85)	0	2.8 (-0.57)	3.29 (-0.64)
TOTAL	5.86	6.77	33.18	39.95	45.81
Mean	1.47	1.69	11.06	9.99	11.45
Standard Deviation	1.25	1.31	14.39	12.56	12.97

Table 8-2: The calculation of the 'markedness' of the Pragmatic Interaction signals in each corpus of the data. (Figures are per 1000 words; figures in brackets represent the score of 'markedness' for each signal as calculated from the mean and standard deviation)

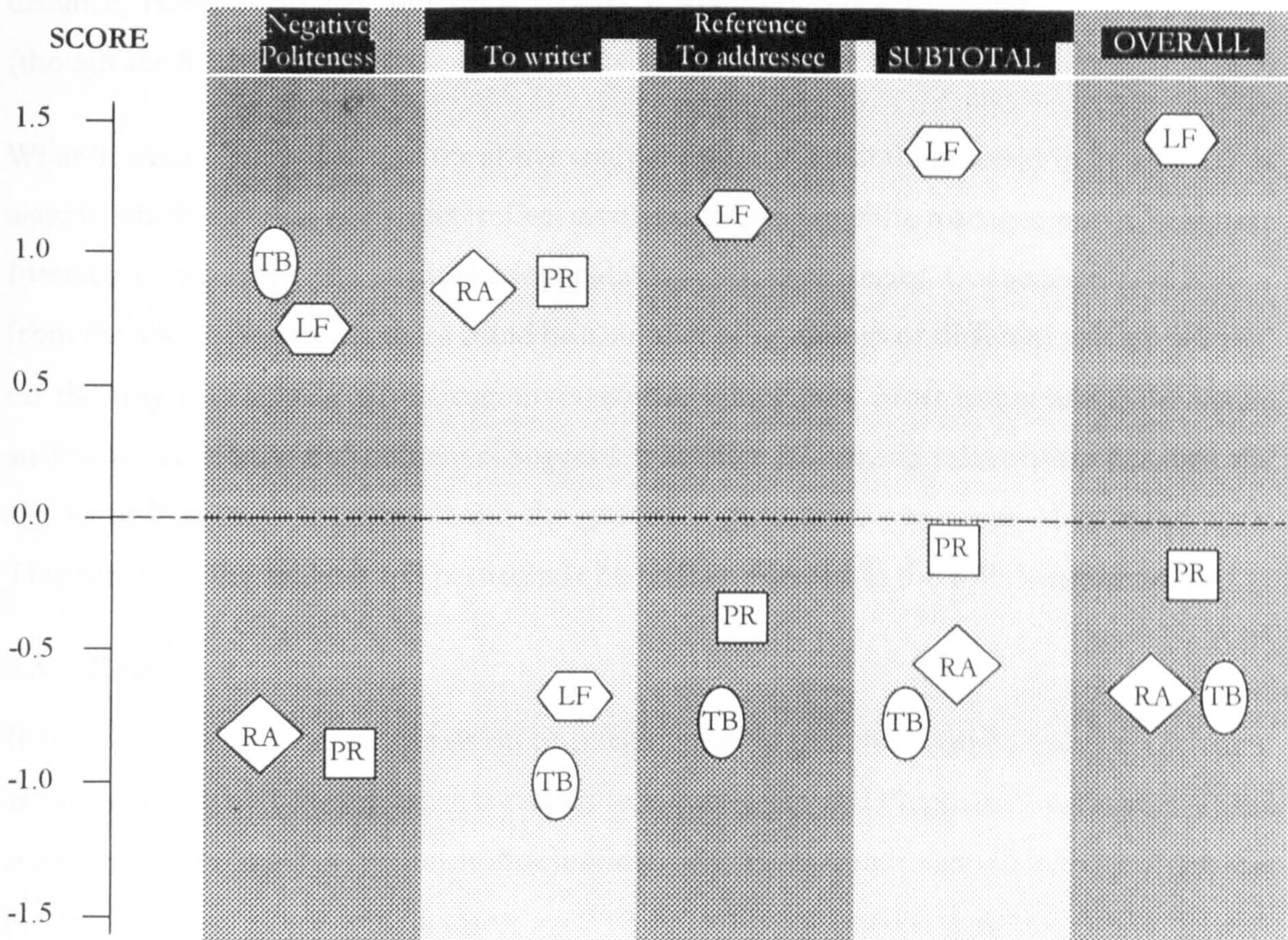


Figure 8-1: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the Pragmatic Interaction signals.

Key:

- LF (Hexagon) = Medical Leaflets
- RA (Diamond) = Medical Research Articles
- PR (Square) = Medical Press Reports
- TB (Oval) = Medical Textbooks

An interesting pattern to note in Figure 8-1 is the alternation for each text type of negative politeness and reference to writer between positive and negative markedness. Where one is marked on the positive (top) side, the other is marked on the negative (bottom) side to almost the same extent (score), and vice versa. While negative politeness is marked positively in the textbooks and the leaflets, reference to writer is negatively marked for both of these text types; conversely, for research articles and press reports, negative politeness is negatively marked whereas reference to writer is positively marked. As indicated in 8.1, negative politeness has a distancing effect, and reference to writer can make the text sound more monologic and thus distancing; this suggests that both negative politeness and self-reference to the writer may be used interchangeably in different texts to manage involvement. It could be said that while textbooks and leaflets rely on negative politeness to show deference to addressee and indicate distance, research articles and press reports employ reference to writer for this purpose (though see 8.3.1 below).

What this last observation and the above analysis indicate is that there seems to be a variety of ways in which texts can construct/reflect involvement, and that the management of Pragmatic Interaction requires some intricate combinations of these strategies. Consequently, as is clear from the above discussion, there could be a number of groupings of different text types based on the way they appear to manage involvement/interaction. Most importantly, the above analysis of reference and politeness suggests that there is a strong relationship between the signals of Pragmatic Interaction and the general communicative purpose of each text type. This theme of the analysis will particularly be further pursued in the following sections.

8.3 Reference

It should be clear from the discussion of reference so far that this analysis makes some initial assumptions about how reference is related to involvement and Pragmatic Interaction. These assumptions are based on established definitions of the pronouns included in the analysis, that is *I*, exclusive *we/us*, *you*, and inclusive *we/us*. A more fundamental assumption has to do with the contrast between reference and no reference; analogous to Scollon & Scollon's (1995, p.39) argument that it "is the difference between speaking (or communicating) and silence (or non-communication)" that represents "the most extreme contrast between involvement and independence", it is also possible to say that while reference in general indicates involvement,

no reference is indicative of non-involvement. A clear case of this in the data is the textbooks corpus, where there is very little reference (counting for only about 1.5% of the total reference in the data), reflecting a clear distancing effect.

But if there is personal reference, then we can divide the pronouns used according to whether they indicate more or less involvement. The first two pronominal choices mentioned above as ways of self-reference are considered broadly to have a distancing effect. Texts characterised by frequent reference to the writer, especially when accompanied by no or little addressee reference, are concerned more with expressing the writer's evaluations and point of view and are "not designed to involve or request action of the audience" (Fina, 1995, pp.401-2). On the other hand, *you* is a standard signal of direct personal address, and thus intimacy and closeness with the addressee³; and inclusive *we/us* "ostensibly implies joint activity or involvement" (Wales, 1996, p.63). Nevertheless, as will be clear from the following analysis of reference to both writer and addressee in the leaflets, press reports, and research articles corpora⁴, these assumptions, though theoretically valid and generally useful, should not be taken for granted, and the context of pronominal use should be regarded as a deciding factor.

8.3.1 *To writer*⁵

In addition to (or perhaps as a result of) identifying referents, personal pronouns help draw attention to those referents. This is specially true in the case of reference to the writer, where *I* and exclusive *we/us* appear to be powerful signals writers use to make their presence more noticeable. This may be motivated by the need to show more commitment to one's statements, to indicate subjectivity, or, more generally, to exclude others from the reported activity. Regardless of the motivation, one crucial consequence of this prominence given to the writer's role, particularly if this is a stable or predominant pattern of reference, is that the text will appear less addressee-oriented, more self-centred, and highly monologic. This is certainly what seems to be happening in the research articles corpus, as clear from the following two typical examples:

- (8-5) We studied whether it is possible to diagnose specific epilepsy syndromes promptly by use of standard clinical methods, electroencephalography (EEG) and magnetic resonance imaging (MRI).
[RA07]

- (8-6) We believe that the open discussions of relationship issues in our intervention contributed to bonding among the women, helped them confront their own situations, and encouraged empowerment and action.
[RA04]

Not only is it the case that in the research articles reference is exclusively made to the writer (see 8-2 above), but, as in these examples, the types of verbs associated with the self-reference pronouns are more evidence of the intention to distance the addressee from the text. In 8-5 the past tense of the verb dissociates the addressee from the here and now of the activity, relating it to the writers alone; and in 8-6 the internal, mental process of *believing* confines this activity to the writers as individuals, making explicit that this is a personal opinion that might not be shared by others. These kinds of verbs, especially the first, represent the majority of those occurring in the research articles corpus. So, it seems, interactionally speaking, that the main function of personal reference in the research articles is to emphasise the presence of the writers and simultaneously distance the addressee. Put differently, reference to writer here helps create a space between writers and community by projecting writers as the doer and thinker, while (temporarily) holding the community as a distant observer.

In the above two examples, *we* is used to refer to the individual writers, since all research articles in the data are written by multiple authors. So it is not used here, as is sometimes the case, to refer to a single author so as “to resist the egocentricity of the potential *I*” (Wales, 1996, p.63). As shown above, egocentricity and connotations of distance are inherent qualities of self-reference; even when *we* is used instead of *I*, as noted by Wales, “an egocentric ‘meaning’ will often be re-asserted” (p.63). This is typically, however, subject to the context, which is an important factor in all pronominal use (and in fact Pragmatic Interaction in general). Some ways of reference have different meanings for different people, in different types of texts, and in different contexts in single speeches or texts⁶.

The context in the research articles, that is the absence of any reference to addressee and the types of verbs associated with first-person pronouns as discussed above, helps direct attention to the writer and distance the addressee. However, the context of self-reference in the press reports is clearly different. One important aspect of this difference in context is that in the press reports reference to the addressee is quite frequent; indeed, as shown in 8-2, reference to addressee is about two times more than that made to the writer. Another aspect of this

difference is demonstrated in the following two examples of reference to writer in the press reports:

- (8-7) But here is the result I find most surprising: when mothers and fathers use a training style of parenting, their children become more resilient.
[PRTL34]
- (8-8) Despite eating turkey at Christmas and black pudding when pregnant, for the past 20 years I have stuck to my (predominantly) meat-free and high-pulse diet because I believe it is healthier. But am I justified in this belief? Should parents worry or be pleased when their children follow the trend and turn against meat?
[PRTM01]

In 8-7 the pronoun *I* is used in a context that is more involving than we have seen in the previous examples from research articles; cues like the addressee-oriented predictive guidance (see Chapter 6), *here is the result*, and the invitation to agreement through evaluation (see Chapter 7), *most surprising*, highlight this endeavour to bring the addressee closer to the text/writer. Although the discovery is ascribed to the writer, the addressee is relatively explicitly invited to share it (and its implications) both as a *result* and as something *interesting*. The cue of involvement is different in example 8-8, questioning, but it is not less strong; it is clear that the writer is telling her personal experience and beliefs in order to involve the addressees by asking them about their opinion of this experience.

Telling personal stories is one strategy people can use to establish rapport with their addressees (Maitland & Wilson, 1987, p.499), and this is what appears to be the main function of self-reference in press reports. In the research articles, writers also tell stories, but these are not to be conceived of as personal ones; the story told in the research article is the objective research story (Myers, 1994a; Thompson, 1997, Chapter 7). So the primary task of first-person pronouns in the story telling in the research article is more of drawing attention to the role of the writer in the research process than of asking the addressee to take a position relative to what is being told.

To summarise, the discussion above suggests that there are two essential ways in which reference to writer reflects/constructs degrees of involvement. The first, which seems to be at play in the research articles corpus, is through the basic, natural meaning of first-person pronouns as writer/speaker-oriented, which by implication results in distancing and excluding

the addressee. The second is essentially an outcome of the context of reference, and it can allow writers to exploit self-reference as an involving strategy, as is the case in the press reports corpus. The different ways in which reference to writer is utilised in both research articles and press reports is perhaps linked to the general contexts and communicative purposes of these two text types. Research articles are meant to be read and evaluated for professional purposes, so the addressee will more appropriately be projected as a distant observer; press reports, on the other hand, aim to engage their addressees at various points of the text so that they can appreciate its relevance to them and will enjoy and keep reading. More importantly, the research article needs to show more deference (see below) towards its addressees who belong to the internal cycle of science, whereas the press report aims at breaking the barrier between its addressees, most of whom are outsiders, and the scientific community.

8.3.2 To addressee

Beyond the simplistic model of face-to-face, two-party conversations, the identities of the interactants become less transparent, and hence reference to them becomes more complex; but, as will be clear later, this is precisely why the role of personal reference here is crucial. In public speeches and writings where the speaker/writer is not only speaking on behalf of him/herself, and where the addressee is often more than one, the potential of reference as an involvement strategy is paramount. In particular, reference to the addressee through *you* and inclusive *we/us* is a rich resource through which writers/speakers can indicate their relationship with and attitudes towards their addressees. This is because, in practice, *you* and inclusive *we/us* are capable of referring to almost any participating or non-participating human agent; both of these pronouns have personal and impersonal uses allowing them to include in their referent the speaker/writer, the addressee, and any other third-person agent (or virtually any combination of these referents) (see Laberge & Sankoff, 1979; Kitagawa & Lehrer, 1990).

You in its basic meaning refers to the addressee, the interlocutor in dyadic conversations. In some forms of public writing where there is no single addressee as such, and where an intimate/direct 'exchange' needs to be initiated, *you* (along with other strategies, e.g. questions – see previous chapter) may be used to simulate a face-to-face conversation. This basic referring function of *you* is what medical leaflets in the data appear to overwhelmingly employ.

(8-9) **You** can see that yours is not an isolated problem. We have told **you** what we can in one short leaflet. Why not see your doctor or make that telephone call to Eric?
[LF03]

Obviously, the leaflet from which this example is taken is not addressed to one specific individual whom *you* refers to here. But, similarly to advertisements (Myers, 1994b), this personal *you* allows writers “to *seem* to address us personally, even when they address millions of us at once” (p.78, emphasis in original) (see also Cook, 1992). It also allows readers – writers hope – to individually associate themselves with the image depicted of the addressee.

This basic meaning of *you* referring to one single addressee is, unlike the leaflets, not the norm in the press reports corpus. Most of the uses of *you* can be replaced with *one* or *anyone*, indicating its non-specific⁷ nature. This raises the question of why then writers choose *you* and not the unambiguous *one*. The reason that seems to motivate this choice lies in the fact that personal pronouns, whatever their use, retain their basic personal meaning (Kitagawa & Lehrer, 1990); so non-specific *you* still encompasses the addressee as one of its referents. This enables writers to, for instance, personalise some expressions that would endanger distancing the addressee. One such expression is generalisation, as in the next example.

(8-10) If **you** felt a bit peaky 20 years ago, all **you**'d find in Boots would be a bottle of tonic.
[PRIN37]

The first thing to note is that *you* here is different from that in 8-9 above, since if it is meant to be interpreted personally as referring to the individual reader, some readers – those younger than twenty – will find themselves excluded. Read impersonally as a generalisation, however, even those readers will be able to see that if they were older than twenty and ‘they felt a bit peaky 20 years ago’, this is what they would have found in *Boots*. This involvement of the addressee in the generalisation would not have been possible if the writer uses *one*, *anyone*, *people* or any other way of third-person reference in place of the non-specific *you*.

Non-specific *you* does not only help writers avoid some expressions that would make addressees seem distanced from the text and the writer, but it may also be useful in bringing those addressees even closer. This may be done through the non-specific *you* in what Laberge & Sankoff (1979) calls ‘situational insertion.’ This is a strategy by which writers/speakers use non-specific *you* to talk about their own experiences or hypothetical ones. Situational insertion

of personal experience occurs in the press reports mostly in quoted speech. The following example is of the hypothetical type:

- (8-11) IMAGINE a machine that could tell **you** instantly whether a cow was carrying the fatal brain proteins that cause BSE.
[PRTL21]

The hypotheticality in this example is obvious from the imperative *IMAGINE*. *You* is expected to be used in this context because of the preceding imperative; but it need not be, as a third-person reference could also be used. What makes *you* especially useful here is that it would allow the addressee, who is most likely not a scientist or someone who is involved in the treatment of BSE, to be involved in this process and assume this particular role (albeit hypothetically) of the scientist or fighter against BSE. This dramatising⁸ of the role of the addressee helps him/her converge with the text as an active participant, and not stay away as a mere observer (as is the case with the addressee in the research articles – see 8.3.1).

If, as shown above, the role of non-specific *you* in reducing the distance between writer and addressee is best seen in special contexts, like generalisation and dramatisation, inclusive *we/us* is, by definition, a solidarity signal. Inclusive *we/us* is distinguished from its exclusive variant in that it subsumes in its referent not only the speaker/writer (and sometimes others), but also crucially the addressee. However, in written discourse, the addressee, as indicated at the beginning of this section, is typically more than one; so inclusive *we* may be used to define the limits of who is included in the addressee's role and to identify both writer and addressee with each other, as in the following two examples:

- (8-12) It seems that **we** British aren't good at breastfeeding.
[PRIN53]

- (8-13) In this country **we** tend to eat a lot of sugar, so **we** should cut down where possible, unless underweight.
[LF25]

In 8-12 *we* is followed by the category it refers to, *British*, and in 8-13, *In this country* indicates that *we* refers to the people of Britain. The inclusive *we* enables the two writers to identify themselves with the British addressee, and not with any other reader. So, for one thing, the writer in both cases is treating him/herself like the addressee by combining both of them in

one referring pronoun; this is important, as both examples represent a criticism of the British people, in 8-12 for not breastfeeding and in 8-13 for the excessive consumption of sugar (see politeness analysis below). For another, *we* here is also exclusive; any non-British reader is not part of this *we*. This does not, however, pose a threat that some of the writers' addressees will thus be alienated, as these two texts are clearly addressed to British readers, and in both cases it is those readers who are likely to approach these texts for the purposes they were written for. But crucially, this exclusion is clearly intended as a way of further strengthening the involvement effect inherent in the pronoun *we*.

Contrary to the above two examples, most of the time the referent of the inclusive *we/us* is not well defined as such. *We* could be taken as referring to anyone beside the writer and the individual addressee. This kind of usage is particularly useful in expressing general or common-sense facts, and inclusive *we* here has a more or less similar effect to non-specific *you* (see above) in stating these facts in a personal, involving way. Nevertheless, inclusive *we/us* is probably more effective with this regard, not only because both writer and addressee are encoded more directly as referents, but also because *we* can signal power (Wales, 1996). So when used to index closeness with the addressee, the display of solidarity sounds more prominent (and sincere).

(8-14) We want our food to be tasty and satisfying, but we also want it to be healthy.
[LF22]

(8-15) Stress is with us all the time. What we need to know is how to give it the boot when it's negative, embrace it when it's positive and to be aware enough to know the difference.
[PRTM61]

So as in 8-14, one of the functions of inclusive *we/us* is allowing the expression of global facts or rules without distancing the addressee. Other contexts of use of this type of *we/us* that are recurrent in both the leaflets and the press reports include showing sympathy with the addressee as in 8-15 – the writer includes him/herself (and others) with the addressee in suffering from stress. As in 8-15 also, inclusive *we/us* is sometimes associated with indirect instructions to the addressee to take action, especially “when the activities are likely to be resisted” (Wales, 1996, p.67). For obvious reasons, this type of *we/us*, as noted by Wales, is commonly used with children; here, activities are ‘likely to be resisted’ either because of the

sensitivity of topic as in 8-15, or because they concern some kind of a habitual behaviour; an example of this is the second *we* in 8-13 where addressees are directed to 'cut down' their sugar intake. It is worth noting here also that inclusive *we* in this last context of giving directions is clearly more addressee-oriented; in 8-13 in particular, the second *we*, unlike the first one, does not seem to refer to the writer (*I should cut down where possible*) to the same extent that it refers to the addressee (*you should cut down where possible*). This is a clear instance in which pronouns can be used strategically to include a specific referent and not (or more than) the other (perhaps, as in this case, for politeness reasons – see 8.4 below).

The overall conclusion the above analysis indicates is that reference to addressee is a clear strategy of involving the addressee and indicating solidarity with him/her. The inclusive *we/us* seems to create this effect in similar ways across both medical leaflets and press reports. As shown above, it usually occurs in contexts that relate to the addressee, indicating its reflection/construction of solidarity and closeness. *You* on the other hand seems to be employed differently in the two corpora; in the leaflets it is typically used personally to refer to the addressee as an individual, and in the press reports its non-specific use treats the addressee as a member of a larger group. Two aspects of this conclusion are in particular worth commenting on, as they relate to some previous results. First, the inclusive *we/us* as well as the non-specific *you* in the press reports seem to be used sometimes to allow the addressee to identify him/herself as part of the scientific community; this is in line with the above analysis of reference to writer. Second, using personal *you* to refer to the 'individual' addressee in the leaflets is another way (in addition to questions, as discussed in the previous chapter) of mimicking some kind of an intimate conversation between writer and addressee.

8.3.3 Referential switch

In the above two sections, both reference to writer and to addressee have been considered separately. But, as shown in 8-2, these types of reference may occur together rather frequently in the same type of text, as in the press reports corpus. It may therefore be plausible to expect some sort of an interplay of the pronouns of self- and addressee-reference in the same text or part of it. From the discussion above of the different meanings pronouns can have, it can be inferred that switching from one pronoun to another, whether across the two types of reference discussed here or within them, is a productive involvement strategy for writers. Despite the fact that referential switch involving the pronouns considered in this analysis is not

common, it seems a useful way of showing how pronominal choices interact with each other and of further stressing the general role of reference as a Pragmatic Interaction signal.

The following simple, but revealing, example is from a personal story told in the first-person pronoun and supplemented to a press report about the benefits of the sun. Though written, the story retains most of its conversational spontaneity, including pronominal switch, which, in writing, is typically “considered stylistically inelegant” (Kitagawa & Lehrer, 1990, p.741).

(8-16) I love that blast of heat when **you** get off the plane.
[PRIN52]

The switch here is from first-person *I* to non-specific *you*. The interesting element of the switch is normally the second one, *you* in this case. Here, *you*, as is clear from the context, refers to the story-teller, i.e. it is equivalent to the preceding *I*. But the inherent referent of *you*, that is the individual addressee, is simultaneously a possible referent. So in this non-specific *you* both a first-person self-reference and a second-person address co-exist. The pronominal switch makes this involving meaning of *you* more explicit; and, at the same time, it supports the argument advanced above (8.3.1) about the interactional role personal stories seem to play in the press reports.

The role of personal stories in press reports is also clear from the next example. This is a more sophisticated example that shows multiple pronominal shifts in a longer stretch of text.

(8-17) HOLIDAYS BY the sea are always a gamble, so this year I consulted the guru of weather forecasting, Mr Piers Corbyn, to find out what was in store for my imminent fortnight’s summer break in Normandy. The news was not good – most of the time, he said, it would be “cloudy with heavy rain” and only the end would turn out “fine and warm”.

We are currently halfway through the first week, and Mr Corbyn’s reputation for highly accurate forecasts would seem to be justified.

Besides making all the difference to a summer holiday, the weather does, to a much greater extent than is commonly realised, have a profound influence on how we feel – almost as if the body itself is a sensitive instrument. How else can **one** explain the dead dullness that precedes a thunderstorm, followed by the exhilaration once the rain starts to fall?

[PRTL15]

The *I* is a natural way of referring to the narrator in story telling. On the other hand, the switch to *we* to refer to the narrator in a personal story is probably less typical. But *we* seems here to

function in similar way to the non-specific *you* in the previous example, to include the addressee in the process while preserving the reference to the writer. The second *we* is inclusive not only of addressee, but also of others, preparing for a generalisation with the indefinite *one*. This carefully interwoven pattern of referential switch gradually involves the addressee to raise his/her interest in the general fact about the 'mysterious' effect of the weather on people's mood. Generally, referential switch, as shown in this example, allows writers to control the degree of addressee involvement at different stages of the text.

Referential switch is, as these examples indicate, a useful way of showing how pronouns may combine to strengthen the general involvement effect of reference. Not only this, but it appears from the above discussion that switching to other pronouns is in itself important in projecting overt interaction and thus involvement with the addressee. This is suggested by the fact that in the present data, referential switch tends generally to be from the first or third person pronouns *I*, *we*, and *one* to the more involving second person *you*. The infrequent use of this technique in the present data may be related to stylistic issues as indicated above; this is borne out by the tendency of such pronominal patterns to appear in quoted or simulated speech, particularly in the press reports. But this may also indicate that its use may be intended in part to reflect conversational spontaneity, informality, and closeness with the addressee. This is certainly what appears to motivate referential switch in the examples above.

8.4 Politeness

In the above section, the analysis of reference makes a broad theoretical distinction between writer and addressee reference according to how they relate to involvement. Likewise, this analysis of politeness distinguishes between positive and negative politeness: the first is associated with solidarity and closeness, and the latter with deference and distance. But here, unlike in the case of reference, the distinction is more well-grounded – both in theory and in practice. As mentioned in the introduction to this chapter, the interdependence between positive/negative politeness strategies and involvement is an integral part of Brown & Levinson's (1987) theory of politeness on which this analysis is based. This link and the implications of politeness on involvement have been further endorsed by many later discussions of politeness (see particularly Scollon & Scollon, 1995, pp.34-47). The present

analysis shows that the positive/negative politeness distinction is indeed an effective way in studying how addressees are projected as either close or distant from the writer.

8.4.1 Negative politeness

Analysing negative politeness strategies requires knowledge of the basic FTAs specific to the texts analysed. As is clear from the quantitative overview above, the present analysis assumes that medical leaflets, textbooks, and to some extent press reports have in common that they all involve requesting the addressee to perform some action, a direct threat to his/her face. Research articles, on the other hand, do not have this kind of FTA, as they are generally not concerned with directing their addressees plainly to do something; what they seem to primarily intend to convey are claims the writers think to be true and would like the addressee to accept as such, or, though not as commonly, denials of other researchers' claims which the writers hope their addressees will agree with. Both of these acts, in the context of the research article, represent risks to the face of the addressee – the scientific community in this case – and should therefore be expressed in a polite way.

As has also been indicated above, the two main strategies of redressing requests are mitigation of imperatives and indirectness. Mitigation is common in the leaflets and press reports corpora, and indirectness is more frequent in the leaflets and textbooks corpora; these tendencies will be reflected in the following analysis by focusing only on those texts where each of these redressive strategies is recurrent. Claims and denials in the research articles corpus are redressed using two main linguistic signals, impersonalisation and pessimism, as will be exemplified below. The joint feature of the redressive strategies of both requests and claims/denials that led to them being discussed here is their overall interactional effect of distancing (see 8.1).

Mitigation is clearly an obvious deference strategy to save the addressee's face when making a request. However, considering the fact that most imperatives (about 80% – see 8.2) in both the leaflets and the press reports are actually not mitigated, it is reasonable to question the face-saving, distancing role of mitigation as a quality of these two text types. Before looking at how mitigation works, it is necessary to understand the motivation behind unmitigated imperatives and whether they have any apparent effect on involvement. The following is a typical example of these unmitigated imperatives from a leaflet about 'cot death':

(8-18) **Place** your baby on the back or side to sleep.
[LF27]

Compelling the addressee to do something as in this example can mean a number of things (Lakoff, 1972, p.912): the speaker/writer may simply be putting into force his/her power in imposing something on the weaker addressee, the action could be undesirable to the addressee in which case it may be required to force him/her into doing it, or “something untoward will happen to the addressee if he does not carry out the instruction” and this needs to be made explicit through unreserved coercion. The first two meanings seem to be irrelevant to the example above; though the power relation is asymmetrical in that the writer is more knowledgeable, this is not absolute, since he/she has no means of practicing his/her power and forcing the addressee to perform the action; likewise, this is obviously not an undesirable action to the addressee, as all mothers want to keep their babies safe. It is the third meaning that appears to explain the form of the command in this case, and indeed most other unmitigated imperatives in the leaflets and press reports corpora. This meaning that ‘these are actions if you do not carry out, you will be risking your (or someone else’s) health or safety’ renders unmitigated imperatives less impolite than one might at first glance expect. As such, *Place* in 8-18 is most likely not face-threatening to the extent that it may be perceived as rudeness from the writer; and consequently, mitigating it would be considered as unnecessary politeness.

This specific meaning of unmitigated imperatives in the leaflets and press reports corpora has been expressed more generally by Brown & Levinson (1987, p.69) who identify three broad conditions more or less similar to the above meanings that allow any FTA to be made with no need for redress; the one that concerns us here is that of actions that are unequivocally in the addressee’s interest. As demonstrated in 8-18 above, unmitigated imperatives clearly request actions that will benefit the addressee and not the writer or a third party; hence, mitigation in this case would at best be regarded as superfluous. We should now expect that mitigated imperatives are somehow crucially different; but as the following examples of mitigation indicate, this is only partly true:

(8-19) Finally – thank you for volunteering to give blood. Your gift could save a life. **Please** come again as soon as you can.
[LF19]

(8-20) **Try to cut your caffeine intake.**
[PRTM64]

(8-21) **For more information about counselling, or to make an appointment with BACUP's Counselling Service, please ring 071 6969000 between 10 am and 5 pm, Monday to Friday.**
[LF12]

The first example is relatively straightforward; it represents the opposite situation to the unmitigated imperatives discussed above. Here it is the writer who is benefiting from the action; so the writer mitigates the request as a sign of humbling oneself towards the addressee and, most importantly, as a signal of respect to the addressee's right of independence and self-determination. 8-20 is less straightforward, as the request to 'cut caffeine intake' is actually in the addressee's interest; however, it is precisely because of this that the effect of non-imposition is stronger. The request in this example concerns one of a number of actions that can be grouped under the term 'personal habits' where the addressee is instructed to change some way of his/her personal or social everyday activities. The imposition caused by imperatives of this sort is not only due to their intrusive nature into the addressee's personal affairs, but also because they normally ask him/her to change or stop a particular behaviour altogether – not merely adjust it, as in 8-18. So these actions seem to be treated by the writer in a somewhat sensitive way; they are probably considered personal matters or habits that are difficult to modify. Hence, mitigation is preferred (though it is not always used) with these actions, since it allows writers to express this rather sensitive request and simultaneously indicate deference with the addressee.

Finally, example 8-21 is the most problematic of all; it represents a class of requests that are almost always mitigated, that is requests for contact. It is, however, the addressee again who will most often profit from this class of requests; and although they do not entail that the addressee will be harmed by not taking the action of contact, these requests usually make it explicit through justification that the addressee will lose something by not carrying out the request – in 8-21, this will be not getting more information or not making an appointment for counselling. It looks as if there is something unique about this class of requests that led them to be mitigated, sometimes as heavily as in 8-21 with three mitigation markers. Requests of contact are, by definition, requests for 'real' involvement; they overtly invite the addressee to physically come closer to the writer or any other suggested representative of the profession of

medicine. Mitigation in this case appears to counterbalance the risk to the addressee's 'territorial integrity' that would result from an outright imperative; it softens and compensates for this unavoidable invasion of the addressee's independence by reducing as much as possible the force of imposition and by emphasising the distance of respect between writer and addressee. Of course, mitigation of verbs of contact is now more or less conventionalised in most written texts (advertisements, business letters, and so on). It is possible, however, that it is such politeness considerations that give rise to this convention in the first place.

It is clear from the above examples that the topics with which mitigation is associated indicate that it is generally motivated by the need to sustain distance between writer and addressee. Imperatives concerned with writer-as-beneficiary, personal habits (e.g. eating, exercise, what to wear, how to sit or sleep, etc.), or contact (*contact, ring, write, phone, get in touch*, etc.) represent strong threats to the addressee's face and require some softening to allow him/her freedom of action and self-determination. On the other hand, un-mitigated imperatives do not usually manifest similar effect on the addressee's face and have therefore less relevance on the management of politeness and involvement.

The second strategy to redress the FTA of requesting is through indirectness. This, as mentioned above, is more common in the leaflets and the textbooks corpora. Indirect requests for action differ from mitigation in that they do not have a direct form of request, such as an imperative. Indeed their literal meaning is more of a statement, an assertion, or a question than of a request. But they are often unambiguous and will unproblematically be interpreted as appropriate; as will be shown below, the context in which these indirect requests are used normally disambiguates their meaning (see Brown & Levinson, 1987, p.134). Another aspect of difference that, on the surface, would stem from the absence of a direct form of request in the case of indirectness is that this kind of redressive strategy indicates less power gap between writer and addressee: the writer is choosing to disguise his/her power by making the request without using, e.g., an imperative. However, as discussed above, imperatives do not necessarily mean that the speaker/writer is superior to the addressee. More specifically, indirect requests formally encode power difference in as clear a way as the imperatives; the following examples illustrate some of this signalling of power:

- (8-22) To save time, **you can cook** large batches of rice or beans and freeze them in small portions.
[LF25]
- (8-23) If the condition follows a recognisable precipitant... prognosis is good, but if it arises insidiously, **specialist referral is indicated**.
[TB06]
- (8-24) Some women find it embarrassing to consult a medical practitioner about contraception and **a sensitive doctor will do everything possible** to diminish that embarrassment. The ability to listen to and to talk with the woman **is of great importance**. The doctor should take a general history, a menstrual history and a sexual history in a nonjudgemental way.
[TB07]

The first example uses the ability sense of the modal *can* to indicate the addressee's ability to act; in the context of medical leaflets, this is easily interpreted as a request for action, and not simply a statement about the addressee's capabilities. By the same token, telling a student of medicine that a particular course of treatment of a particular disease *is indicated*, as in 8-23, undoubtedly means that this is the action he/she should take in that particular situation. There are sometimes textual cues that make interpretation of these indirect acts more definite; in 8-22, the indirect request is mitigated with a justification, *To save time*; even more explicit, 8-24 proceeds with a direct modulative request, *The doctor should take a general history*, making it clear that the preceding evaluations are, in retrospect, meant to be perceived as indirect requests.

So the immediate context in such examples makes the requesting force of the act explicit and unambiguous. The more general context may also be helpful in explaining the relation of these indirect requests to power and involvement. In the textbooks in particular, there is an established, straightforward power relation of a superior, knowledgeable writer, and a weaker addressee who needs the writer to teach him/her the concepts of the topic (this is on the whole the same relation that holds between writers and addressees in medical leaflets, but, as will be discussed later, this is a more complex one). In the context of an authority relationship like this, one would expect writers to express requests for action in a direct, unmitigated way – through imperatives, for instance. I believe that this is what indirect requests similar to the above actually do; they project a compliant addressee who is willing to perform these requests and does not need to be compelled to do them. But, unlike most imperatives, indirectness achieves this by foregrounding the addressee's subordinate status and not the writer's

superiority. So, indirect requests are 'action-guiding' as much as the imperatives; but the "order or command is issued as something that is "the proper thing to do", "the done thing", or "what one does", etc." (Marcondes de Souza, 1983, p.54), and may even therefore be regarded, according to Marcondes de Souza, as the 'stronger and ideological' sense in which language is 'action-guiding'.

The linguistic structures used to express indirectness, as in the above examples, also reflect this lower rank given to the addressee. In 8-22, the sense of ability of *can* entails that the addressee is in a lower position relative to the writer who can tell him/her what he/she is able or unable to do. This connotation of power difference is more noticeable in example 8-24 from a textbook, where evaluation (*great importance*) – which normally enhances negotiation and solidarity (see previous chapter) – is used to create exactly the opposite effect. The aim of evaluation here does not seem to be that of inviting consensus between writer and addressee, but it is more of the writer expressing his/her evaluation of the action and requesting the addressee to act upon this evaluation. Only a subservient addressee, like the textbook student, would interpret these evaluations as requesting him/her to act.

The educational motivation behind indirect requests in the textbooks (and to some extent in the leaflets) is fairly obvious from the examples discussed. The power differences reflected by indirectness set both writers and addressees in distinct roles of knower/expert and learner/layperson. Indirectness emphasises this distinction of roles by allowing both writers and addressees to be separated from the action requested in a way not possible with direct imperatives (this is especially true in the textbooks where imperatives are very infrequent). Even evaluations are most likely to be interpreted in an objective sense rather than as personal opinions (this is partly why they are meant to be accepted and not negotiated); extreme cases of indirectness, like the passivisation in 8-23, *specialist referral is indicated*, express this separation more overtly. Nevertheless, in the leaflets, this is usually accompanied with direct reference to the addressee by the pronoun *you*, making this sense of separation less clear, at least, in reference to the addressee, and testifying to the dual effect of both involving and distancing the addressee leaflets appear to create (see positive politeness analysis below).

The issue of power appears to be relevant to all 'genuine' scientific interactions. In the research articles, this power gap manifests itself through the mitigation of claims, and not through

indirectness as in the textbooks. The direction of power here is not as clear as it is in the textbooks. Generally, however, writers in the research articles – regardless of their academic rank – need to show modesty towards the scientific community they are addressing. This is done by mitigating one's claims or denials of other writer's claims (the latter occurs very rarely in the present research articles corpus and will not therefore be discussed further). The main two strategies that are used in the research articles to soften claims are impersonalisation and pessimism. Impersonalisation involves expressing the FTA but attributing it to some impersonal agent, like *the study*, *the results*, *the data*, etc., and pessimism limits claims by casting doubt on their implications, generalisability, etc. The following examples demonstrate both of these strategies:

(8-25) These results suggest that the ob gene encodes a protein that informs the brain of the amount of adipose tissue present in the body.
[RA15]

(8-26) This study adds to our understanding of the aetiology of suicide and related causes of death. However, its implications in terms of detection of individuals at high risk of premature mortality are limited.
[RA03]

In the first example, the claim has been attributed to the *results* and not to the authors, and in the second, the implications of the study have been described – in one respect at least – as *limited*. In both cases, the motivation of mitigation may be related to the fact that writers are addressing a 'superior' and they need to show deference and be careful not to appear as imposing their views on the community.

The above analysis of negative politeness stresses the role of power in the more 'genuinely' scientific texts, the textbooks and the research articles. In the textbooks, the subordinate position of the addressee allows the writer to use indirect requests projecting the assumption that the addressee is willing to perform them. More or less the same could also be said about the relation between writers and addressees in the research articles where the perceived superiority of the addressee makes writers phrase their claims in as impersonal and alleviated a way as possible. Both these strategies allow involvement between writers and addressees to be kept to the minimum. The case is more complicated with regard to the leaflets and the press reports, where the issue of power seems to be less determinate. In fact, the above analysis

suggests that distancing the addressee is not what these texts generally aim at, though distancing can be used strategically as a gesture of respect of the addressee's wants. The next section will hopefully shed more light on the effect of involvement in the leaflets and press reports corpora.

8.4.2 Positive politeness

Positive politeness has not been discussed above in quantitative terms because it appears to be a special strategy that is typically only employed in certain contexts. In the present data, positive politeness signals are quite common in the leaflets and press reports corpora, but they are very rarely used in the textbooks and the research articles. This is perhaps expected as both groups of texts represent two distinct power relationships between writer and addressee. As a general rule, it could be said that in written texts "the more clear-cut the power (P) relationship, the less the need for positive facework" (Pilegaard, 1997, p.241). This is especially true in the case of the textbooks where the writer is in an institutionally acknowledged higher position than the addressee. In the research article, this variation in power is less clear-cut than in the textbooks, but it is mainly because the context assumes that the writer should (at least temporarily) humble him/herself in front of the addressee that positive politeness is not operating (note that, unlike in the textbooks, it is the addressee here who is in a relatively higher position). Another factor may be the generic constraints that oblige writers of research articles to show formality and impersonality; textbook writers, on the other hand, are to a certain extent free from such constraints⁹.

In the leaflet and the press report, power differences certainly exist – especially in the leaflet. However, it is virtually hidden; similar to what happens in medical consultations, where doctors need to construct *friendly* relations with their patients (e.g. Thompson, 1999), writers in medical leaflets project such relations despite the overall relative power they possess. As is clear from the above analyses of reference and negative politeness, the text can utilise certain devices to mitigate impositions and soften criticisms. Even more effective in disguising the power gap between writer and addressee are the strategies of positive politeness, as in the following example, which employs a reference item, *we*, to convey politeness and solidarity.

(8-27) Winter brings dark evenings, cold weather, snow, frost and frozen pipes! It is also a time when we suffer more coughs and colds, and there is the reappearance of another seasonal visitor, the unpleasant and potentially serious illness influenza or 'flu.
[LF06]

We in this example is not as clearly associated with any particular FTA, like a request or a criticism, as in some of the examples discussed before (though, of course, the general context – as is the case in most leaflets – is that of talking about something unpleasant to the addressee). It is used here as part of a general endeavour to address some positive face concerns by 'claiming common ground'. It is not only *we*, but the cumulative effect of a number of positive politeness signals, as identified by Brown & Levinson (1987, pp.101-29), that makes this intention explicit. There is, for instance, the humorous overtone created by *frozen pipes!*, a strategy called 'joke', and the 'use of in-group identity markers' through the colloquial term *flu*. Equally important is the exaggeration of the problems caused by the winter; lexical signals of this are the comparison, *more coughs and colds*, and the piling up of the unpleasant things winter brings (see below for examples of more signals and 5.4.3 for a short, tentative list).

Exaggeration¹⁰ is in fact the most widely used positive politeness strategy in the leaflets and the press reports. Consequently, before looking at more specific examples of this kind of strategy, it may be fruitful to briefly comment on this phenomenon in the present data. As noted by Brown & Levinson (1987, pp.104-7), exaggerating is a noticeable practice in spoken social conversations; this is borne out by the fact that overstating is often realised through intonation and stress patterns (in writing, this may be done using some punctuation marks, like the exclamation mark in *frozen pipes!* in 8-27). In such a context, speakers exaggerate to show sympathy with or interest in the addressee. But they may also overstate facts to draw the addressee's attention to their relevance and interestingness to him/her. This latter use is the one frequently encountered in the present data, though there seems to be in some contexts, particularly in the leaflets corpus, an element of sympathy (such as in 8-27 above). The purpose of this latter type of exaggeration is certainly not to mislead; on the contrary, it indicates the writer's honesty, candidness, and genuine intention in presenting something that will be of interest to the addressee. A related effect of exaggeration, especially in the context of storytelling, is that of dramatisation (see also the discussion in 8.3.2 of non-specific *you*); this further stresses the involvement role of this strategy "as it pulls [the addressee] right into the middle of

the events being discussed” (Brown & Levinson, 1987, p.106). The following two examples from a leaflet and a press report respectively illustrate the role exaggeration plays as an involvement signal:

(8-28) Learning that your cancer has spread or come back can be **even more devastating** than hearing that you have cancer for the first time. It may be hard to take it in – your thoughts may spin round **so much** it becomes difficult to understand what you are being told. This **shock** and disbelief can give way to **powerful – even overwhelming** – emotions.

[LF12]

(8-29) **Eighty per cent** of the population uses it at some time or another, and **20%** of them take it as part of their daily routine. In Copenhagen, **every** pharmacy has **huge** displays of it. One brand sponsors the Danish hockey team **in the way that** breweries sponsor our football teams.

[PRTM10]

Exaggeration in 8-28 is of the first type mentioned above: it is aimed at emphasising the addressee’s feelings so as to appear sympathetic and understanding. The signals of exaggeration are more overt here than in 8-27 (these are shown in bold face in the example), and it is relatively easy to see the important interactional function exaggeration performs. This example deals with some bad news on the part of the addressee, and it may be thought that talking about it in such detail and inflating it to this extent is not polite. The writer could have ignored the negative effect of this news trying to look at the brighter side of things. This is, of course, a plausible option for the writer had he/she chosen to redress this kind of FTA using negative politeness strategies. Nevertheless, the distancing effect of such a choice (see above analysis of negative politeness) is not what the writer seems to hope to create in the context of the leaflets; quite the opposite, what is aimed at is involvement and the establishment of common ground.

The second example above comes from a press report about a vitamin-like drug called Q10 that appears to have incredible positive effects on many aspects of our health. The example focuses on the popularity of this drug in Denmark, and it is not difficult with exaggerations like the ones used in this example to appreciate what people there think of Q10, and most importantly, why the writer has chosen to specifically talk about this drug among thousands of other similar ones. The aim of such exaggeration appears to be that of building some sort of an interest in the phenomenon discussed by highlighting certain common facts that we all agree

mean that this phenomenon is in some way or another distinctive (wonderful, weird, incredible, ridiculous, etc.): a drug that sponsors sport activities, used by *eighty percent of the population*, and displayed in *every pharmacy* is undoubtedly no ordinary drug. This strategy is not only therefore useful in making explicit why a particular 'story' of something is tellable (a crucial benefit for a press report), but also as a way of establishing common ground and, in turn, involving the addressee.

Whereas the above positive politeness strategy of exaggeration is commonly used in both leaflets and press reports, there are certain other strategies that seem to be used mainly in one type of text or the other. This is probably not surprising, as the general purpose of the leaflet is to a large extent different from that of the press report; and, more importantly, the extent to which the addressee is projected as engaged in the topic discussed is less obvious in the case of the press report (see Chapter 3). So, as illustrated in the next two examples, the 'be optimistic' strategy is utilised in the leaflets, while the 'joke' strategy is relatively frequent in the press reports corpus.

(8-30) You may not believe it right now, but if you follow your doctor's advice which includes taking your medication every day, in six months' time your depression will seem like a bad dream.
[LF41]

(8-31) With 16 million people wearing dentures in this country, anecdotes about the strange circumstances in which people lose them abound. There's the one about the woman who sneezed so hard that her false teeth fell out and were gnawed by a dog who mistook them for a bone. One man lost his overboard when he was seasick. And another, who was wearing new glasses, misjudged the distance between his mouth and his beer glass, smashing his false teeth in the process.
[PRIN49]

In section 8.1 above, a typical example of the 'be optimistic' strategy has been given (example 8-4, p.159). Example 8-30 above is more specific in that it is not concerned with the activity of reading the leaflet, but in the particular condition it discusses. In Brown & Levinson's (1987) model, the strategy of being optimistic is different from exaggerating and joking, since it is more associated with the positive politeness class of showing co-operation and not reflecting common ground. This is done by 'claiming reflexivity' in that the writer wants what the addressee wants for him/herself, as quite obvious from the two examples given: in 8-4, the

writer wants the addressee to find answers to the questions he/she has, and in 8-30, the writer wants the addressee to recover from depression.

While being optimistic is clearly an appropriate strategy to be used in the leaflets, joking generally is not; the sensitivity of the topics discussed in the leaflets and the 'real-life' pertinence of them to the addressee in most leaflets makes no room for humour (except in some occasional cases while discussing less sensitive topics). In the press reports, however, telling jokes and making jocular comments seems to be a common strategy writers use to build some kind of a friendly, informal relationship with the addressee. This is the case in 8-31 where the writer tells three jokes about dentures (in the original press report, another joke is also given). Some jokes, particularly in the form of comments, represent an important part of the message; but others, such as the ones in this example, are less crucial to the essence of the topic. In fact, the writer's transition to the main idea is marked by dismissing these 'anecdotes'; the next paragraph (not shown) starts as such: "Less amusing, though,..." This is not to say, however, that these jokes are totally off-topic and that they are redundant. Textually, they help the writer introduce the topic, and interactionally, they do this in a way that draws on the writer and addressee's common ground. A context of some extent should be shared so that jokes can make this effect. (As a side note, it is also worth noting the exaggeration used to introduce the jokes in 8-31 – *16 million, strange, and abound* – and in the first joke – *so hard* – showing how positive politeness strategies can combine to create an involvement effect and indicating that exaggeration is indeed an integral part of most jokes.)

The analysis above has focused on three main strategies of positive politeness in the leaflets and the press reports corpora, illustrating that they can actually work as clear involvement signals, either by emphasising common ground or by indicating cooperative reflexivity. However, positive politeness is not limited to these three strategies; its signals are ubiquitous in these text types to the extent that they are often considered basic elements of their 'style'. Examples of these signals (see Brown & Levinson, 1987, pp.101ff) include direct quotations (example 6-6, p.101), ellipsis (example 7-19, p.144), tag questions (example 7-18, p.143), colloquial language (example 8-27, p.185), and contractions (example 8-31, p.187). Given that these elements occur in a general context of positive politeness, as clear from the above discussion, it appears that their use is not simply a matter of style; they are employed to serve

the “basic purpose of positive politeness as an instrument with which commonality, intimacy, and togetherness are established” (Pilegaard, 1997, p.241).

8.5 Summary

The discussion in this chapter demonstrates that one of the most essential tasks of written texts is to create an effect of involvement, controlling distance from or closeness with the addressee. This can be achieved through the signals of Pragmatic Interaction, reference and politeness. One important difference between this effect and the effects of orientation and negotiation discussed in the previous two chapters is that it is highly context-bound. Consequently, the analysis indicates that it is not possible to straightforwardly associate certain signals with distance and others with closeness; as demonstrated, context is a deciding factor in this regard. However, with politeness in particular, it could broadly be said that positive politeness signals project a closer relationship with the addressee than negative politeness signals, which have a more distancing effect.

The quantitative overview of the signals of Pragmatic Interaction in the four corpora of texts analysed does not allow them to be easily grouped, as it provides a complex picture of how these signals are distributed across the data. Nevertheless, the leaflets are again clearly positively marked in terms of negative politeness and the subtotal of reference. And in terms of the overall management of Pragmatic Interaction, it is the only corpus of texts that is positively marked, reflecting the importance of involvement as a general strategy in the leaflets. Nevertheless, it is not possible from the quantitative analysis to decide which texts are more involving or distancing than others, as this will depend on the context of the signals used.

The important role of the context has been shown fairly clearly in the analysis of the reference to the writer. It is obvious that such kind of reference functions differently in the research articles and the press reports corpora. In the former, reference to writer has the unmarked distancing effect, but in the latter it is used in a context of closeness and intimacy. In the case of politeness, context is also clearly important in making certain politeness strategies more likely to be utilised than others; for example, the strategy of indirectness is commonly used in the textbooks, reflecting the projection of a specific relationship between writers and addressees; and mitigation is typically employed with certain types of verbs in the medical

leaflets. The assumed less clear-cut power relationship between the interactants is also a major factor for the utilisation of positive politeness in the leaflets and press reports.

Overall, this chapter has attempted to show that the effect of involvement is one of the primary effects of interaction. The different signals writers can use to manage the projection of involvement with the addressees has been discussed. It is clear that 'measuring' how close or distant the addressee is projected in a particular text is not possible; however the analysis demonstrates that certain tendencies can be recognised. Nevertheless, Pragmatic Interaction signals and the effect of involvement are certainly complex issues; but it is because of this that they are primary aspects of a successful and overt management of interaction in written texts.

NOTES

- ¹ Nevertheless, this broad definition is still, in my view, more focused and linguistically-oriented than, e.g., Tannen's (1989, p.12) somewhat elusive literary/stylistic definition of involvement as "an internal, even emotional connection individuals feel which binds them to other people as well as to places, things, activities, ideas, memories, and words", which, Tannen argues, can be identified in conversations through features like rhythm, figures of speech, indirectness, etc.
- ² This is in accordance with the general approach of this study in that phenomena and strategies are not considered as such, but in terms of their function in interaction, i.e. in reflecting the writer-addressee relationship.
- ³ There are, however, some arguments for special uses of *you* that distance the addressee by showing power, e.g. *you shut up!*, or by indicating separation from the speaker/writer, e.g. *you people* or *you women* (e.g. Pennycook, 1994). These uses do not occur in the present data, and, I believe, do not seem to be possible in public writing in general. Furthermore, there seems to be other factors that lead to this distancing effect in these cases; in the first case, it is the imperative that appears to primarily be the cause, and in the second it is likely that *people* and *women* are meant to be read as negative evaluations of the addressee. The role of *you*, if any, is in making the distancing effect more overt by singling out the addressee, which is also the same role *you* would perform had the effect been more involvement.
- ⁴ Textbooks are excluded from this analysis, since reference here, as shown in the previous section, appears to be a comparatively minor feature.
- ⁵ Reference to writer in the leaflets corpus will not be discussed here, because it is relatively less frequent; the analysis will focus on the research articles and the press reports corpora, where reference to writer is much common.
- ⁶ For example, Maitland & Wilson (1987) show that it is possible to draw two different 'pronominal scales' for Mrs Thatcher and Mr Kinnock based on two speeches delivered by them. The scales indicate that both speakers use similar pronouns to convey different distancing effects.
- ⁷ The term 'non-specific *you*' is preferred here over the more common 'impersonal *you*'; this is so in order not to obscure the basic line of the following argument of the important element of personalisation this 'non-specific *you*' retains.
- ⁸ 'Life drama' is interestingly the term Kitagawa & Lehrer (1990) use to identify a more extreme case of 'situational insertion' (see pp.748-51).
- ⁹ In a rare case, this allows one of the textbooks writers in the present corpus to make the 'marked' choice of introducing a topic about 'the immune system' humorously using the analogy of a battle (note the colloquial language use, *guys* and *gang*, the contraction, *don't*, and the utilisation of the pronouns *we* and *you*):

What follows is a brief description of the opposing sides. Since we don't care what the enemy actually is (we also have an excellent propaganda machine), we will describe antigen with group characteristics. Next, we will describe the good guys (defenders) with particulars. These are the special forces (lymphocytes) and support units (accessory cells). After you meet the gang we have a real treat – we will take you to war!
[TB08]
- ¹⁰ It should be clear that the treatment of exaggeration here goes beyond the rather specific use of the term by Brown & Levinson (1987). This analysis is more concerned with exaggeration (or intensification) as a general involvement signal, and not necessarily as essentially a redressive strategy of a particular FTA.

CONCLUSION: IMPLICATIONS AND APPLICATIONS

This concluding chapter sets out to pull together the results reached from the analyses of the three forms of interaction detailed in the previous chapters, discussing the implications of this for the way linguistic features are studied and its applications to how writing is generally viewed and taught. The first section summarises the findings obtained in chapters 6, 7, and 8 and represents them in a way that will make it possible to formulate broader conclusions about interaction as a whole, both theoretically and practically. Crucially, this leads to the framework of interaction used in the analyses being modified to reflect the links between the different forms of interaction. The next section applies the analyses to a single text, aiming at demonstrating how these three forms of interaction work jointly, and providing an example of one of the applications of the analyses to the understanding of texts. The more general implications of the study are discussed in the following section, arguing that a wider view of interaction in written discourse can be useful in delimiting some of the more complex systems of the language. Some general applications of the present study to the teaching of writing to intermediate and advanced students will then be discussed. The chapter concludes with broad reflections on the analyses and some recommendations for further research.

9.1 Summary of the Analyses

In the previous three chapters, each of the three forms of interaction has been individually analysed in the four corpora of medical written texts comprising the data. The discussion in each of these chapters was deliberately focused on the interrelationships of the texts and signals within each interaction type, and little has been said about how explicit connections among the different forms of interaction can be made. At this stage, however, and given the relatively detailed picture of each type of interaction and how it works in each corpus provided by the analyses, it is possible to have an overall look at interaction in written texts similar to that taken initially in Chapter 4. This section will thus seek to complement the previous discussion of the framework of analysis and extend it to cover some aspects, especially those related to the link between different interaction forms and different text types, that it was not possible to fully envisage earlier on.

In order to do this, a summary of the overall results obtained from the analyses in the previous three chapters is presented in Table 9-1 and then plotted in Figure 9-1, which also shows the signals of interaction that were found to be positively marked in each of the corpora. The primary aim of this summarisation of the results is to identify those text types where interaction on the whole, not only certain types of interaction, is positively marked. Of course, where all types of interaction are positively marked for a specific corpus, interaction in general would also be positively marked, as in the case of the leaflets corpus; conversely, in the research articles corpus, where all forms of interaction are clearly negatively marked, interaction is generally negatively marked as well. However, such a summary is useful when the text corpus is not uniformly clearly negatively or positively marked in all three forms of interaction; this is true for the press reports, as they are only positively marked with regard to Lexico-grammatical Interaction. Nevertheless, this allows them to appear on the positive side of the markedness scale. They are not, however, clearly positively marked (a markedness score of only 0.17), and they may be regarded therefore as somewhat neutral, as also clear from their position in Figure 9-1 quite close to the neutral separation line. This is not surprising, as they are negatively marked in relation to Informational Interaction and Pragmatic Interaction (though they may be considered rather neutral in the latter case). Textbooks are generally negatively marked, despite their position close to the neutral line on the negative side of the scale in terms of Informational Interaction.

TYPE CORPUS	Informational Interaction	Lexico- grammatical Interaction	Pragmatic Interaction	OVERALL
Leaflets	4.69 (1.46)	69.41 (1.17)	30.54 (1.47)	104.64 (1.33)
Textbooks	3.06 (-0.2)	34.47 (-0.48)	3.31 (-0.63)	40.84 (-0.54)
Press Reports	2.73 (-0.54)	53.59 (0.42)	8.67 (-0.22)	64.99 (0.17)
Research Articles	2.55 (-0.72)	21.12 (-1.1)	3.29 (-0.64)	26.96 (-0.95)
TOTAL	13.03	178.59	45.81	237.43
Mean	3.26	44.65	11.45	59.36
Standard Deviation	0.98	21.22	12.97	34.03

Table 9-1: The calculation of the 'markedness' of the three types of interaction in each corpus of the data. (Figures are per 1000 words; figures in brackets represent the score of 'markedness' for each type of interaction as calculated from the mean and standard deviation).

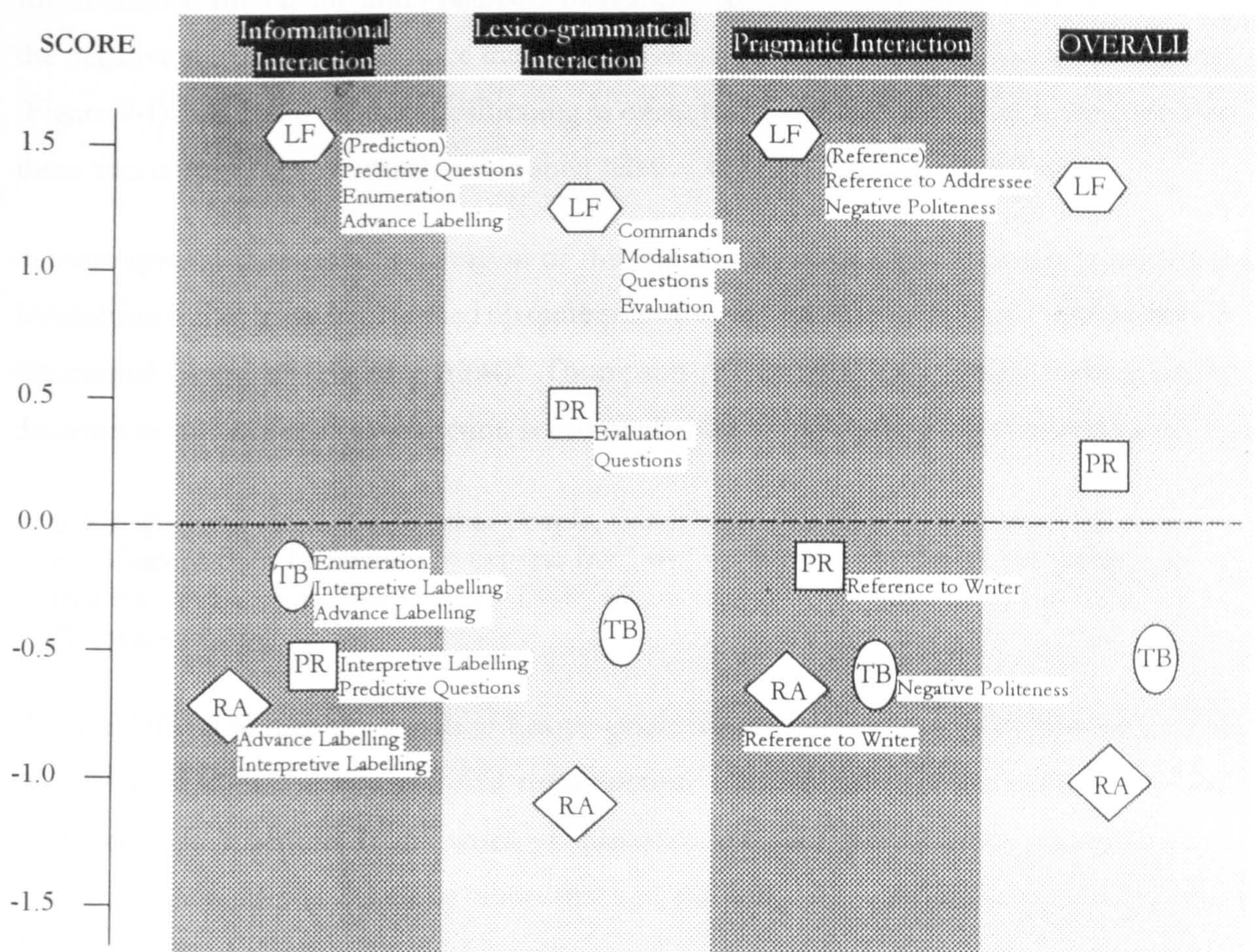


Figure 9-1: Plotting the four sample corpora comprising the data in relation to the 'markedness' of the three types of interaction, showing the positively marked signals in each corpus, if any. (Brackets are for subtotals).

Key:
 LF = Medical Leaflets
 RA = Medical Research Articles
 PR = Medical Press Reports
 TB = Medical Textbooks

It is interesting to note that the general pattern of this distribution of the four corpora in relation to the overall signals of interaction corresponds to a large extent to their ordering in terms of Lexico-grammatical Interaction. This confirms what has been tentatively suggested in 4.4 about the fact that this form of interaction is the principal one (though, as emphasised before, all forms of interaction need to be considered for full appreciation of interaction in various types of texts). The analyses conducted indicate that, for the overall interaction of the text, Lexico-grammatical Interaction has a decisive role. This may indeed be expected, as most of the signals of this type of interaction are those conventionally associated with interaction, most noticeably questions and commands. But the summary above shows that for text types where Lexico-grammatical Interaction is positively marked, interaction in general is also positively marked, and vice versa. Also, in the textbooks and press reports corpora, Informational Interaction and Pragmatic Interaction appear to have complementary roles on the negative side of the scale, since they seem to alternate with each other in the two corpora (Figure 9-1); it is based on their positioning in relation to Lexico-grammatical Interaction that these two corpora are eventually positioned relative to interaction on the whole.

A more general theoretical implication of the important role played by Lexico-grammatical Interaction is that it can be matched up quite smoothly with the interpersonal metafunction in Functional Grammar (Halliday, 1994)¹. Thompson (1996) provides a straightforward useful description of what this metafunction is essentially about; this metafunction allows us to

use language to interact with other people, to establish and maintain relations with them, to influence their behaviour, to express our own viewpoint on things in the world, and to elicit or change theirs.

(Thompson, 1996, p.28)

It is not difficult to map the signals of Lexico-grammatical Interaction on the different parts of this description of the interpersonal metafunction: establishing relations with people and influencing their actions is the work of questions and commands, while expressing and changing viewpoints is primarily done through modality and evaluation. Extending this comparison to the other forms of interaction and the remaining basic metafunctions, it is possible to see some connections between them, but the correspondence is not as strong as it is for Lexico-grammatical Interaction and the interpersonal metafunction. Informational Interaction can be associated to some extent with the textual metafunction, which is concerned

with how the message is organised and how it is related to the other messages surrounding it. This is basically what the analysis of Informational Interaction attempts to achieve, though the focus in this case is on interactive rather than purely textual or cohesive purposes. The link is even less clear between the experiential metafunction (the way we talk about and refer to the different entities or events around us) and Pragmatic Interaction, though one aspect of referring, that is referring to the interactants, is covered by the analysis of personal reference. This only partial relation between Pragmatic and Informational Interaction and the experiential and textual metafunctions respectively is primarily due to the fact that in these types of interaction only the aspects that are overtly interactive/interactional are considered. On the other hand, Lexico-grammatical Interaction corresponds largely to the interpersonal metafunction, since both aim essentially at pinpointing strategies of managing interaction.

A final observation about the above summary of the analyses can be made by referring to the grouping of the four corpora and the distribution of the different signals of interaction, as presented in Figure 9-1. First, as is clear from the overall column, the main way in which the four corpora are grouped is the conventional division of popular versus specialist texts, that is the leaflets and the press reports on the one hand and the textbooks and the research articles on the other. As noted before, this is also the grouping obtained through the Lexico-grammatical Interaction analysis. The signals of Lexico-grammatical Interaction are those normally associated with interaction, and it is not therefore surprising that analysing them results in separating the more friendly popular texts from the others. Second, it is clear from Figure 9-1 that there are more positively marked signals of interaction associated with the leaflets corpus than any other corpus; signals missing because they are negatively marked in the leaflets are only two, interpretive labelling and reference to writer. At the other extreme, only three signals are positively marked in the research articles, advance and interpretive labelling and reference to writer. What this implies is that markedness of interaction as a whole is not a consequence of the influence of a few highly positively or negatively marked signals, but it is a result of the cumulative effect of a wide variety of signals.

Having discussed different aspects of the summary of the analyses, it may be fruitful at this point to review the framework of analysis proposed in Chapter 4. The objective of this is to check for any possible connections among the three forms of interaction and their effects that might be highlighted by the analyses. Generally, the analyses demonstrate that the framework

as outlined before appears to be a reasonable way of accounting for interaction in written texts. However, it becomes clear with the carrying out of the more detailed analyses that it would be more useful if the framework can also account for some of the intrinsic overlaps among the signals of interaction. It also becomes clear that the interactional effects of orientation, negotiation, and involvement seem to be interrelated in a way that might be important to how interaction is analysed in written texts. Figure 9-2 below encompasses these modifications to the framework.

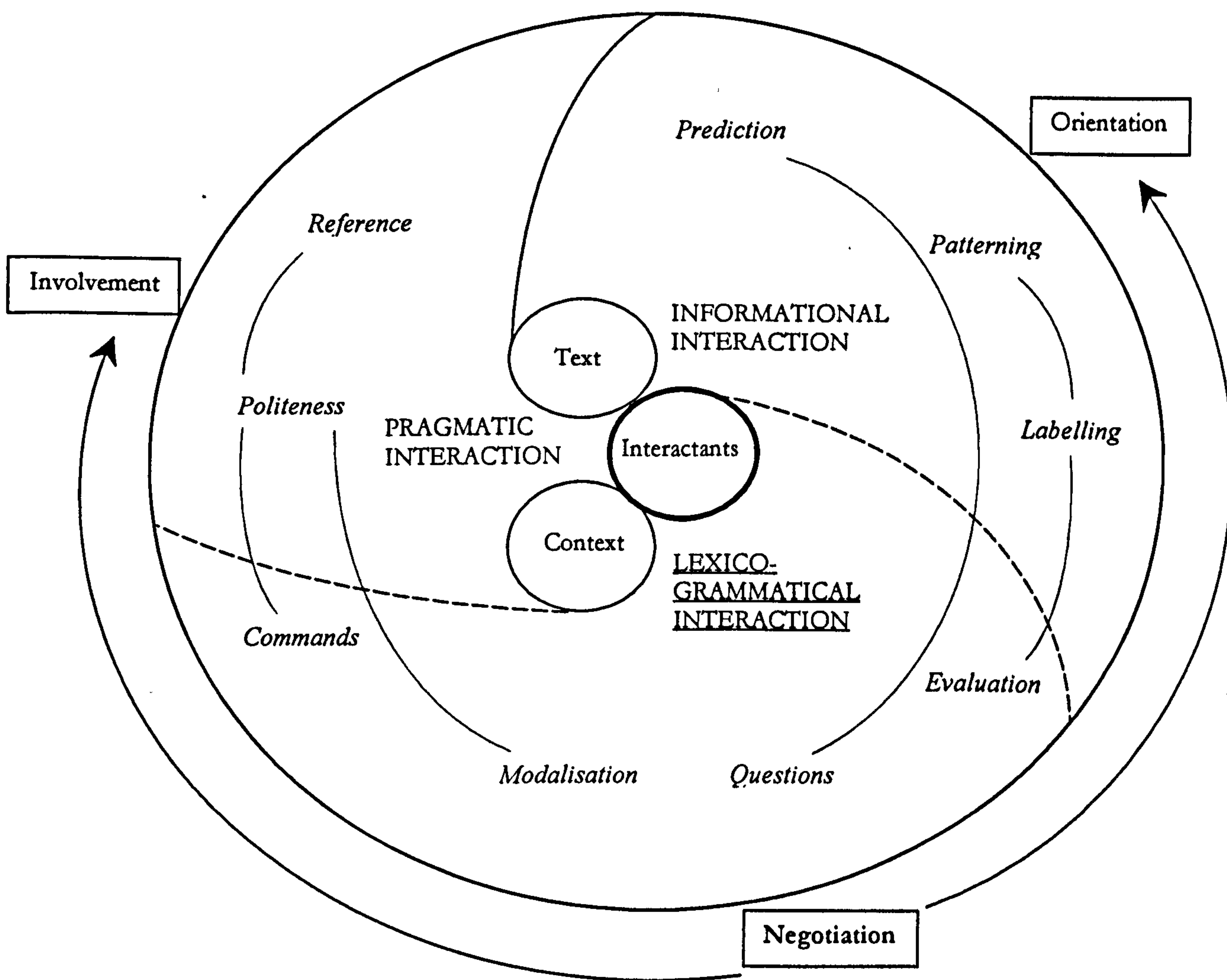


Figure 9-2: The three types of interaction and their focuses and effects, including the interrelationships among the signals of the types of interaction and among their effects.

This revised framework does not only explicitly state the signals of interaction in each of the three different forms, but it also indicates those signals that overlap in a clear way with each

other. For example, patterning draws partly on labelling, and reference can be employed as a politeness strategy. More important, however, are those overlapping signals across different forms of interaction. The Informational Interaction signals of prediction and labelling overlap respectively with questions and evaluation, both of which belong to Lexico-grammatical Interaction: questions are one strategy of prediction, and some labels are evaluative. By the same token, the Pragmatic Interaction signal of politeness is related in part to commands and modalisation: mitigation of commands and hedging through modalisation are two politeness strategies. One thing these dependencies among the signals of interaction suggest is that the categorisation of interaction into three kinds does not mean that they are absolute categories and that signals can partly operate across categories. More importantly, signals of both Informational Interaction and Pragmatic Interaction overlap with others from Lexico-grammatical Interaction, but do not seem to overlap with each other. This reaffirms the conclusion reached earlier in this section about some principal role played by Lexico-grammatical Interaction, showing that it represents a repository of resources for the other two types of interaction.

This distinctive importance of Lexico-grammatical Interaction for the realisation of interaction on the whole implies that the general value of its effect, i.e. negotiation, may likewise be more significant compared to the other types of effects, orientation and involvement. Since, e.g., labelling draws for some of its interactive function on evaluation, then it should to a certain degree involve negotiation. The same thing may also be said about prediction/questions and politeness/commands. In all these cases, the overlap between signals is partial and the effect of negotiation brought about by the Lexico-grammatical Interaction signal exploited does not consequently override the original effect for the other signal; for instance, labelling is not dramatically influenced by the effect of negotiation created by some evaluative labels, and orientation is still the main effect. It appears that the context in which these signals are used makes negotiation relatively less prominent; so negotiation in evaluative labels is less an issue than when the evaluation is made in a context that does not involve labelling. However, in one case, that is politeness/modalisation, the overlap is more or less complete, and modalisation in general is regarded as a politeness strategy. The reason behind this is that modalisation is a hedging technique; in other words, the effect of negotiation characteristic of modalisation seems to be the primary factor for utilising it as a politeness strategy. So it can be argued that

negotiation is the intrinsic effect of modalisation, and that politeness/involvement is therefore an indirect one. This raises the issue of a different kind of overlap between the different forms of interaction not indicated in Figure 9-2, the clearest example of which is evaluation. Evaluation can be used as an involvement technique; but this is dependent on the negotiation effect: if it results in acceptance of evaluation, solidarity is enhanced, and if the evaluation is rejected, there will most likely be less involvement (Martin, 2000, p.172). This explains why modalisation and evaluation are included under Lexico-grammatical Interaction in Figure 9-2. More generally, it demonstrates how the effect of negotiation may override or control other effects (involvement in this case), indicating its central importance to interaction in general, which also corresponds to that of Lexico-grammatical Interaction.

The summary of the analyses discussed above leads to an important conclusion, that Lexico-grammatical Interaction and its negotiation effect play an essential role in the management of interaction as a whole. This is the result obtained from both the summary of the quantitative analyses carried out in the previous three chapters and from the theoretical re-examination of the framework of interaction proposed in Chapter 4. From the quantitative summary, it is clear that Lexico-grammatical Interaction is the form that can eventually make a text positively or negatively marked in terms of the overall signals of interaction. The re-examined framework makes explicit why Lexico-grammatical Interaction plays such important role; it appears that Informational and Pragmatic Interaction function partly through Lexico-grammatical Interaction signals, as there is considerable overlap with these signals. As a result the effect of negotiation seems to influence and control the other effect of orientation and involvement. What the summary above does not reflect is how the forms of interaction actually operate inside the text, and whether Lexico-grammatical Interaction has a similar influential role compared to the other forms of interaction. These issues will be discussed in the next section.

9.2 Interaction in Text

To supplement the above summary and to conclude the analyses conducted in the previous three chapters, this section will focus on a sample text from the press reports corpus, attempting to demonstrate how the three forms of interaction analysed – Informational, Lexico-grammatical, and Pragmatic Interaction – are jointly managed in a single text. This combined analysis, it is hoped, will help elucidate some interesting aspects of what is going on

in the text that are not easily identifiable looking only from the perspective of one form of interaction. As will be clear from the following discussion, the three forms of interaction appear to work in concert with each other to enable the text achieve its specific goal.

The particular sample text chosen for this purpose is a press report about 'cold cures' (Appendix II). There are several reasons that make choosing a press report seems appropriate for this analysis. First, as shown in 9.1 above, interaction on the whole in relation to the press reports corpus is almost neutral, that is interaction is neither highly positively marked (as in the leaflets corpus) nor highly negatively marked (as especially in the research articles corpus). This will ensure that the discussion below will not be biased towards reflecting either more or less clear influence of interaction on the way the text conveys its message. Second, as also repeatedly mentioned in the previous analyses, the press reports are similar in certain respects to the other three text types, particularly the leaflets and the research articles, which allows some generalisations about them all to be made. Finally, and more practically, as the press reports corpus contains the largest number of independent texts (see Appendix I), most of which are of a reasonable length to be considered here, it provides a better selection of texts to be analysed. This particular text is selected mainly because it discusses a familiar topic in a way that is more or less typical of the other press reports in the corpus.

Figure 9-3 presents an overall view of the signals of the three forms of interaction in the sample text. The first point to note is that all these forms are being jointly used, i.e. the text does not rely exclusively on just one form of interaction rather than the others. But, at the same time, it is clear that, within each type of interaction, there are certain signals that are utilised more than others; these are patterning in Informational Interaction, evaluation in Lexico-grammatical Interaction, and positive politeness (particularly exaggeration) in Pragmatic Interaction. Other signals that are noticeably absent are direct commands (in the form of both imperatives and modulations) in Lexico-grammatical Interaction, and in consequence strategies of negative politeness in Pragmatic Interaction, mainly mitigation of commands. Similarly interpretive labelling clearly plays a very minimal role in the management of Informational Interaction. What this pattern of the usage (and non-usage) of the signals indicates is that the text does not appear to influence the addressee's opinion and behaviour in a direct way, through, e.g., explicit commanding and interpretive labelling. Instead, as will be discussed, the main resource the text draws on is that of evaluation.

PRAGMATIC INTERACTION

INFORMATIONAL INTERACTION

Reference

(2) *us* (7) *you* (23) *you* (28) *we*

Politeness (Positive)

Joke:
(2) *No prizes for guessing...*

Exaggerate:
(2) *millions of us* (2) *for nothing more than* (3) *most adults two or three times a year* (3) *has triggered a £300m industry in potions* (3) *ranging from...* (4) *yet* (4) *as elusive as ever* (4) *spent 30 years vainly trying to find one* (5) *by up to 60 per cent* (9) *all previous attempts have failed* (10) *has long been known* (10) *has always proved difficult* (11) *disgusting* (14) *breakthrough* (16) *significantly* (19) *real puzzle* (21) *Most scientists* (21) *too early* (22) *even a slight variation* (24) *first line of treatment* (26) *Other than complete isolation*

Be Optimistic:
(14) *small breakthrough* (25) *although they do fight...*
(25) *although high doses during a cold...* (26) *although keeping your hands...*

Prediction

Reporting:
(5) *...makers of a new product developed in the US are claiming that...*

Questions:
(9) *Can Cold Killers triumph where all previous efforts have failed?*
(23) *What else can you do to combat a cold?*

Patterning

Problem-Solution pattern:
(2-3) Situation (as Problem) + Implied Solution 1
↓
(4) Problem b
(5-8) Solution b1
(9-22) Evaluation
↓
(23-25) Solution b2 + Evaluation
(26) Solution 2 + Evaluation

LEXICO-GRAMMATICAL INTERACTION

Questions

(9) *Can Cold Killers triumph where all previous efforts have failed?*
(23) *What else can you do to combat a cold?*

Modalisation

(12) *appears* (16) *possible* (17) *quite* (22) *might* (25) *are thought to* (26) *will* (28) *is thought to* (28) *probably*

Evaluation

(1) *truth* +judgement (2) *misery* -affect (2) *desire* -affect (3) *afflicts* -affect (4) *elusive* -appreciation (4) *vainly* -appreciation (5) *claiming* -judgement (5) *cut the duration of a cold* +appreciation (7) *kill the rhinoviruses* +appreciation (8) *reduce discomfort* +appreciation (9) *triumph* +appreciation (9) *fail* -appreciation (10) *anti-viral* +appreciation (10) *difficult* -appreciation (11) *drawback* -appreciation (11) *disgusting* -appreciation (11) *collapsed* -appreciation (11) *refused* -judgement (12) *more palatable* +appreciation (12) *stop* -appreciation (13) *lost* -appreciation (14) *small breakthrough* +appreciation (15) *suffered...* +affect (16) *significantly reduce* +appreciation (16) *benefits outweighing possible adverse effects* +appreciation (18) *prevent* +appreciation (19) *real puzzle* -appreciation (24) *first line* +appreciation (24) *useful* +appreciation (25) *anti-oxidant* +appreciation (25) *dampen down* +appreciation (26) *helps* +appreciation (26) *well* +appreciation (26) *strengthen* +appreciation (28) *kill off* +appreciation

Figure 9-3: The signals of interaction in the sample text.

This dependence on evaluation is most obvious in the way the text is patterned. This is somewhat complex, but it reflects the writer's attempt to organise the discourse in a way that suits her addressee and allows her to convey the message effectively. The text opens with a problematic Situation (sentences 2-3), that of catching cold (see Hoey, 1983/1991 on the issue of the 'Situation as Problem'). The description of the Situation as one that *plunges millions of us into misery, afflicts most adults two or three times a year*, and costs a huge amount of money would in itself raise expectations of a Problem-Solution pattern. Sentence 4 implies an unstated Solution, that of finding a cure; but this raises another Problem, that there is, as yet, no cure for this disease (as signalled by *elusive* and *vainly*). So the text moves to a possible Solution, a new type of drug that is 'claimed' to be such (sentences 5-8). In journalistic terms, this is actually what this report is about: the report was written to tell us about the appearance of this new product, and to discuss the 'claims' about its effectiveness with some experts. This second point is the Evaluation (sentences 9-22), which represents the main part of the text. It will be shown below that this part of the pattern is the most important, not only because it is discussed more than the others, but also because it is made prominent using other predictive elements (and this would be taken as one indication of the crucial role evaluation in general plays in this text). As the Evaluation of this Solution is on the whole negative (especially sentence 21), the pattern recycles by discussing other Solutions: Paracetamol, antibiotics, and vitamin C, which are simultaneously negatively evaluated; sentence 26 comes back to the main Problem, catching cold, and concludes the pattern by suggesting what amounts to no solution, *complete isolation from the rest of the human race*.

Two points are worth noting about the above overview of the patterning of the text. First the embedding of a Problem (an unsuccessful cure) within another main Problem (cold) allows the purposes of both writer and addressee to be met; the writer's purpose is obviously to describe and evaluate the new product as something newsworthy, and that of the addressee – as projected in the text – is combating cold. The emphasis is naturally on the former, but it is buried within the latter, so that both purposes would appear as similar rather than conflicting. The second related point is that the Evaluation of the product is being given special prominence, since it accounts for 14 out of the 28 sentences that comprise the text. In addition to this, the other prediction elements employed, i.e. reporting in 5 and the two questions in 9 and 23, seem to further highlight the importance of this part of the pattern. The reporting verb

claiming in sentence 5 is predictive of some sort of an evaluation to follow, and the two questions mark the boundaries of the Evaluation part. The question in sentence 9 is a manifestation of the underlying negotiation between writer and addressee assumed by the pattern; at this exact point, the pattern typically continues as if the addressee has asked a more or less similar question. Making this explicit appears to be a signal of the centrality of the Evaluation part of the pattern. In 23, the question, along with its prediction of an answer (another Solution), also indicates the addressee's projected acceptance of the preceding evaluation, reflecting the importance of establishing such acceptance to the overall message of the text.

On the whole, then, the signals of Informational Interaction appear to emphasise the importance of the Evaluation part of the pattern of the text. Indeed, evaluation, as the analysis of Lexico-grammatical Interaction shows, is a primary resource the text utilises to project negotiation with the addressee. Evaluative elements can be found throughout the text and not restricted to only one part. It may, however, be interesting that though the text foregrounds the 'appreciation' type of evaluation (whether something is worthwhile or not), those in the introductory Situation (sentences 2-3) are 'affect' evaluations expressing some negative feelings. The issue of feelings is partly useful as an involvement strategy, since it generally calls for sympathy and understanding (especially if coupled with explicit involvement techniques, such as joking and reference in this case – see below). In terms of negotiation, this means that, given an appropriate context, affect evaluations are less likely to be rejected by the addressee. Opening up the text in this way suggests that sharing evaluations expressed is probably one of its basic objectives.

The tone of the text is by and large that of trust and collaboration. There are no explicit signs of confrontation with the addressee in the text, and little effort is invested in overtly influencing the addressee's views or actions. On the other hand, the addressee is depicted as an active participant who is engaged in a process of negotiation with the writer, where he/she can ask questions that change the course of the discourse, and where clear opportunities for him/her to contribute are available through the writer's modalisation/hedging. Modalisations in particular reflect the attempt not to pressurise the addressee into accepting the writer's propositions; instead of making absolute statements, the text sounds as if it is offering a relatively wide scope for smooth negotiation between equal participants. In addition to this

projected equality of status between writer and addressee, there is an atmosphere of familiarity, informality, and closeness created by the signals of Pragmatic Interaction. Reference with *us* and *we* respectively opens and closes the text, stressing – at these critical points – commonality and conformity of writer and addressee. Joking, exaggerating, and showing optimism are attempts to bring the addressee closer to the text by being attentive to his/her needs for reassurance, intimacy, and openness. Since the text is in essence a series of evaluations, the common use of exaggeration is of particular relevance here; through this way of managing interaction, the text effectively constructs a cooperative addressee building its message on an assumption of trust, so what it says will not necessarily be taken at face value (it does not matter, for instance, if *millions of us* in sentence 2 actually means two or three millions or the whole population). This clearly helps make the genuine evaluations the text is actually about more readily accepted.

In the above discussion, and for the sake of clarity, the signals of each form of interaction have been generally discussed separately, indicating as much as possible that they play complementary roles that cumulatively help the text create an appropriate relationship with its addressee. This relationship is largely based on shared evaluations. However, addressee acceptance of evaluations contained in the text is not assumed to be inevitable (as may be expected with some other types of writing, e.g. textbooks); as a result, an important part of the interaction in the text is being devoted to the construction of a flexible addressee who can be easily aligned with the evaluations expressed. Though the important role evaluation plays in this particular text can be appreciated through careful reading, and this can also be made more obvious through an isolated analysis of evaluation, a combined analysis similar to the above is clearly useful in showing how such evaluations may (or may not) succeed in building a relationship with the addressee that will enable the text put across its specific message.

9.3 Some Theoretical Implications

As is clear from the discussion so far, interaction is considered an essential characteristic of written texts. The extended arguments (by e.g. Widdowson, Sinclair, Hoey, and Nystrand) of a more or less overt relationship between the participants in the text represent the basis for the present analysis of interaction. However, as is obvious from the previous analyses, it is not only that texts project interaction, but they achieve this in a variety of ways, since various

configurations of certain explicit signals of interaction can be exploited to help construct different kinds of relationships with the addressee. Moreover, as the above text analysis more clearly indicates, for a successful projection of interaction and understanding of texts, it is crucial that the addressee is carefully defined and positioned based on the specific purpose of the text. It is also implicated that approaching texts (and language on the whole) from the perspective of interaction could assist in resolving some of the complications we encounter when trying to formulate and classify some linguistic phenomena that perform distinct discourse functions, such as modality and questions.

One important implication of the framework of interaction proposed in this study is that all major aspects of language and context contribute to the way writers interact with their addressees. It is crucial to stress that the analyses suggest that Lexico-grammatical Interaction influences, but does not dominate or eliminate, Informational and Pragmatic Interaction. If we accept Bolívar's (1994, p.279) view that "the initial categories of discourse are (i) **social interaction**; (ii) **two participants**; and (iii) **a text**" (emphasis in original), then the three forms of interaction discussed here extend over all aspects of discourse, with the interpersonal and the signalling of negotiation being the main resource. This highlights a fundamental feature of interaction that seems to be neglected by most previous considerations of this phenomenon, that description of interaction cannot be fully accomplished by reference to just the interpersonal component of the language (despite its obvious primary role). In fact, this is only one element of the generally relatively narrow treatments, as pointed out earlier in this study (see 2.3.2, 4.1, and 5.1.1), of interaction in written discourse. Another element is the give-and-take relation suggested by expressions like 'interactive' or 'interactional' and the related parallelism with spoken language, which limit the scope of interaction in texts to actual (or assumed) multiparty exchanges. However, as shown by Goodwin (1979), even in spoken conversations the single turn can be constructed interactively, and it is not true that the smallest unit of interaction is the 'exchange' (as, for example, suggested by Coulthard & Ashby, 1975, p.140). The framework of interaction on which the present analyses are based makes it possible to use this wider sense of the term 'interaction' in relation to written discourse.

A potentially crucial consequence of the unrestricted view of interaction in written discourse assumed by the present analyses is that of the redefinition of some problematic linguistic phenomena by way of considering them from a different, wider perspective than usual. Most

of the signals of interaction analysed here are generally complex systems that cannot be indisputably conceptualised and/or classified. As is clear from the discussion in Chapter 5, the problem with some signals is relatively basic, as it relates to the medium in which they are used; so politeness, for instance, is not as easily analysable in written texts as in conversational exchanges. This does not, however, necessarily mean that politeness strategies are irrelevant to written discourse, as e.g. Leech (1983, p.105) seems to suggest. This study, among others (e.g. Myers, 1989), demonstrates that accounting for politeness in writing can be achieved by simply broadening our conception of interaction in written texts. Similarly, the role of modality is better understood within the framework of interaction: Modalisation (or epistemic modality) is primarily a signal of negotiation, with the extra effect of politeness/involvement. Modulation (or deontic modality) plays a similar interactional role to modalisation (under the general category of commands), but the negotiation it projects is of a different kind. It remains to account for two special cases of modality: the two senses of ability and permission for both *can* and *may* respectively; these are normally considered as modulative, but in terms of interaction they clearly do not have the strong commanding force that would make them treated as commands. In the present data, their use appears to be related more to politeness considerations as indirect ways of influencing the addressee's behaviour. It is this built-in politeness aspect of ability *can* and permission *may* that differentiates them from the other modulative uses, which normally require a separate mitigation strategy, like modalisation, to reflect politeness. Modality is undoubtedly a complex system, but the broad view of interaction proposed here helps cast light on some of its less studied aspects, particularly its addressee-orientation (e.g. Coates, 1987, 1990). The inseparable roles of modality as a negotiation strategy and as a politeness/involvement strategy demonstrate that it is both speaker- and addressee-oriented.

Another clearer example of the usefulness of a wider interactional perspective is the description of questions. Questions, as defined in 5.4.2, are designed to elicit a (typically verbal) response. It has been indicated that one problem with the identification of questions is that not all questions require an explicit verbal response, e.g. tag questions. During the course of the analyses, another type of question, 'topic-opener' questions, was identified; these clearly do not attempt to elicit any particular verbal response: all it seeks to do is to raise the addressee's attention. A more general issue with regard to how different kinds of questions are identified is

that the syntactic form of the question is most of the time not sufficient. Tsui (1992, p.89), stressing that the term question “remains vague and ill-defined” and rejecting accounts of questions as speech acts or requests, proposes that they can be defined functionally as ‘elicitations’. In other words, what differentiates types of questions is what they elicit (information, agreement, commitment, etc.), their functions and not their forms. As argued by Tsui, this is a more plausible way of describing questions; and it seems that the present account of questions within the framework of interaction could further strengthen Tsui’s functional description.

Questions have been considered in this study as information prediction signals (Informational Interaction) and as interpersonal negotiation signals (Lexico-grammatical Interaction). Another way of utilising questions that has been omitted from the analyses (because it is very rare in the data) is as ‘conventionalised’ requests (Brown & Levinson, 1987). (This latter use is clearly problematic, as it is actually more a request seeking action than a question eliciting a verbal response; the reason why it is included here will be discussed below.) Based on the discussion of questions in the previous chapters, Table 9-2 shows that questions can be classified from the perspective of interaction according to what response they elicit and what commodity they appear to negotiate about. Obviously, the description is biased towards written texts, but it may also be useful as a possible way of characterising questions in spoken discourse.

Interaction	Formal-Textual-Pragmatic Type	Example	Questioner	Commodity	Response
PRAGMATIC	Genuine requests Suggestions	<i>Will you help us?</i> [LF13] <i>Why not follow the fashion?</i> [LF24]	Writer	Good-&-services	(NV) (V)
LEXICO-GRAMMATICAL	Tags Assumptives Declaratives	<i>Everybody knows what's good for them, don't they?</i> [PRTM02]	Writer	Confirmation / Agreement	(V)
	Wh- Yes/no	<i>Who will care for me?</i> [LF12] <i>Is Epilepsy a disability?</i> [LF21]	Addressee	Information	V
INFORMATIONAL	Issue-raising Topic-opener Rhetorical	<i>How safe are supplements?</i> [PRIN37]	Writer	Commitment / Attention	∅

Table 9-2: Classifying questions based on the form of interaction. (V=Verbal, NV=Nov-verbal, and ∅=No response, brackets indicate optional/projected response)

In terms of interaction, it is possible to isolate three major types of questions. First, Pragmatic Interaction questions are those which seek a non-verbal response, but can optionally (or additionally) be responded to verbally. These are on the borderline between outright commands that only seek an immediate non-verbal response and genuine questions that aim at eliciting information; such sociable, softened requests allow for some verbal communication. They appear to relate to genuine questions and commands in a more or less similar way to the way in which modulation relates to modality and commands. They are in essence questions designed to allow a verbal – in addition to the primarily non-verbal – response; it is this possibility of a verbal response that is the main factor for the characterisation of a ‘question’, and not the type of the commodity exchanged. Second, Lexico-grammatical Interaction questions, which may be asked by the writer or projected on the addressee, elicit either confirmation/agreement or information; unlike the latter, the former only require a minimal verbal response, like *yeah, yes*, etc. in speech. Finally, Informational Interaction questions (typically asked by the writer) seek both writer and addressee commitment to the subject under discussion and do not require any sort of verbal response from the addressee.

The above general taxonomy of questions in relation to the three types of interaction suggests that we can identify what function a particular question performs in the text by examining what response it elicits and what commodity (in the extended sense detailed above) it helps exchange. This would not normally be possible without careful examination of the context of the question, which may not sometimes be quite clear. It would, of course, be more appropriate if this can be achieved from the question itself (but this is obviously not generally possible) or by *definite* textual and contextual cues. This latter option seems to be possible, at least partly, and Table 9-2 shows that a combination of the formal, textual, and pragmatic characteristics of the question can help identify its specific function. We can start from the form of the question which enables us to assign some questions to Lexico-grammatical Interaction, e.g. tag questions. But for some other questions, especially yes/no and wh-questions, the default option would be Lexico-grammatical Interaction, unless there are textual or contextual features that would make the question be categorised under either Informational or Pragmatic Interaction. Constructing a matrix of all these features requires close examination of many instances of questions, which is beyond the scope of this discussion. Nevertheless

such an approach appears to help provide a relatively comprehensive account of how questions function in written texts.

In conclusion, what this section attempts to emphasise is that considering linguistic systems in interactional terms is useful in, at least, two ways: (a) highlighting important aspects of these systems that might otherwise go unnoticed, and (b) accounting for the various functions of these systems in a systematic and (almost) complete way. This is in part due to looking at language as interaction; analysing linguistic signals from the perspective of interaction would most likely enhance our understanding of how they work in actual use (see e.g. Watson, 1975, with regard to the pronominal system). The present characterisation of interaction contributes to this general feature of interactional analysis by making this method of analysing signals more systematised and more comprehensive in its application, as has been shown above in the case of questions.

9.4 Some Teaching Applications

Though this study is mainly theoretical rather than applied in orientation, the topic in general is of important pedagogical relevance, and it is possible that the framework of interaction discussed here may be useful in reinforcing some of the already established views about the centrality of the concept of 'audience' to the writing process (see Chapter 2). More importantly, it can be argued that the framework directs attention to an aspect of writing that is often unattended to in the writing classroom, that is the interactional dimension (as opposed to the interactive dimension) (Thompson, 2001). It will also be shown below that inexperienced writers may be helped to improve their texts by adopting a method of writing that is based on this framework of interaction.

Writing is a highly demanding activity; it involves a wide range of synchronous cognitive processes that the writers' – especially novice writers' – memory cannot normally cope with (Flower, 1979, p.35). For the average task of writing, writers need to consult their linguistic capabilities to help them formulate the ideas they have; they need to relate different ideas to each other in sometimes complex ways; and they further need to express this in a way that serves both their purposes and those of their addressees. One solution to this, as argued by Flower (see also Elbow, 1987), is to encourage writing students to temporarily forget about audience and write for themselves, exploring their ideas and the links among them using

simple 'narrative' or 'survey' structuring strategies. As a second step, they can 'transform' this 'writer-based prose' to the more communicable 'reader-based prose', adapting the text so that it will be more focused, concept-based, and purposefully structured. This is clearly a viable way of facilitating the writing process for novice writers; but I believe that 'reader-based prose' is the quintessence of the writing process, and that the need for 'writer-based prose' depends very much on the complexity of the topic and the expertise of the writer (though, of course, it will at times be a useful, if not a necessary, strategy even for expert writers). So generally this approach would better be limited to the teaching of children and novice writers who need to be trained to first get to the habit of putting their thoughts on paper. For intermediate or advanced students, the focus should be on communicating their ideas to an addressee, and 'writer-based prose' may be regarded, to use Flower's (1979, p.37) expression, as "the writer's homework".

A particularly serious problem one can envisage in the prospect of encouraging students to suspend the role of the audience is that "we may be inhibiting the interactive process that generates written discourse" (Widdowson, 1984, p.61). Widdowson warns that this is what we might get by asking our students to start with making plans for their compositions and then comply with them. Though Flower's approach explicitly states that writers should re-structure their 'writer-based prose', it appears to limit, at least partly, the generation process of the writer's ideas and their relationships to this initial stage. It would probably be more fruitful to begin the writing process with some (provisional) discourse pattern(s) in mind. This will help the writer easily unravel the different parts of the topic under consideration, making the generation of 'writer-based prose' even simpler. Unlike narratives, for instance, patterns are flexible strategies of organising information, as they normally allow the re-ordering of the various parts; so writers can later adapt their texts, but leave the links among their different parts unimpaired. This will also crucially make the production of the 'reader-based prose' simpler than it would otherwise have been; at least, the text will not need to be structured again, and most of its parts can be straightforwardly signalled to the addressee.

Informational, interactive signals can greatly facilitate the production of language, and at the same time make it easier to accommodate addressees' informational expectations. Boyle (1996), for example, uses the Problem-Solution pattern, clause relations, and Tadros' (1994) predictive signals to help his students with their academic presentations; he concludes that the

student who uses such strategies “enhances his or her ability to gain and sustain the involvement of the audience” (p.122). Raising awareness of these signals is especially important with non-native writers whose rhetorical background is different from English writers; for instance, Mauranen (1993), focusing on ‘text-organising’ metatext, shows that this is the case for Finnish students. While for Anglo-American writers, “the reader is invited to take a tour of the text together with the author, who acts as a guide” (p.16), what Mauranen terms “marketing-type rhetorical strategies”, Finns

favour the “poetic” type: they tend to make minimal inscriptions on paper, leaving plenty of scope for reader’s interpretations and, in fact, demanding considerable interpretative effort from the reader. Instead of acting as a guide to his or her text, the Finn travels his path alone, leaving tracks for those who might be interested in following. The reader’s task is then to find the marks, interpret them, and draw the conclusion.

(Mauranen, 1993, p.16)

Hinds (1987) also points out that this may be inherent in the linguistic system, since some languages, like Japanese, are ‘reader responsible’, i.e. the success of communication is more the responsibility of the reader. Interactive signals help writers make sense of their addressees and represent one of the “few pedagogies for helping writers to represent how readers construct meaning as they interact with text” (Schriver, 1992, p.180). Because they are well characterised, commonly used features of English written texts, these Informational Interaction signals are perhaps more effective than other methods of teaching and helping writers in anticipating readers’ needs. Schriver’s ‘reader-protocol teaching’ which exposes students to actual readers’ responses to texts in the hope that they will develop a sharper sense of audience could be useful, but it does not provide students with linguistic tools that they can employ in their writing tasks. Similarly, the ‘strip story’ method used by Hall (1988) does not help students actually experience reciprocity when they write, though it may help make explicit the process of negotiation in texts. Overall, informational guidance signals are important strategies that can be exploited, especially in the early stages of writing, to make writers advance more smoothly in the writing process.

As is clear from the discussion above and the distinction made by Flower between writer- and reader-based prose, and despite recognition of the burden caused by the process of creating a successful relationship with the addressee in the text, the concern is more with the information

side of the writing process. This bias towards teaching interactive (or informational) signals with less, if any, concern with interactional (or non-informational) signals is a noticeable trend in writing textbooks and classrooms, certainly in relation to academic writing (Thompson, 2001). This does not seem to reflect the increasing research showing the importance of employing interactional signals in academic writing (e.g. Skelton, 1988; Gosden, 1995). As demonstrated in the present analyses, this kind of interaction is the one writers primarily rely on in putting forward their message. In practice, however, instructing students to account for this dimension of interaction goes beyond the informational content of the text to some relatively less obvious contextual aspects, particularly within the classroom situation. Moreover, textbooks in an endeavour to simplify things, as noted by Henry (1995, p.179) with regard to business writing, “present the relationship between a particular form and its function as invariable, neglecting the role context plays in determining meaning”. It is not possible to set abstract rules that students can use to decide whether certain usages are appropriate or not. I think that the matrix or grid method used by Henry (1995) and Thompson (2001) respectively are useful methods in making students aware of the effect their texts have; with practice, they will hopefully acquire the capacity to perform this monitoring as they write in a more or less automatic fashion. This method can be applied to the students’ use of most of the signals of Lexico-grammatical and Pragmatic Interaction.

The role of the context in language use in general is well-known. But when it comes to writing, one aspect of context is normally less emphasised: Tenor. Martin & Rothery (1986) pointing out that the Mode of the writing process and how it differs from or resembles speech is normally sufficiently explained to students, criticise teachers’ misrepresentation of the Field, especially their association of ‘creativity’ and ‘good’ writing with narrative structures. They do not, however, comment on the role Tenor plays in writing and how teachers view this variable. This can be taken as an indication of the lesser prominence the writing classroom gives to Tenor. Nevertheless, the current analysis of interaction demonstrates that it is actually through the form of interaction that is most related to the Tenor variable, i.e. Lexico-grammatical Interaction, that the main communicative message of the text is made explicit. This observation is especially important from a communicative language teaching point of view, as

the most efficient communicator in a foreign language...is often the person who is most skilled at processing the complete situation involving himself and his hearer, taking

account of what knowledge is already shared between them (e.g. from the situation or from the preceding conversation), and selecting items which will communicate his message effectively.

(Littlewood, 1981, p.4)

To further highlight the crucial function of the Lexico-grammatical Interaction signals in the writing process, a simple pedagogical model of this process from the perspective of interaction is presented in Figure 9.4. The model uses the traditional three stages method of writing (e.g. Graves, 1983), i.e. planning, writing, and revising, and accepts that “one important role [for teachers] is that of organising student’s writing processes” (Martin & Rothery, 1986, p.262). It shows that each stage of writing may generally be associated with the signals of one form of interaction or the other. The writing or drafting stage is more linked to the signals of Lexico-grammatical Interaction, and it is at this stage where the student writer needs to overtly express his/her intended message, the effect he/she wants to have on the addressee. This will be refined in relation to the wider contextual background of the interaction in the revising stage, and will also be used to re-examine the initial informational structuring of the text. It is important to stress that this representation of the process of writing is intended to guide student writers and not a representation of how experienced writers create texts. It helps them work out the linguistic features they need to focus on using their familiar staged process of writing.

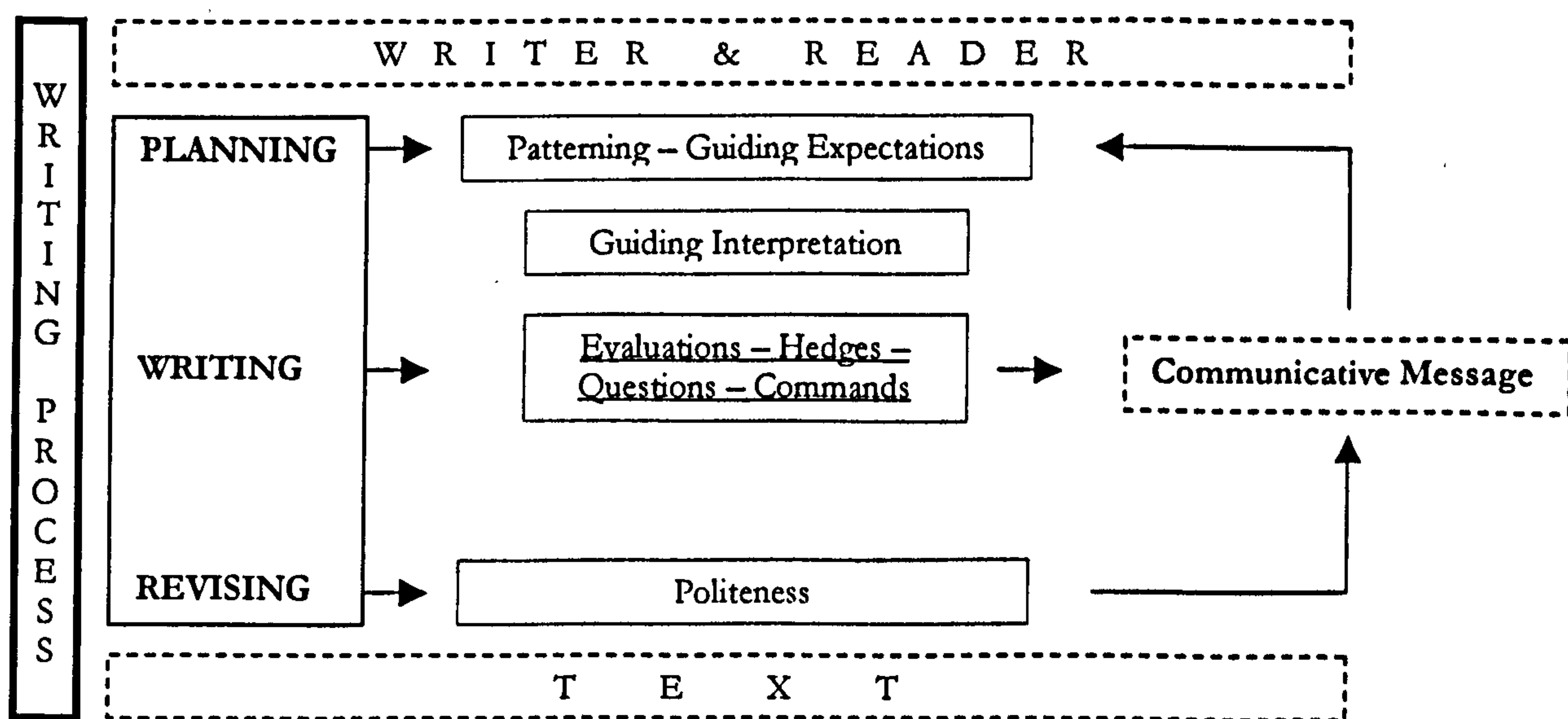


Figure 9-4: A simple representation of the writing process from the perspective of interaction.

To sum up the discussion, it is obvious that taking account of the writer's addressee is not something students can achieve quite easily. It is, however, crucial for their writing to be successful; they need to view writing as a process of "shaping text to accommodate an audience outside the text", but also importantly "as a process of shaping text for an audience" (Mangelsdorf *et al.*, 1990, p.232), that is constructing the addressee inside the text. The above discussion shows that viewing the process of writing from the perspective of interaction can help student writers fulfil these needs. One of its important advantages is that it provides them with the linguistic tools they need and the best ways through which these tools can be used, and not simply expose them to different manifestations of the addressee's role in the text.

9.5 Concluding Remarks

The general aim that originally motivated the present study was that of exploring the management of interaction in writing. The notion of interaction, though quite common in linguistics, is not definitely and thoroughly characterised, especially in relation to writing. However, as the study develops, and as a result of the review of the various approaches to interaction in written discourse, three basic forms of interaction were identified; a corpus of four different types of written texts were then analysed in terms of these three forms of interaction. The overall result of these analyses, that interaction is managed differently in different texts, was by no means surprising. Other similarly broad results were also fairly predictable, like the overall ordering of the four text types in terms of the management of interaction (e.g. there are clearly many overt signals of interaction in the leaflets) and the frequency of most of the features of interaction in the texts (e.g. utilising questions in the leaflets is an evidently prominent feature). Nevertheless, it is possible that the way these results were presented in the analysis may allow more accurate explanation of the management of interaction across various text types than has previously been possible.

Notwithstanding these relatively expected results of the study, some of the findings were probably less so. One important example of such findings is the final picture of the three forms of interaction and their interrelationships discussed in the beginning of this chapter. This is not only a demonstration of the complex way in which texts project interaction, but also an indication of the significance of examining the links between the signals of interaction more closely. Tracking down these links was not a primary goal of the analyses, but it came as

an outcome to the collective consideration of the various major signals of interaction within a single framework. So the picture drawn above is clearly not entirely conclusive; it, however, draws attention to this important aspect of the analysis of interaction in texts. Moreover, it may allow better, alternative, or additional understandings of some of these signals, along the lines of the description of questions presented in 9.3 above.

Consequently, further study of interaction in writing would perhaps benefit from more focused investigation of the signals of interaction and how each of them works in tandem with one or more other signals, allowing texts to achieve their desired effects. Furthermore, other signals of interaction not discussed in this study may be incorporated or supplemented to the framework proposed here. This framework does not claim to be an inclusive model of interaction in written texts, and the signals analysed are only some of the most overt ones that could be included with the framework of analysis. There are many other such signals, which I assume could be studied in an analogous way to the ones considered here. For example, one strategy “with implications for reciprocity is the ordering and selection of information within clauses” (Cook, 1992, p.172). Ordering of particular information is also the concept behind Interactive Themes (Berry, 1989; Davies, 1994) characterised by selections of personal pronouns.

Besides the specific linguistic signals of interaction, there are other aspects of interaction that are worth more examination. Two of these are the distribution of the signals of interaction – or a subset of them – within and across texts (Davies, 1994, p.176), i.e. where signals tend to cluster in texts, and the basic question of how interaction inside the text is related to the outside, *literal* interaction between writers and readers. This latter issue is particularly interesting, because it has not received much attention, despite that fact that there are many examples of actual writer-reader interaction. There are, for instance, various books and publications that are reprinted or modified in consequence to the readers’ initial response to them, or as a result of general contextual changes, such as knowledge advancements or readers’ conceptions; likewise, there are many examples of a particular text being adapted to its readers’ specific needs, e.g. some simplified literary works aimed at children or non-native speakers. Commenting on students’ academic writing, Thompson (2001, p.74) maintains that “the personal interaction of supervisions and comments on drafts, in which possible reactions are expressed or alternatives raised, can become the stimulus for constructing interaction in the

text". This is one clear case in which the *literal* writer-reader interaction may have an effect on the textual interaction between them. Of course, the connection between these two modes of interaction cannot be taken for granted, but the issue appears to be of particular importance for a more general understanding of interaction in writing.

What the above issues raised by the present analyses indicate is that there are now more questions than answers regarding the management of interaction in writing, and that the picture we have of the way participants in written texts interact, compared to those in, e.g., conversations, is still far from complete. It is hoped, however, that the analyses undertaken in this study have at least shown that "the written language is amenable to description in interactive terms, less obviously than the spoken, but no less valuably" (Sinclair, 1980, p.254). As for the many questions concerning interaction in written discourse that could not be answered by this study or have not been addressed, more research on this topic would perhaps point to some possible interesting answers, and at the same time provide more evidence for the value of the description of writing as interaction.

NOTES

¹ Some of the signals considered in this analysis have also been individually equated with the metafunctions in Functional Grammar by other researchers – see, e.g., Francis (1994, p.88) on labelling and Thetela (1997, pp.314ff) on evaluation.

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APPENDICES

APPENDIX I

Texts comprising the corpus used for the analyses. (Writers of press reports and publishers of leaflets are in brackets; texts marked with an asterisk have been used for the evaluation analysis.)

Medical Leaflets

LF01	DRINKING AND DRIVING – THE FACTS (The Department of Transport)
LF02	YOUR GUIDE to CONTRACEPTION (Family Planning Association)
LF03	Advice for 'TEENAGERS' on BEDWETTING (ERIC)
LF04	ALLOGENEIC BONE MARROW TRANSPLANTATION (BACUP)
LF05	Rubella Questions and answers IMMUNISATION the safest way to protect your child (Health Education Authority, Department of Health)
LF06	Fight the Flu (Help the Aged)
LF07	Fitter Feet (Help the Aged)
LF08	Keeping Mobile (Help the Aged)
LF09	Healthy Bones (Help the Aged)
LF10	Shingles (Help the Aged)
LF11	Feeling Better Controlling Pain and Other Symptoms of Cancer (BACUP)
LF12	Facing the Challenge of Advanced Cancer (BACUP)
LF13	Understanding cancer of the skin (BACUP)
LF14	CHOOSING AND USING YOUR METHOD OF FAMILY PLANNING THE PROGESTOGEN-ONLY PILL (Family Planning Association)
LF15	DO NOT GIVE BLOOD Without Reading This Leaflet (United Kingdom Blood Transfusion Services)
LF16*	Fitness & Exercise (Flora)
LF17	Your Gift Explained WHERE DOES MY BLOOD GO? (National Blood Service)
LF18	cheese – the right choice? (Flora)
LF19	Some Questions Donors Ask Answers to the questions blood donors commonly ask (National Blood Service)
LF20	Seizures (The National Society for Epilepsy)
LF21	Explaining Epilepsy (The National Society for Epilepsy)
LF22	FOOD AND YOUR HEART (British Heart Foundation)
LF23	Skin Cancer caused by Oil (Health & Safety Executive)
LF24	If you worship the sun don't sacrifice your skin How to protect your skin from sun damage (Health Education Authority)
LF25	Eating for a Healthy Heart (Flora)
LF26*	HOUSE-DUST MITES and asthma A STEP BY STEP GUIDE TO MITE CONTROL IN THE HOME (Department of the Environment)
LF27	REDUCE THE RISK OF COT DEATH (The Foundation for the Study of Infant Deaths)
LF28*	COPING WITH ECZEMA An information booklet for parents (NHS)
LF29	Blood donors (NHS)
LF30	Passive Smoking Questions AND Answers (Health Education Authority)

- LF31 Be seen to be heard A six point guide to better communication (The Department of Health)
- LF32 LIVING WITH BREAST SURGERY A BOOKLET FOR WOMEN WITH WHOLE OR PARTIAL BREAST LOSS (The health Education Council)
- LF33 understanding acne (Hawker Publications Ltd.)
- LF34 Sterilising your baby's feeding equipment (mothercare)
- LF35* YOU AND YOUR FAMILY'S TEETH (Beecham Dental Health Services)
- LF36 TOOTHBRUSHING WHY AND HOW? (Beecham Dental Health Services)
- LF37 YOU AND YOUR ARTHRITIS A GUIDE FOR PEOPLE WITH ARTHRITIS (Franklin Scientific Projects Ltd.)
- LF38 TETANUS Prevention is so much better than cure (Evans Medical Ltd.)
- LF39 bedwetters you're not your own (ERIC)
- LF40 The prevention and treatment of head lice (The Department of Health)
- LF41 DEALING WITH DEPRESSION (Smithcline Beecham Pharmaceuticals)
- LF42 The no smacking guide to good behaviour (EPOCH)
- LF43* A Guide to Breast Care (Searle)
- LF44* TAKING THE HEAT OF HEARTBURN (Heartburn Information Service)

Medical Press Reports

- PRIN35 Stressed out? Let your feelings flow: Californian researchers have developed a technique that aims to de-stress in seconds. Just remember your last cuddle (Barbara Rowlands)
The Independent, 1996 October 01
- PRIN36 The new British disease: Millions suffer from Irritable Bowel Syndrome. Stress, not illness, may be the cause (Barbara Rowlands)
The Independent, 1996 March 03
- PRIN37 How safe are supplements?: The benefits of high-dose nutrients are being called into question (Emma Haughton)
The Independent, 1996 September 10
- PRIN38 Is God good for your health?: Prayer, say the scientists, may actually heal the sick (Jerome Burne)
The Independent, 1996 July 16
- PRIN39 Should salt come with a health warning?: Food giants say we don't need to cut salt intake. But studies suggest such advice should be taken with a pinch of .. er .. cynicism (Janette Marshall)
The Independent, 1996 July 30
- PRIN40 All the fat you can eat: It's the glutton's ultimate fantasy – the pill that lets you pig-out without piling on the pounds. Is it the weightwatchers' salvation its makers claim? (Glenda Cooper)
The Independent, 1996 December 17
- PRIN41 The truth about cold cures (Cherrill Hicks)
The Independent, 1996 December 17
- PRIN42 The truth about paracetamol (Rita Carter)
The Independent, 1996 December 10

- PRIN43 The truth about herbal medicine (Cherrill Hicks)
The Independent, 1996 December 03
- PRIN44 How to be a winner in the cold war: According to a new book on the world's most successful virus, the common cold may not be as unbeatable as we thought. (Lee Rodwell)
The Independent, 1996 September 17
- PRIN45* Simple steps to freedom: For Dorothy Rowe, depression is a prison we build ourselves that we can escape from (David Cohen)
The Independent, 1996 September 10
- PRIN46 Could ultrasound damage your baby?: A rise in the incidence of speech delay among children has been linked to antenatal scanning. Wendy Wallace investigates (Wendy Wallace)
The Independent, 1996 August 13
- PRIN47 Looking at suncream in a new light: Sanjida O'Connell reports on research which suggests that preparations made to protect us from burning may actually damage the skin (Sanjida O'connell)
The Independent, 1996 August 06
- PRIN48 The perfect remedy? Ask an Aborigine: Heather Welford explains why tea tree oil may be better than some antibiotics (Heather Welford)
The Independent, 1996 August 06
- PRIN49 Teeth in two hours, by gum: A technique to copy dentures quickly and cheaply could ease suffering and embarrassment for millions (Lynn Eaton)
The Independent, 1996 July 09
- PRIN50 Getting hooked on HRT: Hailed as an elixir for menopausal women, oestrogen replacement can have side effects and leaves some women begging for more, says Annabel Ferriman (Annabel Ferriman)
The Independent, 1996 July 02
- PRIN51 Painkillers can turn nasty: Some over-the-counter drugs have been linked to fatal allergies (Margaret Park)
The Independent, 1996 June 18
- PRIN52 Is the sun so harmful?: Have we become too concerned about the hazards of its rays, while neglecting the benefits (Wendy Wallace)
The Independent, 1996 June 04
- PRIN53 Breast is best? Try telling the midwife: Hospitals give up too easily when mothers run into problems (Heather Welford)
The Independent, 1996 May 21
- PRIN54 Doctor, can't you ease the pain?: Thousands of cancer patients are suffering needlessly because of misplaced fears about the use of morphine (Rita Carter)
The Independent, 1996 April 23
- PRIN55 Conquering phobias with virtual reality: Scared of spiders? Terrified of tall buildings? There's no need to panic. Researchers are now using computer images to help people overcome their fears (Roger Dobson)
The Independent, 1996 April 09
- PRIN56 Chronic pain? Check your diet: A new test can detect hidden food allergies (Jerome Burne)
The Independent, 1996 April 02

- PRIN57 The New Age way to ease old age – Natural therapies aren't just for the young and moneyed; they relieve the aches and pains of the elderly, too (Anna Moore)
The Independent, 1996 March 12
- PRTL12 A treatment at last – after 126 years It is not a cure, but it means a lot to sufferers of motor neurone disease. Julian Smith tells Celia Dodd how a new drug is helping him to cope
The Telegraph, 1996 August 10
- PRTL13 Lump that makes you limp Bunion removal is much easier than it was. Barbara Jackson went to the new breed of surgical chiropodist
The Telegraph, 1996 August 10
- PRTL14 Life After Melanoma Long-term care of skin cancer patients is set to improve. Alison Wick reports
The Telegraph, 1996 August 10
- PRTL15 Feeling a bit under the weather (Dr James Le Fanu)
The Telegraph, 1996 August 10
- PRTL16 A very bitter pill to swallow Christine Doyle reports on the best protection against malaria
The Telegraph, 1996 August 10
- PRTL17 It's not just a phase they're going through Mental illness is increasing among children and teenage suicides are up, reports Celia Hall. Is too much expected of today's adolescent?
The Telegraph, 1996 July 10
- PRTL18 How to stop tearing your hair out Stress is being blamed for a habit that can start in childhood. Elizabeth Steel tells of the success of her self-help group
The Telegraph, 1996 July 10
- PRTL19* Open wide . . . this won't hurt Dentists are trying a variety of new techniques – from virtual reality headsets to hypnosis – to coax the timid into their surgeries, says Keren David
The Telegraph, 1996 July 03
- PRTL20 Put your back into keeping fit More working days are lost through lumbar pain than any other condition. Now firms are fighting back, says Christine Doyle
The Telegraph, 1996 May 29
- PRTL21 Mad cows and odd needles Can acupuncture detect BSE in cattle before the disease spreads? Ross Clark checks out an unusual theory
The Telegraph, 1996 August 31
- PRTL22 When phobia can prove fatal (Dr John Le Fanu)
The Telegraph, 1996 August 31
- PRTL23 Lyme disease: A walker's nightmare Walkers are at risk of a devastating condition caused by tick bites. Annabel Ferrimen reports
The Telegraph, 1996 August 31
- PRTL24 Dietary twists to end the shakes Sister Lavinia Byrne tells Celia Hall how diet and acupuncture overcame her inherited 'essential tremor' disorder
The Telegraph, 1996 March 13

- PRTL25 A case of pick up thy wheelchair and walk A multiple sclerosis sufferer believes a special diet has got him 'well on the way to a cure', finds Jo Knowsley
The Telegraph, 1996 September 21
- PRTL26 Will your spring end in tears? For one person in 10, this time of year brings misery. But there are remedies which prevent hayfever, reports Barbara Lantin
The Telegraph, 1997 April 05
- PRTL27 The trouble with syndromes Dr Theodore Dalrymple casts doubt on Gulf war illness and wonders if we will ever again be allowed to send men into battle
The Telegraph, 1997 March 08
- PRTL28 Acne The age of sufferers is rising, but so too are the hopes for new treatments. Report by Roger Dobson
The Telegraph, 1996 December 14
- PRTL29 Prostate Cancer To screen or not to screen? Annabel Ferriman reports on the division between doctors
The Telegraph, 1997 February 01
- PRTL30 Why all the hysteria? Hysterectomy can damage heart, bones and sex life – and is often unnecessary, says Christine Doyle
The Telegraph, 1997 March 01
- PRTL31 Meningitis Early diagnosis and vaccine research offer new hope on this dangerous disease. Roger Dobson reports
The Telegraph, 1996 November 16
- PRTL32 Facing Facts The treatment of cleft lip and palate is coming under scrutiny. Report by Alison Wick
The Telegraph, 1996 November 02
- PRTL33 Giving your body a fighting chance Homoeopathic treatment can help soothe cancer patients undergoing harsh, orthodox treatments. Lulu Appleton explains
The Telegraph, 1997 April 19
- PRTL34* Are you a good parent? When your child has a tantrum, do you scold him or listen to him? Professor John Gottman says using 'emotional intelligence' will help him grow up to be brighter, healthier – and happier
The Telegraph, 1997 January 18
- PRTM01 When a child gives up meat (Dr Trisha Greenhalgh)
The Times, 1995 March 16
- PRTM02* The Crunch (Richard Girling)
The Times, 1995 March 04
- PRTM03 Suspicion follows a failed vasectomy (Dr Thomas Stuttaford)
The Times, 1995 May 09
- PRTM04* Scourge of women in the West (Dr Trisha Greenhalgh)
The Times, 1995 January 10
- PRTM05 Painful legacy of chickenpox (Dr Thomas Stuttaford)
The Times, 1995 March 16
- PRTM06 If cancer runs in a family (Dr Trisha Greenhalgh)
The Times, 1995 April 11

- PRTM07 Getting better all the time (Lois Rogers)
The Times, 1995 March 19
- PRTM08 Fertility rights (Sue Reid)
The Times, 1995 October 29
- PRTM09 A pressing problem (Matthew Gwyther)
The Times, 1995 March 26
- PRTM10 A drug to put to the test? (Chrissy Iley)
The Times, 1995 February 19
- PRTM11 A cure for the incurables (Dr James Le Fanu)
The Times, 1995 February 02
- PRTM58 'So stiff I couldn't get my coat on' (Dr Kieran Sweeney)
The Times, 1995 January 03
- PRTM59 A pain too great for us to endure (Carol Howard)
The Times, 1995 March 05
- PRTM60 Break the habit of bone idleness (Ann Kent)
The Times, 1995 January 15
- PRTM61 Bye-bye anxiety (Wendy James)
The Times, 1995 January 08
- PRTM62 Closing in on a killer (Steve Connor)
The Times, 1995 December 03
- PRTM63 Down-to-earth advice for those up in the air (Catherine Chetwynd)
The Times, 1995 November 03
- PRTM64 Eat your fill – and diet (Michel Montignac)
The Times, 1995 May 14
- PRTM65 Electric lifesaver (Lois Rogers)
The Times, 1995 October 29
- PRTM66 Gentle steps to fitness after forty (Ros Drinkwater)
The Times, 1995 February 08
- PRTM67 Searching for safe ways to fall asleep (Dr Laurence Knott)
The Times, 1995 December 21
- PRTM68 Settling the stomach (Heather Kirby)
The Times, 1995 April 23
- PRTM69 Surviving The Split (Sue Reid)
The Times, 1995 October 08
- PRTM70 The blight of brittle bones (Dr Kieran Sweeney)
The Times, 1995 May 23

Medical Textbooks

- TB01 *Toohy's Medicine. A Textbook for Students in the Health Care Professions*. Fifteenth Edition, 1994. Edited by: Stephen R. Bloom. Edinburgh: Churchill Livingstone.
Pages: 279-298 (Metabolism and vitamins)
- TB02 *Textbook of Endocrine Physiology*. Third Edition, 1996. Edited by: James E. Griffin & Sergio R. Ojeda. Oxford University Press.
Pages: 223-243 (Fertilization, Implantation, and Endocrinology of Pregnancy)

- TB03* *Textbook of Medicine*. Second Edition, 1994. Edited by: Souhami, R. L. & Moxham J. Edinburgh: Churchill Livingstone.
Pages: 232-240 (Clinical Orthopaedic Examination)
- TB04 *Pathology*. Alan Stevens & James Lowe. 1995. London: Mosby.
Pages: 398-412 (Nervous system and muscle)
- TB05 *Essential Orthopaedics and Trauma*. Second Edition, 1993. By: David J. Dandy. Edinburgh: Churchill Livingstone.
Pages: 89-109 (The principles of managing trauma)
- TB06* *Illustrated Textbook of Paediatrics*. 1997. By: Tom Lissauer & Graham Clayden. London: Mosby.
Pages: 245-258 (Emotions and Behaviour)
- TB07* *Fundamentals of Obstetrics and Gynaecology*. Sixth Edition, 1994. By: Derek Llewellyn-Jones. London: Mosby.
Pages: 229-237 (Conception Control)
- TB08 *Inflammation. A Review of the Process*. Fourth Edition, 1993. By: Henry O. Trowbridge & Robert C. Emling. Chicago: Quintessence Publishing Co, Inc.
Pages: 71-101 (The Immune System)
- TB09 *Pickards's Manual of Operative Dentistry*. Seventh Edition, 1996. By: E. A. M. Kidd, B. G. N. Smith & H. M. Pickard. Oxford: Oxford University Press
Pages: 03-27 (Why restore teeth?)
- TB10 *A Textbook of Family Medicine*. 1989. By: Ian R. McWhinney. New York: Oxford University Press.
Pages: 231-245 (Acute Sore Throat)

Medical Research Articles

- RA01 Donald D. McIntire, Steven L. Bloom, Brian M. Casey & Kenneth J. Leveno. 1999. 'Birth weight in relation to morbidity and mortality among newborn infants'. *The New England Journal of Medicine*. Vol. 340, No. 16. pp.1234-8.
- RA02 Ian Harvey, Stephen Frankel, Ronald Marks, David Shalom & Maria Morgan. 1997. 'Foot morbidity and exposure to chiropody: population based study'. *British Medical Journal*. Vol. 315. pp.1054-5.
- RA03 Jan Neeleman, Simon Wessely & Michael Wadsworth. 1998. 'Predictors of suicide, accidental death, and premature natural death in a general-population birth cohort'. *Lancet*. Vol. 351, No. 9096. pp.93-97.
- RA04 Rochelle N. Shain, Jeanna M. Piper, Edward R. Newton, Sondra T. Perdue, Reyes Ramos, Jane Dimmitt Champion & Fernando A. Guerra. 1999. 'A randomized, controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women'. *The New England Journal of Medicine*. Vol. 340, No. 2. pp.93-100.
- RA05 Paul Elliott, Jeremiah Stamler, Rob Nichols, Alan R Dyer, Rose Stamler, Hugo Kesteloot & Michael Marmot. 1996. 'Intersalt revisited: further analyses of 24 hour sodium excretion and blood pressure within and across populations'. *British Medical Journal*. Vol. 312. pp.1249-53.

- RA06 J Williams, A Wolff, A Daly, A MacDonald, A Aukett & I W Booth. 1999. 'Iron supplemented formula milk related to reduction in psychomotor decline in infants from inner city areas: randomised study'. *British Medical Journal*. Vol. 318. pp.693-8.
- RA07 Mark A King, Mark R Newton, Graeme D Jackson, Gregory J Fitt, L Anne Mitchell, Mervyn J Silvapulle & Samuel F Berkovic. 1998. 'Epileptology of the first-seizure presentation: a clinical, electroencephalographic, and magnetic resonance imaging study of 300 consecutive patients'. *Lancet*. Vol. 352, No. 9133. pp.1007-11.
- RA08 Lars Sjöström, Aila Rissanen, Teis Andersen, Mark Boldrin, Alain Golay, Hans P F Koppeschaar & Michel Krempf. 1998. 'Randomised placebo-controlled trial of orlistat for weight loss and prevention of weight regain in obese patients'. *Lancet*. Vol. 352, No. 9123. pp.167-73.
- RA09 Early Breast Cancer Trialists' Collaborative Group. 1998. 'Polychemotherapy for early breast cancer: an overview of the randomised trials'. *Lancet*. Vol. 352, No. 9132. pp.930-42.
- RA10 Douglas E. Jorenby, Scott J. Leischow, Mitchell A. Nides, Stephen I. Rennard, J. Andrew Johnston, Arlene R. Hughes, Stevens S. Smith, Myra L. Muramoto, David M. Daughton, Kimberli Doan, Michael C. Fiore & Timothy B. Baker. 1999. 'A controlled trial of sustained-release bupropion, a nicotine patch, or both for smoking cessation'. *The New England Journal of Medicine*. Vol. 340, No. 9. pp.685-91.
- RA11 Roberta B. Ness, Jeane Ann Grisso, Nancy Hirschinger, Nina Markovic, Leslie M. Shaw, Nancy L. Day & Jennie Kline. 1999. 'Cocaine and tobacco use and the risk of spontaneous abortion'. *The New England Journal of Medicine*. Vol. 340, No. 5. pp.333-9.
- RA12 F Barbone, A D McMahan, P G Davey, A D Morris, I C Reid, D G McDevitt & T M MacDonald. 1998. 'Association of road-traffic accidents with benzodiazepine use'. *Lancet*. Vol. 352, No. 9137. pp.1331-36.
- RA13* Michael Bloor, Michelle Thomas, Kerenza Hood, Damiano Abeni, Catherine Goujon, Dominique Hausser, Michel Hubert, Dieter Kleiber & Jose Antonio Nieto. 1998. 'Differences in sexual risk behaviour between young men and women travelling abroad from the UK'. *Lancet*. Vol. 352, No. 9141. pp.1664-68.
- RA14 Allen J. Wilcox, Donna Day Baird & Clarice R. Weinberg. 1999. 'Time of implantation of the conceptus and loss of pregnancy'. *The New England Journal of Medicine*. Vol. 340, No. 23. pp.1796-9.
- RA15 Robert V. Considine, Madhur K. Sinha, Mark L. Heiman, Aidas Kriauciunas, Thomas W. Stephens, Mark R. Nyce, Joanna P. Ohannesian, Cheryl C. Marco, Linda J. McKee, Thomas L. Bauer & Jose F. Caro. 1996. 'Serum immunoreactive-leptin concentrations in normal-weight and obese humans'. *The New England Journal of Medicine*. Vol. 334, No. 5. pp.292-5.
- RA16 Anna Graham, Lora Green & Anna F Glasier. 1996. 'Teenagers' knowledge of emergency contraception: questionnaire survey in south east Scotland'. *British Medical Journal*. Vol. 312. pp.1567-9.

- RA17* Alan P Johnson, David C E Speller, Robert C George, Marina Warner, Gil Domingue & Androulla Efstratiou. 1996. 'Prevalence of antibiotic resistance and serotypes in pneumococci in England and Wales: results of observational surveys in 1990 and 1995'. *British Medical Journal*. Vol. 312. pp.1454-6.
- RA18 Ian Roberts, Michael S Kramer & Samy Suissa. 1996. 'Does home visiting prevent childhood injury? A systematic review of randomised controlled trials'. *British Medical Journal*. Vol. 312. pp.29-33.
- RA19 Robert G Priest, Christine Vize, Ann Roberts, Megan Roberts & Andre Tylee. 1996. 'Lay people's attitudes to treatment of depression: results of opinion poll for Defeat Depression Campaign just before its launch'. *British Medical Journal*. Vol. 313. pp.858-9.
- RA20 Cornelia S Carr, K D Eddie Ling, Paul Boulos & Mervyn Singer. 1996. 'Randomised trial of safety and efficacy of immediate postoperative enteral feeding in patients undergoing gastrointestinal resection'. *British Medical Journal*. Vol. 312. pp.869-71.
- RA21* Jukka H Meurman, Ari Rajasuo, Heikki Murtomaa & Seppo Savolainen. 1995. 'Respiratory tract infections and concomitant pericoronitis of the wisdom teeth'. *British Medical Journal*. Vol. 310. pp.834-6.
- RA22* Peter S. Creticos, Charles E. Reed, Philip S. Norman, Jane Khoury, N. Franklin Adkinson, Jr., C. Ralph Buncher, William W. Busse, Robert K. Bush, Jyothi Gadde, James T. Li, Hal B. Richerson, Richard R. Rosenthal, William R. Solomon, Paul Steinberg & John W. Yunginger. 1996. 'Ragweed immunotherapy in adult asthma'. *The New England Journal of Medicine*. Vol. 334, No. 8. pp.501-6.
- RA23 Robyn J. Barst, Lewis J. Rubin, Walker A. Long, Michael D. McGoon, Stuart Rich, David B. Badesch, Bertron M. Groves, Victor F. Tapson, Robert C. Bourge, Bruce H. Brundage, Spencer K. Koerner, David Langleben, Cesar A. Keller, Srinivas Murali, Barry F. Uretsky, Linda M. Clayton, Maria M. Jobsis, Shelmer D. Blackburn, Jr., Denise Shortino & James W. Crow. 1996. 'A comparison of continuous intravenous epoprostenol (prostacyclin) with conventional therapy for primary pulmonary hypertension'. *The New England Journal of Medicine*. Vol. 334, No. 5. pp.296-301.
- RA24 Jonathan Leor, W. Kenneth Poole & Robert A. Kloner. 1996. 'Sudden cardiac death triggered by an earthquake'. *The New England Journal of Medicine*. Vol. 334, No. 7. pp.413-9.

APPENDIX II

The sample press report analysed in 9.2.

(1) The truth about cold cures

By CHERRILL HICKS

(2) No prizes for guessing which condition plunges millions of us into misery each winter and triggers a desire for nothing more than bed, a hot water bottle and a large glass of warm whisky.

(3) The common cold afflicts most adults two or three times a year and has triggered a £300m industry in potions ranging from hot lemon drinks to decongestants. (4) Yet cures for the cold remain as elusive as ever; the Common Cold Research Unit in Salisbury, which was closed in 1990, spent 30 years vainly trying to find one.

(5) However, makers of a new product developed in the US are claiming that it can cut the duration of a cold by up to 60 per cent. (6) The 'Cold Killer', launched in a flurry of publicity this month, is a lozenge containing an 'enteric zinc and silver complex' plus herbs such as elderberry extract, eucalyptus, horehound and wild cherry bark. (7) According to the PR blurb, if the lozenges are sucked regularly 'as soon as you feel a cold coming on', the zinc is delivered to the mucous membranes to kill the rhinoviruses, one of the two major groups which cause colds. (8) The other ingredients reduce discomfort.

(9) Can Cold Killers triumph where all previous efforts have failed? (10) Zinc has long been known to have anti-viral properties in the lab, but research into its effect on colds in real people has always proved difficult to replicate. (11) One drawback is that high concentrations of zinc taste disgusting – some trials collapsed when volunteers refused to continue taking it. (12) Making the zinc more palatable by adding another ingredient appears to stop it from working. (13) Once the zinc ions were chelated, or bound to molecules from another substance, they lost their charge.

(14) A small breakthrough occurred earlier this year. (15) A clinical trial published in July in the Annals of Internal Medicine, involving 100 volunteers, showed that those taking the compound zinc gluconate suffered cold symptoms for an average of four days, compared with 7.6 days in a placebo group. (16) Zinc gluconate, concluded researchers from Hofstra University, New York State, can significantly reduce the duration of a cold, with benefits outweighing possible adverse effects such as mouth irritation and nausea.

(17) Nobody quite knows how zinc fights a cold. (18) One theory is that the zinc ions bind to the proteins in the virus to prevent it reproducing. (19) The real puzzle is how enough zinc gets into the mucous membranes of the nose, where the virus resides. (20) One study showed that sucking a zinc lozenge leads to most of the mineral being swallowed.

(21) Most scientists concur that until further trials take place, it is too early to claim that zinc can 'kill' cold viruses. (22) One or two zinc compounds, sold as food supplements, are

available as lozenges in Britain, but even a slight variation in the trial formulation means there might not be the same effect.

(23) What else can you do to combat a cold? (24) Paracetamol or aspirin are the first line of treatment for headache, fever and sore throat, while nasal decongestants and steam infusions are also useful. (25) Antibiotics do not work on viruses (although they do fight off accompanying bacterial infections) and there is no clinical evidence that vitamin C prevents infection, although high doses during a cold are thought to act as an anti-oxidant and dampen down inflammation.

(26) Other than complete isolation from the rest of the human race, there is no way to avoid catching cold, although keeping your hands washed helps, and eating well and avoiding stress will strengthen the immune system. (27) Contrary to popular belief, exposure to cold and wet does not increase the risk of infection. (28) Sunlight is thought to kill off cold viruses – which probably explains why we 'catch' more of them in winter.

Source: *The Independent*, 1996, December 17

