Lexical Vagueness in Student Writing

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SUMMARY

This study addresses the issue of underspecificity in undergraduate writing. Two corpora of South African undergraduate essays (writing in first and second language English) are compared to a corpus of academic papers (PW). The comparison is in terms of corpus-analytic methods and a discourse analytic approach to using definite expressions.

So-called "abstract" nouns like problem, purpose, fact, example, and idea, identified as "carrier/shell" nouns, are often claimed to cause 'vagueness' in student writing, so students are advised not to use them. Yet corpus analysis (e.g. Biber et al, 1999) shows they are a core feature of English academic vocabulary.

Distinguishing between sense and reference clarifies a crucial difference between nouns with vague denotation, and noun phrases (NPs) with vague reference. A quantitative analysis of the corpora reveals that the students and PWs use both "shell" nouns, and the syntactic patterns in which they frequently occur, with similarly high frequency. However, the PW sub-corpus contains significantly more nouns than the student corpora and exhibits significantly more variety in the nouns used.

Using a discourse-based approach, a second analysis focuses more closely on the discoursal structure of the texts, concentrating on definite referring expressions. A specially developed method of coding is used to categorise the way writers specify and constrain the referents of NPs containing 'abstract' nouns. Student writers in this study tend to use "shell" nouns not only as NP heads but, repetitively, within specifying phrases whose function should be to constrain reference. Hawkins' (1991) approach to definiteness is used to show that this embedding of 'vague' nouns in referring NPs, together with other discoursal features, stems from student writers inappropriately assuming shared knowledge. This in turn strengthens the argument that if student writers are to be viewed as apprentice PWs, learning to write for a 'general readership' must be seen as a crucial part of their training.
PREFACE

It is a pleasure to thank the people who have made this work possible.

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For the love and understanding which made it possible for me to complete this dissertation, and for the inspiration of living with a finisher and a champion, I dedicate this work to my husband César.

This dissertation, except where otherwise stated, is the result of my own work and includes nothing which is the outcome of work done in collaboration. No part of this dissertation has been published elsewhere, or submitted for a degree, diploma or similar qualification at any other university. This dissertation does not exceed the regulation length of 80 000 words, including footnotes and appendices, but excluding the reference list.

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Chapter 1

1.1 Lexical Vagueness in Student writing

In countless online writing guides, student writers are warned about the hazards of “vagueness” in English academic writing (see Brandon, 1988; Georges, 1996; Gocsik, 1997; Melkareck, 1997; Harrison, 1999; Jerz, 2000; Raab, 2000). They are cautioned to avoid abstract nouns at all costs, to “say what they mean” and to “tell” rather than “show”. As Channell (1994) points out, an important belief about language is that “good” usage involves (among other things) clarity and precision. Hence, it is believed that vagueness, ambiguity, imprecision and general woolliness are to be avoided (p.1), particularly in “scientific” writing.

Recent studies of vagueness in language (Channell, 1994; Bertucelli Papi, 1995) show, however, that there can be no such thing as absolute precision, even in mathematics. On the grammatical plane, Halliday and Martin (1993) also observe that the heavily nominalised condensations widely used in scientific prose are highly ambiguous. So, as Channell (1994) argues, giving the above instructions to those learning how to write (especially second language users of English) is positively misleading. One of the ways competent writers demonstrate their competence is through their use of a degree of vagueness appropriate for the purpose of their writing (Channell, 1994:3).

“Vagueness” and “Vague Language” are ambiguous concepts themselves so it is important to begin by establishing what I mean by “lexical vagueness”. In their overview of vague predicates, Keefe and Smith (1997:5-6) make three clarificatory distinctions:

Firstly, the remark ‘someone said something’ would naturally be described as vague (who said what?). ‘X is an integer greater than thirty’ would also count as an unhelpfully vague hint about the value of X. “Vagueness in this sense is underspecificity, a matter of being less than adequately informative for the purposes in hand. This seems to have nothing to do with borderline cases or with the lack of sharp boundaries - ‘is an integer greater than thirty’ has sharp boundaries, has no borderline cases, and is not susceptible to sorites paradox”\(^1\) (Keefe & Smith, 1997:5-6). The papers in their volume largely ignore the idea of vagueness as underspecificity, but it will be the central concern of this study.

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\(^1\) The ancient example of the heap. Plausibly, [S2 ] if X is a heap of sand, then the result Y of removing one grain will still be a heap. So take a heap and remove grains one by one; repeated applications of [S2 ] imply absurdly that even a solitary last grain must still count as a heap.
The second distinction they draw is between vagueness and paradigm context-dependence (i.e. having a different extension in different contexts), even though many terms have both features (e.g. “tall”). “Fix on a context which can be made as definite as you like: ‘tall’ will remain vague, with borderline cases and fuzzy boundaries, and the sorites paradox will retain its force. This indicates that we are unlikely to understand vagueness or solve the paradox by concentrating on context-dependence” (Keefe & Smith, 1997:5-6). For the purposes of this study, however, understanding underspecificity would be impossible without taking context-dependence into account.

Finally, vagueness might be distinguished from ambiguity. “Certainly, terms can be ambiguous and vague: ‘bank’ for example has two quite different main senses, both of which are vague. But ‘tadpole’, we may suppose, has an univocal sense, though that sense does not determine a sharp, well-defined extension” (Keefe & Smith, 1997:5-6). Certain theories, however, do attempt to close the gap between vagueness and a form of ambiguity. Describing his super-valuationist proposals, Fine (cited in Keefe & Smith 1997) writes “vagueness is ambiguity on a grand and systematic scale” (p.136) - for in his view, to speak vaguely means leaving unsettled the choice between certain precise concepts.

Papers collected in Vagueness (1997) make it difficult to see vagueness as a merely optional or eliminable feature of language - a point Dummet (1996:109) emphasises, attributing to Wittgenstein the thought that natural language is essentially vague. Contrast this with the view of vagueness as a defect of language found, for example, in Frege (1903, §56) and perhaps in Russell’s (1997:61) implication that language is vague because we have not bothered to make our predicates precise.

Finally, our focus will also not be on “vague language” of the sort examined by Channell (1994). This includes approximators (around, about), placeholders (thingy, whatsisname), vague quantifiers (oodles, umpteen) and tags such as or something and and things. What this dissertation is specifically concerned with is the source of the vagueness (as underspecificity) that is most criticised in student writing. The following is used in a writing guide as an example of a “vague” paragraph:

In many kinds of ways, Shakespeare gives us a manner of writing where its characteristics stress his views and attitudes toward all the things developed in the play’s situations and circumstances. In this fashion, he paints every aspect of the story’s traits with all types of
Students are warned that certain nouns (those underlined) are over-used (and "ineffectively used") and that the problem with a paragraph like the one above is that it gives almost no specific information. The writer of this paragraph, claims Melczarek, either 1) takes for granted that the reader can read the writer's mind, or 2) has no idea what s/he is talking about and is actually padding the paragraph. So the "bad guys" are the "ineffectively-used", abstract nouns and the suggested solution in many cases is to avoid them, "be more specific" and "make your verbs do the work".

As Channell (1994) shows, however, a degree of vagueness is evident in the most competent writing. Furthermore, as noted by Halliday (1988) and Halliday and Martin (1993), the language at the heart of scientific communication has evolved a special grammar. This involves, above all, increasing nominalisation and a densely packed style. While these "densely packed" nominalisations can be highly ambiguous, this grammar has arisen as a necessary requisite for reasoned argumentation where much shared knowledge is taken for granted.

My own analysis indicates that this sort of "inefficient nominalisation" occurs very frequently in published cognitive psychology texts. This in turn supports the findings of researchers such as Ivančić (1991), Francis (1986, 1994) and Schmid (2000), whose work will be discussed in some detail. These writers give quite a different perspective on the type of noun so maligned by writing guides. Ivančić (1991) in fact suggests that these words "seem to be good candidates for any list of core vocabulary in the language of secondary education" and are "particularly useful for learners entering the academic discourse community" (p.96). Supporting this suggestion are the nouns appearing in the recently published Academic Word List (Coxhead, 1998). Based on a 3500 000 word Academic Corpus, the aim of the project was to create a vocabulary list that would be useful for all learners entering academia. The "word families" selected for inclusion in the list had to occur over 100 times in the corpus and at least 10 times in each faculty section. Having excluded the 2000 most common words in English (based on West's General Service List, 1953), 50% of the families of words with the highest coverage of the corpus include the nouns that Ivančić suggests should be taught to learners entering the

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2 This idea, however, goes back at least as far as Locke.
3 See Appendix I for a list of Ivančić's (1991) Carrier Nouns.
4 Divided into Arts, Commerce, Law and Science and containing journal articles, book chapters, course workbooks, laboratory manuals and course notes.
academic discourse community.

So we have a type of noun considered vague and inefficient by many authors of writing guides. And considering how often student writing is labelled “wishy-washy”, “clumsy” and “unclear”, they may well believe they have found the culprit. However, this same type of noun appears frequently in published academic writing and it plays a seemingly important role in scientific writing. The contents of the Academic Word List indicate that student writers should be taught these nouns, and they have drawn enough attention from linguists to suggest that there is more to them than initially meets the eye. Finally, vagueness exists in natural language and part of native-speaker competence is being able to use it appropriately. What will consequently be explored in this dissertation is how the use of certain nouns can lead to varying degrees of vagueness (in particular, vagueness as underspecificity) in student academic writing. The aim is to explore the potential of the nouns in question: the apparently pivotal role they play in academic writing, the myriad of functions they are able to perform and the fact that, in spite of this potential, they also appear to be involved in whatever it is that leads to “vagueness” in a text.

Before going on to discuss the nouns in detail, it is necessary to contextualise this study as well as provide the rationale behind it.

1.2 Language and Education - The South African Context
As Lillis (2001:21) notes, “the idea that students can’t write is central to official, public and pedagogic discourse in many parts of the world” (see, for example, discussions in Rose, 1989, Horner & Lu, 1999 for the US; see Angelil-Carter 1998 for South Africa). The problem is explicitly signalled in some research (e.g. Winch and Wells, 1995) and emphasised in the press (see discussion in Creme and Lea, 1999). A comment in the ‘Agony Aunt’ column for lecturers in the Times Higher Education Supplement gives an idea of this stance. A tutor wrote: “The standard of written English among some of my new undergraduates is truly awful. Is there a simple way of tackling this?” (THES 15/10/99), echoing much informal tutor/lecturer talk about student writing in Higher Education (see also Clark and Lorenzini, 1998). However, while the scope of “the problem” may be international, the South African (SA) context is unique. Some understanding of this context is therefore integral to understanding the rationale behind conducting a study based specifically on SA undergraduate writing.
1.2.1 *The South African Context*

In 1994, SA became a democracy and the segregation of facilities and institutions that existed under apartheid's racially-based legislature finally ended. Thus, historically "white" universities were finally able to admit more than a few "token" black students and found themselves in a situation with which they are still coming to grips. While SA now has 11 official languages, the majority of universities in the country are English-medium (a few are Afrikaans) and, as high-schools across the country supposedly operate in one of these languages, medium of instruction at university should not have posed a problem.

However, before 1994 the majority of young black people had to attend schools governed by a separate education body, and received an undeniably deficient secondary education. In theory, children are now able to attend any school they wish. However, all children still tend to go to schools close to home, and SA remains geographically segregated for numerous economic and social reasons. Consequently, many black children have continued to attend under-funded institutions notorious for the poor quality of teaching provided. Textbooks are in English but many teachers are themselves not qualified to use the language as a medium of instruction. Students who pass exams in this setting have often developed a parroting strategy in order to cope with the English required - large chunks of textbooks are memorised while the class teaching is conducted in a mixture of mother-tongue and "specialist" English vocabulary.

Unlike institutions in the USA or the UK, English-medium universities in SA have never required the passing of a standardised English test as a minimum entrance requirement for second language speakers (L2). As so few L2 students entered the Universities, there was hardly a need to use one. In the post-apartheid era, such tests are considered inappropriate in a society "redressing past imbalances". Thus the admission of many students "from disadvantaged backgrounds" has been, and still is, based neither on their meaningless school results nor on an entrance test. They are admitted at the "dean's discretion". This usually means that they are interviewed and somehow prove themselves both "bright" and capable of "conducting a discussion in English". Once admitted, some of these students begin as "bridge-years", where the content of the first undergraduate year is covered over two years. Both bridge-year students and others considered "borderline cases" are required to take an English for Academic Purposes course (EAP) in their first year. At the University from which my data is drawn, many L2 students are required to attend a course called ELAP: English Language for Academic Purposes. This is so in spite of evidence indicating that many students resent having to take such courses, as well as there being no clear correlation between course attendance and improvement in academic
performance. L1 students, on the other hand, receive no introductory writing or “academic English” courses - the assumption remains that this is a “language” issue rather than an “academic discourse” issue.

The “bridge year” option has proved extremely successful but is clearly an expensive, frustrating route and cannot be adopted as a long-term solution. So, for lack of a better solution, the EAP courses stay in place. At the same time, academic staff who once insisted that they were not “English teachers” are now the focus of academic development centres, and individual departments have been obliged to review the way they teach in light of their new multilingual audiences.

The challenge EAP courses continue to face is to provide students from a number of different language backgrounds, registered in every faculty from social science to commerce and physics, with “academic skills” that they will all find useful. This is a tall order to say the least. Reading and writing skills are particularly difficult to teach in such a broad way because the tasks facing undergraduate students vary so much. Thus the idea of being able to teach an identifiable group of nouns that 1) are not subject specific, 2) are particularly prevalent in academic discourse, 3) play an important role in many other types of discourse, and 4) also contribute to the overall coherence of a text, is very appealing indeed.

1.2.2. “Correct English” in South African Universities

“In South Africa, democracy and equality are the order of the day, especially where language matters are concerned, and old-fashioned judgmental prescriptive concern for correctness has been replaced by greater tolerance and more emphasis on getting the message across” (de Klerk, 1999: 317).

In this context, it is impossible to discuss “first” and “second” language English without alluding to race: in South African universities, most, if not all, speakers of English as an L1 are white. Those using the language as an L2 are predominantly black. As a white academic, carrying out a study involving the comparison of first and second language South African student writing, I am in danger of appearing to promote what has been called a “linguocracy” (Pendley, 1983): a minority group who control the registers necessary to enter influential levels of decision-making, leadership and power. In accepting the notion of an “academic discourse” that is worthy of being explored as it is, it may seem that I am fuelling the “elite closure” (Myers-Scotton, 1993) predicted to result “from the influence of those who maintain the normative value of
exonormative English”. That is, encouraging the continued teaching of “proper” English which will, in turn, provide the future members of the aforementioned “linguatoctacy”.

As de Klerk (1997:114) has noted, the “structured inequalities of South African society are played out in language, and specifically in English”. Despite the recent drive to improve the status of the indigenous languages, the pressure to master English has not declined: “ordinary South Africans who do not speak English as a mother tongue are unlikely ever to be free not to learn English, owing to the huge economic, political and ideological constraints which make the ‘choice’ of English inevitable” (de Klerk, 1999:321). South Africa is hardly unique in this situation, with approximately one quarter of the world’s population now using English as a first, second or foreign language (Platt, Weber and Ho, 1984; Crystal, 1997). With regard to academic English, in particular, the standardisation of English writing happens at an international level, specifically in the realm of the editorial policies adopted by publications with a global readership. While many may disapprove of the pressure on academia to take place in English, an academic lingua franca now exists. My aim is not to laud, in any way, South African English as a first language. Nor do I belong in the camp of university staff still believing L2 speakers of English need to be “fixed” by an EAP course before they will ever succeed in the academic context. My overall goal is, rather, to highlight how the use of a simple, ubiquitous feature of English academic writing (its core, non-subject-specific vocabulary) can lead to problems of clarity for all student writers. In doing this, the hope is that both L1 and L2 students can be helped to improve on the seemingly pervasive problem of “vagueness” in their writing. This is not a “problem” specific to South Africa or, as we shall see, to L2 users of English. No matter how “tolerant” a community may perceive itself to be, “getting the message across” is possibly the most difficult aspect of academic writing for anyone to master.

This study is concerned with helping writers do just this. The aim is not to correct anyone’s English; we are examining vocabulary and discourse reference in an attempt to pin down the source of underspecificity in student writing. Such an “old-fashioned” focus on text and language may seem out of place in an era when “the approach to language teaching has widened outward from a focus on sentence structure as a unit of analysis, with the individual learner at the centre, to the interdisciplinary study of sociocultural context and practices and the social identity of learners (and sometimes teachers) in these processes” (Thesen, 1997: 487).

However, while we ponder the “power of Discourses to define and confine individuals within them” (Thesen, 1997), EAP courses go on and teachers continue to search for helpful things to teach. Regardless of the philosophy behind their approach they are, at the end of they
day, working with their students on the language that is academic English. No matter how conscientised they may be, ideology does not provide any tools for successfully “getting the message across” in a psychology essay written in English.

1.3 Research Subjects and Data
In order to examine how South African undergraduates use the “vague” nouns illustrated in the paragraph on page three, a sample of writing was gathered and used to build a small electronic corpus. All the texts were provided by the cognitive psychology department at Rhodes University (East London) (RU) and consist of writing by first and second language English students in their second undergraduate year.

Research into academic literacy practices in South Africa (conducted for my MA dissertation) was carried out in the RU Psychology department. Hence I am familiar with the discourse of this discipline and the staff were prepared to co-operate and provide the texts necessary for this study. There is, however, another reason for selecting cognitive psychology writing as the focus of this analysis. A lot of work has been done on “scientific writing”, particularly journal articles and laboratory reports. Cognitive psychology is considered a “social science” and, in South African universities, can be studied under the umbrella of an Arts, Commerce or Science degree. Thus in view of the problems faced by EAP course designers, it seems most useful to analyse the discourse of a discipline that includes aspects of both the humanities and the sciences.

All the ESL students involved in this study are mother-tongue Xhosa speakers; the largest South African language (alongside Zulu) in the country. All the L1 students are South African, but it was not established whether or not any of them received their secondary education outside SA. In order to compare the student writing to that of “professionals”, a corpus of similar size, consisting of published articles topically and stylistically related to the student essays, was constructed for comparison with the student corpora. The three corpora compared in the study are thus composed of writing produced by second-year L1 and L2 students and published writers (PWs).

1.4 The broad purpose and perceived contribution of the study
This study compares the treatment of a particular type of noun within student and published texts. This involves examining the relationship between the nouns and the predicates with which they
frequently co-occur. The examination is conducted comparatively (between L1 and L2 students and between student and published texts).

The study addresses issues in theoretical and descriptive linguistics as well as issues relevant to pedagogy. It may contribute to the body of work concerning the class of words referred to as “container nouns” by Vendler (1967). It will, furthermore, contribute to the description of the academic discourse in question, (both novice and professional) by focussing specifically on the function of said nouns in this discourse. Such analysis may, in turn, provide the basis for a component of, or approach to, an academic writing course or the development of a writing “aid”. The aim is essentially to conduct an analysis of the writing students currently produce in order to help design more effective productive tools or writing courses, particularly suited to a multilingual, multi-disciplinary setting such as the EAP class in a South African university.

1.5 An Overview of the Nouns in question
Abstract nouns, as a group, have not been very popular as objects of linguistic research. The only reference to them in the last ten years (1990-2000) on the very active LinguistList may provide a clue as to why this is so; it is a query from an MIT researcher requesting a reliable method of distinguishing abstract from concrete nouns. Despite the inherent difficulty in drawing this distinction, several researchers have taken an interest in a particular subgroup of “abstract” nouns, and their selections (and choices of names for these nouns) reflect their predominant interests. In what remains of this chapter, I provide a broad overview of their work which, in turn, begins to highlight why these nouns have been considered worthy of further investigation. It should be noted that this review is restricted to the most recent writing on the topic. The types of nouns and constructions that we will be looking at were, however, highlighted as far back as the early modern grammarians: Jespersen (1927:24-6), for example, remarked that the nouns fact and circumstance can be used to “prop up a clause” when a that-clause functions as subject, or to evade “the difficulty of joining an object to certain verbs”, as in this could not conceal the fact that he was growing old. Jespersen calls the clauses in such constructions “content-clauses” (1927:23-32).

Finally, none of the studies in the following review, nor the notion of “grouping” these nouns in the first place, are without their flaws. These problems will be discussed in Chapter 2.
1.5.1 Vendler (1967, 1968)

Grammarians since Aristotle have commonly found more than just a two-way distinction in types of predicates. Aristotle himself pointed to a three way distinction among states like knowing Arabic, which are relatively unchanging, processes like running, in which there is activity of some kind going on, and actions like building a house, which have a natural culmination or termination point. The latter are now commonly referred to as telic eventualities (Abbott, 1999b).

Zeno Vendler, one of the earliest philosophers to pay serious attention to the kinds of linguistic evidence that motivates linguists, divided Aristotle’s telic eventualities into two subcategories - accomplishments like building a house, which are volitional and take some time to bring about, and what he called achievements like noticing a mistake or dying, which are nonvolitional and are referred to as though they were instantaneous (See Vendler, 1967). Not everybody has agreed with Vendler about the number of distinct categories he postulated (see, for example, Parsons 1990). Nevertheless, in his desire to contribute linguistic evidence to this larger philosophical debate about the difference between facts and events, Vendler discussed the syntax and semantics of a group of nouns he called container nouns. Unlike other nouns, they can take a verbal complement in the form of a nominalisation or clause acting as a noun5. N can be the subject of a relational process verb (such as “is”) and take a noun complement clause. Vendler pointed out that different container nouns combine with different types of clause: purpose, aim, solution and function take a “to-clause”; explanation, criticism, difference and principle take a “that-clause” as complement; question and issue take a “wh- question clause”.

By contrast, nouns which are not container nouns cannot occur in the following structures:

* This century was + that-clause
* Her contempt seemed to be + wh-clause

The basis for his image of containers was that combinations of a copular verb with nouns like fact or idea can function syntactically as containers, or hosts for that-clauses, for example, in sentences like That he died is a fact. Vendler’s approach has been developed further by Asher

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5 The writers reviewed here are all concerned primarily with nouns. They appeal to the notions of clause and sentence but none, besides Schmid (2000), pays any real attention to the Noun Phrase (NP). NPs will be the focus of my own study and will be introduced in Chapter 2.
(1993), who calls such expressions as *the possibility that Mary had left without John* “noun complement constructions” (1993:30).


In 1979 Michael Hoey published a short monograph on signalling in discourse, synthesising some of Eugene Winter’s work (1977) on lexical signals with his unpublished ideas (1976) on problem-solution patterning in texts. Winter’s monograph has, more recently, also been regularly cited in works on lexis (e.g. Carter, 1987; Carter & MacCarthy, 1988). The reason for this is that “Winter approaches the organisation of text from a lexical perspective, identifying a class of words whose function is to signal semantic relations between parts of a text; examples are *reason, consequence, result, differ and example*” (Hoey, 1996:72).

In this view, such words are “the linguistic outcrop of the underlying semantic relations that give coherence and organisation to text” (Hoey, 1996:72). In an updated summary of his 1979 monograph, Hoey (1994) states his aim as being “to show how the English language indicates to the reader/listener the functions of a particular discourse’s constituent sentences” (1994:44). While space precludes his examining, in this 1994 paper, “discourses whose use of the language’s signalling facilities is ‘faulty’”, Hoey notes that such discourses certainly do exist and “problems of comprehension can be shown to arise from ‘faulty’ or missing signalling” (1994:44). He concludes therefore that an acceptance of this view has important practical consequences for the field of rhetoric:

In particular, the thorny question of how to improve the communicative skills of student scientists and technologists might in part be answered by demonstrating to them ... the signalling system available to make clear the structure of what they write.

(Hoey, 1994:44)

This “signalling system” is composed of the class of “cohesive words” exemplified above (Hoey, 1996); “cohesive” in that they are shown to serve the same functions as conjuncts such as *therefore, however and moreover*, which have always been treated as contributing to the cohesion of a text (e.g. Halliday & Hasan, 1976; Quirk et al., 1972 from which the term “conjunct” is drawn). Winter characterised his class of cohesive words, which he terms Vocabulary 3, as having both the grammatical properties of open-class lexis (they can be modified and may fill
any functional slots of the clause) and the functional properties of closed items such as subordinators (Vocabulary 1 in Winter's terms) and conjuncts (Vocabulary 2) (Hoey, 1996:72).

Winter's monograph (1977) concerns itself predominantly with the way Vocabulary 3 can be used to signal discourse relationships. In Hoey (1979, 1983 and 1994) the focus remains on showing how these signalling words are used in text. Noting that he did not devote any attention to the characteristic grammatical behaviour of these items, Hoey (1996) points out that in the context of a corpus-based study, one cannot ignore the idiosyncratic nature of the grammatical and collocational relationships that these words may form with other words.

Based on both his own work (Hoey, 1993) and that of Stubbs (1995), Hoey argues that the “cohesive words of the Vocabulary 3 kind will repay attention from a corpus perspective” (1996:73). The characteristics of such cohesive words (or lexical signals) make them “flexible and pervasive” (1993, 1996): they may compress information into a single clause that might otherwise have been spread over several clauses or they may organise large stretches of text (Hoey, 1993:68). It is in the latter function particularly that they have been studied by Winter (1977), Hoey (1979, 1983) and Jordan (1984) and, albeit under different names and with different emphasis, by Francis (1986, 1994), Ivanič (1991) and Schmid (2000).

1.5.3 Francis (1986, 1994)

The contribution of certain nouns to the cohesion of texts is certainly the focus of Francis's (1986) notion of *anaphoric nouns* (or *A-nouns*). She uses this term to refer to nouns which can function as anaphoric pro-forms, can be used “meta-discursively” within a discourse and “are presented as the given element within a clause containing new information” (1986:7). Building on the work by Winter and Hoey, Francis supports this function with the image of signposts: *A-nouns* are linguistic signposts which signal to the reader that the specific information can be found somewhere else in the text (1986:2f). Among the nouns that meet these criteria are nouns derived from speech act verbs, e.g. *accusation, claim, comment, conclusion and suggestion*, other nouns describing verbal activities, e.g. *controversy, critique, implication and metalinguistic ‘text’ nouns* such as *chapter, excerpt, phrase, quotation and word*. Also included are ‘cognition’ nouns (1986:14ff) such as *analysis, concept, idea, inference, perspective and view*. So-called “ownerless” nouns such as *aspect, context, fact, issue, and problem* are seen as borderline cases with regard to the criterion of metadiscursivity, while *cause, development, move, process* and *result* are not treated as *A-nouns* because they miss out on this requirement.
In a second paper in 1994 Francis uses the term *label* for a group of nouns which largely overlaps with her earlier set of *A-nouns*. The main characteristic of what she terms a label is that "it requires realisation, or lexicalisation, in its co-text: it is an inherently unspecific nominal element whose specific meaning in the discourse needs to be precisely spelled out" (Francis, 1994:83; ideas attributed to Winter, 1982, 1992). Nouns such as *argument, point or statement* may be used as *advance* labels (the label precedes its lexicalisation) or *retrospective* labels (the label follows its lexicalisation) (1994:83). Noting that while "a label and its lexicalisation often occur within a single clause”, Francis considers only those operating cohesively across clause boundaries.

Francis's advance labels, as in "*I offered two reasons. The first ...*", closely resemble what have been examined as "predictive signals" (Winter 1977; Tadros 1985, 1994). Tadros (1994) defines "prediction" as a prospective rhetorical device which commits the writer at one point in the text to a future discourse act. Such "prediction" has also been discussed as "anticipation" (Winter, 1977) and "prospection" (Sinclair, 1993). The "signal" or "label" is viewed as a "first-pair part" which sets up the expectation that a coherent "second-pair part" will also occur in the text; a systematic "predictive-predicted" relation is thus established. A sub-category of these signals examined by Tadros (1994) and others (see Choi & Nesi, 2000; Meurer, 1997) is that of predictive enumeration: *two alternatives, three ways, several ideas, six categories* etc. The most common type of predictive enumeration contains, as its first-pair part, the sequence of a numeral and an *unspecific* item: the numeral can be exact (nine, two) or inexact (some, several). The unspecific items "are lexical choices such as ‘alternatives’, ‘consequences’, ‘way’, which need to be made specific in the text in order to be made meaningful" (Winter, 1992). In context, these "nominal groups" constitute predictions because they lead readers to anticipate that the writer will next explicitly present a certain number of "consequences" etc.

Winter (1977, 1992) goes on to argue that the lack of textual specification of the inherent unspecificity of "consequences" would render the text incomplete and incoherent. Furthermore, it is argued elsewhere (Tadros, 1992; Meurer, 1998) that "a necessary feature for membership (as the first-pair part) of predictive enumeration is that the unspecific lexical item occurring as head of (this first pair-part) must signal *new* information, i.e. information that cannot be retrieved from the previously occurring co-text or that is not part of writers'/readers' shared knowledge.... The specifics of the unspecific item ('consequences') must be lexicalised prospectively, or cataphorically in the text" (Meurer, 1998).
While the function of an advance label is "to tell the reader what to expect", a retrospective label "serves to encapsulate or package a stretch of discourse" (Francis, 1994:85). The image of encapsulation, taken over from Sinclair (1981:76), is also taken up by Conte (1996) and corresponds to Schmid's (2000) most recent reformulation: that certain nouns create "conceptual boundaries" by casting larger chunks of information into nominal structures. "The label indicates to the reader exactly how that stretch of discourse is to be interpreted, and this provides the frame of reference within which the subsequent argument is developed" (Francis, 1994:85). Francis does not examine any texts where the labelling may be "faulty" or missing and hence is able to claim that retrospective labels are used, "like the anaphoric this, to tell the reader to section off in his or her mind what has gone before. The precise extent of the stretch to be sectioned off may not matter ... It could even be argued that referential indistinctness of this kind may be used strategically by the writer to creative or persuasive effect" (1994:88).

Finally, Francis notes that it is impossible to provide an exhaustive list of the nominal-group heads which can function as labels. "Any noun can be a head noun of a label if it is unspecific and requires lexical realisation in its immediate context, whether beforehand or afterwards" (1994:88). Labels therefore have a lot in common with what Widdowson (1983:92) calls general or "procedural" vocabulary which structures and supports the more specific, field-related vocabulary of academic texts. This consists of "words of a wide indexical range ... useful for negotiating the conveyance of more specific concepts, for defining terms which relate to particular fields of reference". Ivanič (1991) uses very similar criteria to identify her category of "carrier nouns".

1.5.4 Ivanič (1991)

As noted, Vendler exploits the container-image in his study of nouns denoting facts and events. Ivanič's (1991) 'carrier nouns' calls up a related image (See Appendix I). The term carrier has a double motivation in her paper. On the one hand, she argues that the nouns in question "frequently carry a specific meaning within their context in addition to their dictionary meaning" (1991:95). On the other hand, the term carrier is used to underline the affinity to Halliday's systemic functional grammar, where Carrier is used to refer to the subjects in one of two types of clauses which express relational processes. As mentioned earlier, these words drew Ivanič's attention because they seem to be good candidates for any list of core vocabulary. 'Core words do not normally allow us to identify from which field of discourse they have been taken' (Carter, 1987:41). This, Ivanič argues, is exactly the characteristic which makes carrier nouns so
interesting: “since they take the bulk of their meaning from context, they are not subject specific. This makes them particularly useful for learners entering the academic discourse community” (1991:96). She assumes a loose use of “meaning” which we will discuss in more detail in the section on sense and reference in Chapter 2. The following is a summary of Ivanič’s criteria for identifying nouns as *Carrier Nouns*:

a) They are abstract and countable nouns.

b) Syntactically, they can occur in Vendler’s “container sentences” (see above). Ivanič believes this category of nouns to be much larger than Vendler implied. She also notes that in “container sentences, the specific meaning of N. in context is provided by the complement clause” (p.103). But the same nouns are often found in other syntactic environments. Thus, she argues, when their “variable meaning is not supplied by a complement within the clause, these nouns often extend their relational function beyond the clause, carrying meaning from their context” (p.103). In this respect,

c) carrier nouns are like pronouns: By this she means they all have a “constant meaning” which can be found in the dictionary and is predictable in any context. Their “variable meaning, however, is unpredictable and can only be determined by reference to their context, either linguistic (endophoric reference) or extralinguistic (exophoric reference) (p.103). Francis (1986) draws attention to the fact that, when functioning anaphorically, such nouns are almost always associated with a definite reference item, most frequently “this”. However, they also frequently function cataphorically, i.e. their “variable meanings” can be found in a subsequent clause. They act as an instruction to search for information of a particular type.

d) They are nevertheless still nouns. Hence the constant semantic component is always more informative than pronouns and they are therefore able to label, classify and/or evaluate what they are referring to.

In her discussion of where it is the reader may find the noun’s “variable meaning”, Ivanič (1991) mentions a study by Matthews (1981) in which he examines sentences containing carrier nouns in isolation. Ivanič uses these sentences to illustrate her point that the “variable meanings” of these nouns are often not found within the same clause as the noun.
Matthews argues that there is a missing “that” clause as complement to the noun realisation in this sentence. He comments “plainly there is something that the speaker had realised and, in speaking, he assumes that his hearer knows what it was. Therefore we might argue that the clause was latent”. Ivanić argues that when such sentences are viewed as part of continuous discourse, the question of the missing “that” clause becomes crucial. This “latent clause”, she claims, may be found in the preceding or subsequent stretch of discourse, or may not be supplied by the text at all: “Carriers are often signals for readers to search their background knowledge for suitable interpretations”. She concludes, therefore, that it would be inappropriate to call them “text-dependent” nouns and argues that Francis’s term “labels” is limited in this way too.

Matthews himself notes, however (1981:232) that the very fact that the realisation is a phrase with a definite article means no latent element need be posited. In other words, it is the definite referring expression that must be taken into account, rather than the noun alone:

“If one says I’ve cut down the rhododendron, the hearer is expected to grasp what rhododendron is referred to. This does not show that the rhododendron has a latent modifier, but merely attests to one meaning of the, or of phrases determined by it. … Similarly the realisation is enough, it might be argued, to identify a realisation.” (Matthews, 1981:232).

Francis (1986:27) makes appearance within a definite noun phrase, or in close association with a definite reference item an essential criterion for identifying A-nouns. Ivanić argues, however, that even when carrier nouns “occur in indefinite phrases, readers may draw on some context-dependent meaning to interpret them” (1991:111).

While the aim of her paper is “the delineation of carrier nouns as a broad category”, Ivanić (1991) must nevertheless acknowledge that there is no clear dividing line between nouns which are carrier nouns and those which are not. For example, there are nouns like period/s and item/s “which do not fit container sentences but do have both a constant and a variable meaning” (p.109). Furthermore, what Francis (1986:16) calls “text” nouns are “another type of carrier noun which cannot occur in a container sentence. These are context-dependent in a rather different way from other nouns I have considered.” (Ivanić, 1991:110). Finally, carrier nouns must be
viewed as a “fuzzy category” because there is “a continuum from ‘very context dependent’ to ‘almost self-contained’ in the way these nouns are used in discourse” (1991:110):

<table>
<thead>
<tr>
<th>Most context dependent uses</th>
<th>Most self-contained uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countable Definite: Endophoric Reference</td>
<td>Countable definite: exophoric reference</td>
</tr>
<tr>
<td>Countable indefinite</td>
<td>Countable indefinite</td>
</tr>
<tr>
<td>Uncountable</td>
<td>Uncountable</td>
</tr>
</tbody>
</table>

She proposes that the nouns identified as carriers live somewhere on a continuum between open- and closed-system nominals. They resemble other nouns in that they can take the full range of determiners, quantifiers and types of modifications available for nouns. However, they resemble pronouns in that some part of their “meaning” has to be recovered or inferred from the context in which they are used. “When the variable meaning can be recovered from the accompanying text, by endophoric reference, the noun in question is most clearly functioning as a carrier noun” (1991:110).

1.5.5 Schmid (1997, 2000)

In recent Ph.D. research, Schmid (2000) conducted a corpus-based analysis of a large group of nouns in which (most of) Francis’s A-nouns/labels and Ivanic’s carrier nouns are included. The “class of abstract nouns” included in his study originates in a corpus search for their stereotypical “linguistic environment”: from a grammatical point of view, “the most striking feature of these nouns is that they can be inserted in one or both of the two grammatical patterns given below” (2000:3):

1. (a) Det + (prem) + N + postmodifying that-, infinitive or wh-clause

   The (deplorable) fact that I have no money...

   (b) Det + (prem) + N + copular be + complementing that-, infinitive or wh-clause

   The (big) problem was that I had no money.  

   (Schmid, 2000:3)

These patterns, or “shell NPs”, constitute the “small number of linguistic devices” speakers use to trigger the co-interpretation of a noun and its content (p.21). Schmid uses the patterns to extract an index of 670 nouns which he calls Shell nouns: they “make up an open-ended functionally-defined class of abstract nouns that have, to varying degrees, the potential for being used as
conceptual shells for complex, proposition-like pieces of information” (2000:4). While some of these nouns “seem to be geared for this type of usage” he points out early on that “nouns are not shell nouns because of some inherent property, but become shell nouns when they are used in the way described above” (Schmid, 2000:4). The term “shell noun” is thus “only a convenient shorthand for “use-as-shell noun” (p.4). While Francis (1994) only considers the way a label and its lexicalisation operate across clause boundaries, Schmid analyses his “shell-content complexes” both within and across clauses. For example:

**The Government’s aim** is to make GP’s more financially accountable, in charge of their own budgets, as well as to extend the choice of the patient. Under **this new scheme**, family doctors are required to produce annual...

The two noun phrases containing shell nouns are in **bold** type, while the “content” of the shells, i.e. what both shell-noun phrases “relate” to, is underlined. The linguistic and conceptual process of casting a “complex piece of information into one single noun phrase” (2000:7), illustrated in the above example, is the focus of Schmid’s work: shell nouns and shell-noun phrases “can only be studied appropriately if what they link up with is taken into account” (p.8). He emphasises that “it is always the speaker of an utterance who characterises some piece of information by choosing a particular shell noun and modifier” (p.8) and goes on to note that the list of shell nouns he provides is “actually quite misleading because it suggests that these are shell nouns ... whereas in fact they are only nouns that are very frequently used as shell nouns” (p.14). Despite this opening emphasis on “use” and “the speaker”, Schmid nevertheless moves on to discuss the fuzzy boundaries of “the class”, good vs. bad “candidates for shell-nounhood” (p.53) and, before listing the functions that define uses of nouns as shell nouns, he asks “what do the nouns allow speakers to do?” (p.14). Surely a less contradictory way of phrasing this question would be, “what do speakers do with these nouns that could motivate one to analyse them as a class?”.

Approaching his project from a cognitive viewpoint, Schmid’s overall claim is that “shell nouns and shell contents activate components of one cognitive model” (p.20, emphasis mine) and that “subsuming reference and anaphora as well as deixis under the idea of activation of components of a cognitive model solves the problem inherent in this claim” (p.29). He justifies the use of decontextualised corpus data to make claims about cognitive functions and processes.

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6 The British section of COBUILD’s Bank of English: “size was given preference over the balance of sources” (2000:43)
by highlighting the relation between frequency and representativeness. Extending Halliday’s (1993:3) idea that “frequency in text instantiate[s] probability in the system”, Schmid postulates the following “from Corpus-to-Cognition Principle”: “frequency in text instantiates entrenchment in the cognitive system” (2000:39). This principle also justifies what is essentially a syntactically delimited search for “shell nouns” : “the corpus method can be applied ... to obtain the frequent, and therefore linguistically preferred and cognitively more entrenched, shell nouns rather than exotic albeit interesting ones” (p.40).

The restriction of syntactic patterns (see 1(a) & (b) above) used as search strings, while principled, also seems to be in conflict with Schmid’s apparent interest in how speakers cast complex pieces of information into one single noun phrase (2000:7). Clearly these are not the only “patterns” speakers use to create “conceptual shells for complex and elaborate chunks of text”. What about appositive noun phrases, particularly where they are used to provide an explanatory gloss to a technical reference or to introduce “convenience labels”? In their recent *Grammar of Spoken and Written English*, Biber et al. (1999) show that such labels account for over 15% of all postmodifiers in academic prose, and this seems a perfect example of how a user creates (temporary) conceptual shells for complex chunks of information. These apparent contradictions will be discussed in more detail in both Chapter 3 and Chapter 4.

The grammatical patterns Schmid selects are based on Vendler’s work (see 1.5.1) and are nevertheless interesting in their propensity to “host” a restricted group of nouns. Biber et al. (1999) also draw attention to the nouns appearing in some of these patterns. In their discussion of noun complement clauses, they note that such clauses are controlled by a closed set of head nouns (p.647, emphasis mine). Schmid too admits that “only the patterns N-cl and N-be-cl more or less guarantee that the noun in the nominal slot is actually a shell noun” (2000:40).

Based on the analysis of an extensive corpus7 (and pointing out findings specific to academic writing), Biber et al. are also able to show that most of the head nouns with noun complement clauses mark some abstract (nominalised) stance towards the proposition in the complement clause, including assessment of the certainty of the proposition, the source of the information, or other speaker/writer attitudes towards the propositions. Their findings show how that-clauses functioning as noun complements are one of the primary devices used to mark stance in academic prose. In these constructions, the that-clause reports a proposition, while the head

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7 40 million word total - Academic sub-corpus approx. 5 million words; British & American English.
noun reports the author’s stance towards that proposition. Two primary kinds of stance information are given by the most common heads:

1. An assessment of the certainty of the proposition in the that-clause, as with fact, possibility, claim, notion, assumption, hypothesis and rumour.

2. An indication of the source of the knowledge expressed in the that-clause. Three primary sources can be distinguished:
   i.) linguistic communication - claim, report, suggestion, proposal, remark
   ii.) cognitive reasoning - assumption, hypothesis, idea, observation
   iii.) personal belief - belief, doubt, hope, opinion.

In distinguishing relative clauses from noun complement clauses, they state that noun complement clauses “present the complete content of the head noun” (1999:645). This principle, they claim, applies generally as complement clauses differ from post-modifying clauses in that they do not have a gap corresponding in meaning to the head noun. This brings us full circle to the idea of a “noun in search of context/content” (Ivanič, 1991; Schmid, 2000). In a final chapter on “the grammatical marking of stance” Biber et al. discuss, for the first time, “stance nouns”. They note that while “stance nouns taking a prepositional phrase complement are not discussed as a class elsewhere in the grammar, these nouns include many of the same nouns that can control noun complement clauses, such as fact, hope, and fear:

   e.g. They deny the possibility of a death wish lurking amidst the gardens of lust (ACAD)” (1999:972).

In addition “many stance adjectives and verbs that can control that- or to- complement clauses have abstract noun counterparts that take prepositional phrase complements. Such nominalisations, some of which can also take noun complement clauses, include possibility, probability, likelihood, importance, need, necessity, requirement, certainty (1999:972). A stance noun + prepositional phrase marks “epistemic stance (used to present speaker comments on the status of information in a proposition. They can mark certainty (or doubt), actuality, precision, or limitation; or they can indicate the source of knowledge of the perspective from which the information is given.)” (p.972). A (stance) noun + complement clause marks “attitudinal stance (markers which report personal attitudes or feelings)” which is more likely to be implicit than explicit (p.974). That is, “while the attribution of stance is not overt, it can be easily inferred as
that of the speaker/writer." (p. 977). They note, finally, that given the general lack of first person involvement in academic writing, it is surprising that stance markers are so prevalent in that register. Nevertheless, "it is not at all uncommon to find personal attitudes and estimates of likelihood expressed in academic writing through impersonal stance devices such as...extraposed complement clauses" (p.980). Schmid's (2000) point, as noted already, that it is always the "speaker" of an utterance who categorises some piece of information by choosing a particular shell noun and modifier, supports Biber et al.'s notion of stance nouns. These nouns thus provide speakers with "powerful tools for the characterisation, perspectivisation, and indeed even manipulation, of their own and other speakers' ideas" (Schmid, 2000:8).

Yet for all the interest they may have generated, and for all the energy writers have invested in inventing new names for these nouns, one still looks in vain for an unequivocal definition. Why are they so difficult to define? Francis, Ivanič and Schmid all agree that it is because they are not defined by inherent properties but rather they constitute a functional linguistic class. What, then, are the functions that define uses of nouns as "shell" nouns? While Schmid (2000) identifies an array of more or less specific functions, three "stand out from the rest because they can be seen to play a role in all uses of shell-content complexes" (p.14). As a consequence, he claims, "these three can be used to define the functional class of shell nouns" (p.14):

a) Shell nouns "serve the semantic function of characterising...complex chunks of information" (p.14).

b) Shell nouns "serve the cognitive function of temporary concept-formation". In other words, they "allow speakers to encapsulate...complex chunks of information in temporary nominal concepts... with clear-cut conceptual boundaries". (p.14)

c) Shell nouns "serve the textual function of linking these nominal concepts with clauses or other pieces of text which contain... details of information, thereby instructing the hearer to interpret different sections...together" (p.14)

In response to the question of how these common functions can possibly serve as defining criteria for the relations at stake, Schmid argues that shell nouns perform these functions in a very special way: by comparing them to full-content open-class nouns on one hand and anaphoric elements (personal and demonstrative pronouns) on the other, he concludes that shell nouns seem to be a unique linguistic phenomenon for two reasons:
1. They “combine the three functions of characterisation, concept-formation and linking, which are otherwise performed separately, each by different types of linguistic elements”.

2. They “perform these functions in a fine-tuned balance between conceptual stability and informational flexibility”. (2000:19).

Neither Schmid’s criteria for defining a functional class of shell nouns nor the reasons he gives for their “uniqueness” are unproblematic. As my own corpus analysis tests many of Schmid’s claims, his work will be discussed further at various points throughout this dissertation.
Chapter 2

2.1 Introduction
Rather than write separate critiques of the work reviewed in Chapter 1, I will attempt to draw out the common, and most relevant, underlying concepts, and the problems previous studies exhibit in dealing with these concepts. Firstly, while they approach their selection of nouns in quite different ways, spending a lot of time justifying their chosen nomenclature, they are in essence dealing with the same, rather slippery, subject matter: they are all concerned with abstract nouns; hence the first issue requiring discussion is the phenomenon of abstractness. We will begin with a summary of the way Ivanić (1991), Francis (1994) and Schmid (2000) treat this phenomenon. We then move on to discuss abstractness from the two perspectives suggested by Schmid:

- The more common (semantic) idea that what these nouns denote and can refer to is abstract in the sense that it cannot be seen, touched etc. This discussion (2.2) will encompass the different approaches towards these nouns taken by theoretical, descriptive and pedagogical grammars; how the notion of "class-changing" items has been dealt with and the lexico-semantic treatment of this phenomenon.
- How the use of these nouns can lead to the effect that a given text has an "abstract style". In keeping with the focus of this chapter, this discussion of use is restricted to the realm of semantic relations. The larger question of the differences between the PW and student writers' use of the nouns, from the point of view of syntactic choices and discourse reference, will be addressed in chapters 4 and 5.

2.2 Ivanić, Francis and Schmid on Abstractness
Schmid (2000:74) notes that, "in everyday language, semantic unspecificity … is often confused with abstractness". For example, the entry for one sense of abstract in the Longman Dictionary of Contemporary English (Summers 1995) reads "based on general ideas or principles rather than specific examples or real events". Also, if we look again at the "vague" paragraph presented in Chapter 1, the criticism is that simply by using abstract nouns, the writer avoids providing specific information and the text is therefore vague.

In linguistics, on the other hand, semantic unspecificity is commonly understood in intensional rather than extensional terms: "the meaning of a noun is unspecific if it is determined by only one or a very small number of semantic dimensions" (Schmid, 2000:74). Halliday and Hasan (1976) would argue, for example, that it lies in the very nature of general nouns like event,
action, process and state: as “superordinate members of major lexical sets” (p.275) their senses are more or less mono-dimensional. We will return to this idea of “superordination” in section 2.5.1.

Schmid remarks that “by no means all shell nouns are unspecific in this sense”, nor are they “semantically unspecific in the general sense advocated for example by Winter (1992)” (2000:74). Nevertheless “the intuition that shell nouns are unspecific in a certain way remains” (p.74). So what solutions do he and previous writers offer with regard to the nature of their unspecificity?

Ivanić (1991) sets out in table form the syntactic and semantic dimensions on which nouns are usually classified (concrete/abstract; countable/uncountable), stating that carrier nouns “are recognisably abstract rather than concrete, but they differ from many other abstract nouns in that they are frequently countable” (p.98). She notes that while many accounts of abstract nouns suggest that they are usually uncountable, nouns like purpose are predominantly countable in use and there are many of them (we will discuss the countable/uncountable distinction in more detail in 2.2). Furthermore, semantically, carrier nouns resemble pronouns in that “their meaning is not self-contained” (1991:103). It is this class of countable abstract nouns which she identifies as having the ability to “carry a specific meaning within their context in addition to their dictionary meaning”) (1991:95), and posits a cline of “context dependent” uses from countable (most context-dependent) to uncountable (most self-contained) (see 1.5.4). Ivanić allows her examples to speak for themselves and does not elaborate on the criteria she uses to categorise the nouns as “abstract”. While she notes that this criterion is not reliable on its own, it is nevertheless the first criterion.

From the perspective of discourse relations, Francis (1994) makes the following suggestion about the type of unspecificity that is involved. She argues that:

“The main characteristic of ... a label is that it requires lexical realisation, or lexicalisation, in its co-text: it is an inherently unspecific nominal element whose specific meaning in the discourse needs to be precisely spelled out (Winter, 1982, 1992)”.

(Francis, 1994:83).

As the references indicate, this suggestion goes back to the work of Winter. In his earlier publication, Winter (1982) argues that there is a type of clause, called unspecific clauses, which require information given in other clauses, so-called lexical realisations, in order to be
semantically complete. In the later publication mentioned by Francis, Winter (1992) takes a much more detailed look at nouns with “unspecific meanings”. He maintains that there is a large group of inherently unspecific nouns which serve as a “metalanguage for the clause”. These nouns “do not refer to concrete things in the outside world”, but “talk about” the nature of the clause or sentence as a message in the text itself” (Winter, 1992:133). To be communicatively effective, they have to be made specific or, as he calls it, “lexically unique” (1992:153).

Like Ivanić, Schmid (2000) is in favour of placing shell nouns somewhere on a continuum between open-class (nouns, verbs, adjectives) and closed-class (pronouns) items. Shell nouns stand between the opposing poles: like full-content nouns “they exhibit a constant conceptual relationship to a specific recurrent type of experience... and being nouns, they create the impression that the types of experience they encapsulate as concepts are things” (2000:18). On the other hand the concepts created by shell nouns are also very variable: “They are of a temporary nature because their content changes with the situational and linguistic context in which they are used” (p.18). With regard to the “unspecificity” of shell nouns, Schmid claims finally that it is “semantic in nature after all” (p.76). He then provides the following rather muddy characterisation of this “unspecificity”: it “is a specific type of unspecificity which can in fact be gleaned from the term shell noun and the shell metaphor underlying it” (p.76). Like the real shells for which they are named, “if a noun is to function as a shell noun, its semantic structure must include one or several gaps that can be filled in by the information given in the shell content” (p.76). “The meaning of [a shell] noun thus consists of two parts: a stable and relatively well-determined semantic structure on the one hand, and...gaps which, depending on the contexts in which the word is used, can be filled by a variety of pieces of information” (p.76).

Two issues arising out of these previous writers’ approach to “abstractness” will be the focus of the rest of this chapter: first, it seems to be taken for granted in all cases that it is possible, and useful, to distinguish “abstract” and “concrete” nouns. And secondly, the way “meaning” is used by all these writers seems very unhelpful when it comes to clarifying the “unspecific” nature of shell nouns. In our later discussion of sense and reference (2.3), we will move away from this loose and rather confusing use of “meaning” and hopefully clarify at least one aspect of what these writers appear to be trying to say about the nature of “shell nouns”.

2.3 Traditional Classification of nouns

As mentioned earlier, “abstract nouns”, being somewhat elusive, have never been very popular as objects of linguistic research. The notions of container/carrier/A-Noun/label/shell are all
attempts to delineate, in one way or another, a sub-group of abstract nouns, which immediately raises questions of identification and classification. If one is to enter into a discussion in this area, there is some obligation to clarify how the term abstract noun is going to be used; the reliability of distinguishing abstract from concrete nouns still being an issue linguists grapple with. Such clarification is also important in view of the potential pedagogical application of a study like this. In fact, while linguists may be questioning their ability to identify and categorise abstract nouns, learner grammars continue to provide apparently simple means of distinguishing them: Concrete nouns name people, animals, places and things. Abstract nouns name things you cannot visualise like ideas, feelings, conditions, qualities and measurements. Superficially, this seems like a sensible distinction: it is the “abstractness” of whatever is being referred to that allows the distinction to be drawn. When it comes to the behaviour of these nouns in their linguistic context, however, things become less clear-cut:

Abstract nouns tend to be described as “uncountable” (Collins Cobuild 1997), unless referring to a “particular instance of something”. Cobuild’s English Usage also tells us that abstract nouns are “often followed by a prepositional phrase to show what they relate to”. The implication then, is that although abstract nouns are described as uncountable, they are used with sufficient frequency to refer to “particular instances of things” (hence becoming countable), that the grammatical structure of the following (necessary) “elaboration” is predictable. Furthermore, Quirk et al. (1985) note that while abstract nouns may be count (like remark/remarks) or noncount (like warmth/*warmths), “there is a considerable degree of overlap between abstract and noncount. The division of nouns according to countability into count nouns and noncount nouns is basic in English. Yet the language makes it possible to look upon some objects from the point of view of both count and noncount” (p.247).

This means that Ivančič’s first criterion for inclusion in the group of carrier nouns (abstract countable) does very little to narrow things down. For my own study, the 100 most frequent nouns in each sub-corpus were extracted and ranked. Using the above criteria to distinguish concrete from abstract nouns (i.e. that abstract nouns name things/concepts not available to senses), the following indicates the very high number of nouns with “abstract referents” present in the sub-corpora:

1. Published Writing - 84% abstract, of which 82% are countable.
2. First Language students - 79% abstract, of which 91% are countable.
3. Second Language students - 75% abstract, of which 88% are countable.
While these figures lend further support to the finding that academic texts contain high numbers of “abstract” nouns, they do more to simply highlight the large number of nouns that can in fact be classified as “abstract and countable”. This raises questions regarding the tendency of learner dictionaries and grammars to describe abstract nouns as uncountable. We will now have a closer look at the ease with which individual nouns are able to pass from one countability class to another, and the syntax, lexis and semantics of this phenomenon.

2.3.1 Countability

Brown (1997) notes that countability lies at the heart of a set of interlocking issues in the grammatical and lexical description of English and raises questions about the relationships between these components and semantics and pragmatics. As noted, many grammatical and lexical accounts, both descriptive and theoretical, assign nouns to countability classes. For example, (from Quirk et al. 1985: 246-248) “It is necessary for grammatical and semantic reasons to see nouns as falling into different subclasses”. Nouns like book, “which must be seen as denoting individual countable entities and not as undifferentiated mass, are called count nouns”. Nouns like furniture “must by contrast be seen as denoting an undifferentiated mass or continuum. These are called noncount nouns.” In this account some nouns, like brick, cake etc belong to both countability classes: they “can be either count or mass … in that we can view a noun like brick either as a noncount material (The house is built of brick) or as constituting the countable object (He used bricks to build the house).” As noted already, the most systematic use of a characterisation of this kind is found in learner’s dictionaries where nouns, or particular senses of nouns, are systematically coded as C(count) or U(uncount) or both (cf. Crowther 1995, Sinclair 1987).

As Brown (1997; citing Quirk et al. 1985) notes, the position is complicated by the fact that “nouns may also be shifted from one class to another by means of conversion”, a process that may also involve a “semantic shift”. Conversion processes of these kinds are common and pervasive in English, so much so that ‘institutionalised’ conversions, say coffee the non-count substance, and coffee, the count individual noun with the sense ‘a cup of coffee’ typically each have an entry in a learner’s dictionary. The process, Brown notes, is productive hence non-institutionalised conversions are also common: a count noun like cat, used to refer to an individual animal in Your cat smells, can be recategorised as noncount and be used to refer to a general property of cats, ‘essence of cat’, ‘cattiness’, as in This room smells of cat (Brown,
This recategorisation process, from count to non-count, has been attributed to a function called the ‘universal grinder’ which, “applied to an individual, yields a substance” (Jackendoff, 1992:26). The converse, recategorisation from non-count to count, is the ‘universal packager’, which packages a substance into an individual. An institutionalised example would be the non-count abstract noun beauty and the corresponding count noun with the sense ‘a person or thing which is beautiful’. Packaging is also productive, so a noncount abstract noun like courage in It takes courage to speak out against a totalitarian government can be recategorised as a count noun, ‘an individual act of courage’, as in He showed a rare courage to speak out against the government. As before (in the case of coffee), the institutionalised example tends to be recorded in learner’s dictionaries while the productive one is not.

The position described in the previous paragraph assumes that nouns are assigned to a particular countability class, or perhaps to more than one, and that there are general processes of recategorisation that can shift a noun from one class to another. An entirely contrary position is adopted in Allan (1980) where the account offered above is seen as an “indefensible traditional kind of analysis”. Allan offers a “radically different approach, based on the assumption that countability is not in fact a characteristic of nouns per se, but of NPs: thus it is associated with nouns in syntagmata, not with nouns as lexical entries” (1980:546). In this approach, the syntactic environment of a noun stem might be said to “coerce” it into one countability class or another. For example, courage in It takes courage to buck the trend is used as an abstract, non-count, noun because only singular non-count nouns occur with the ‘zero’ article and courage in He showed a rare courage, is used as a count noun to refer to an individual act of courage because the indefinite article a can only occur with singular count nouns.

Brown (1997) defends the “indefensible traditional kind of analysis”, focussing on the various ways in which a noun can be shifted from one countability class to another. In so doing, he summarises the semantic and grammatical issues directly relevant to this discussion of abstractness and countability.

As already noted, the conceptual basis of the count-mass opposition rests on making a distinction between individual “bounded” objects, prototypically bodies with “definite outlines”, bodies that are “individuated”, and “unbounded” substances that are not “individuated”, that are “homogeneous continua without implied boundaries”. Prototypically we use count nouns like cat or machine to refer to bounded, individuated objects that can be enumerated and mass nouns like flesh or machinery to refer to unbounded, non-individuated substances that cannot be enumerated.
The above paragraph suggests that there is a coherent “class meaning” based on a physical distinction. Some take the position further arguing “that form classes are semantically motivated, and that differences in grammatical behaviour reflect iconically differences in meaning” (Wierzbicka 1988:501). Many others take the opposite view, that the assignment of a noun to a particular countability class is arbitrary: “There is a count/mass difference between fruit and vegetable, but they apply to things that for all accounts and purposes seem to be alike. Nor can I see anything that would explain the count/mass difference between footwear and shoe, clothing and clothes, shit and turd, or fuzz and cop” (Ware 1979:22).

A further position would see countability as a matter of perception: Carroll (1978:20) argues that “a physicalist interpretation does not adequately account for the grammatical behaviour of a large number of nouns that refer to less concrete entities”. Furthermore, the fact that at least some nouns may occur either as mass or count suggests that “what has been called the mass/count feature distinction does not concern any true physical difference in referents, but that it reflects, rather, a difference in how a language user wishes to regard and present the referent at a given time” (p.20). “Countability as a matter of perception” is also the central tenet of what Allan (1981:157) calls “customary reference” and Yule (1998:31) calls “a frequency effect in experience”. As it is possible to think of contexts in which each noun could be used as count and as noncount, Yule argues that it is more sensible to ascribe the property count/noncount to contexts, rather than to nouns (for a similar view see Chesterman, 1991). According to Yule “the tendency to treat concepts (and hence nouns) as either countable or mass is based on a frequency effect in experience”, and is not “based on the grammatical characteristics of the English noun”, as Quirk et al. (1991:248), following a long tradition, have suggested (Yule 1998:31).

Looking at countability and the interpretation of animal nouns, Allan asks “how do we know “she prefers leopard to fox” refers to fur and skin, while “he prefers lamb to goat” refers to meat?” (Allan, 1981:157). The answer, he suggests, lies in customary reference: “a pragmatic inference with the effect that in the absence of any contextual or situational clues to the interpretation of a linguistic expression, some customary interpretation will be assigned to it” (p.157). The notion of customary reference is based in large part on observance of the cooperative principle of making the best sense possible of what is said; in particular the Gricean maxims of quality and relation (cf. Grice 1975). Interpretation is thus “a function of pragmatic processes operating on the interaction between the semantics of a linguistic expression and its context” (Allan, 1981:163).
Clearly, there may be a conceptual problem of assigning a noun to a countability class in the lexicon. However, because countability is obligatorily marked in the grammar of English, the countability status of a noun in an instance of use (i.e. in an NP) is almost invariably clear. As Allan (1980:542) expresses it: “If his listeners do not already know the countability of the NP reference, the speaker must make it known to them”. As we will be examining “shell NPs” (rather than nouns) as both syntactic patterns and referring expressions, it is worthwhile exploring this view in some detail.

The obligatory marking of countability in English is most commonly achieved via grammaticalisation in the noun phrase. As Brown (1997) notes, countability is most obviously characterised by the web of restrictions between a noun and the determiners, articles, quantifiers and so forth with which it can co-occur within an NP. So much so, that while countability is not necessarily morphologically marked on the noun itself, it is usually possible to determine the countability status of a noun from its accompanying determiners in the NP.

Determiners are typically divided into three broad classes along the lines shown below (cf. Brown 1997): the list, he notes, is not exhaustive.

<table>
<thead>
<tr>
<th>Universal Quantifier:</th>
<th>all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitisers:</td>
<td></td>
</tr>
<tr>
<td>SING</td>
<td>the, this: that, my, etc.</td>
</tr>
<tr>
<td>PL</td>
<td>the, these: those, my, etc.</td>
</tr>
<tr>
<td>Specifiers:</td>
<td></td>
</tr>
<tr>
<td>UNIT DENUMERATORS</td>
<td>a, another, one</td>
</tr>
<tr>
<td>FUZZY DENUMERATORS</td>
<td>many, few, several, two, etc.</td>
</tr>
<tr>
<td>FUZZY QUANTIFIERS</td>
<td>ZERO, enough, less, a little etc.</td>
</tr>
</tbody>
</table>

Syntactic criteria usually involve substitutability, order and co-occurrence restrictions with the head noun based on countability. Semantic criteria usually identify different functions for the various classes. Here Brown (1997) follows the account in Vangsnes (1994, 2001) which derives from the “generalised quantifier” approach of Barwise and Cooper (1981). Vangsnes identifies three classes of determiner corresponding to those above, and distinguishes between “strong” determiners (the universal quantifier and definitisers above) and “weak” determiners (the specifiers above). Within strong determiners a further distinction is drawn between the universal quantifier and the definitisers. A useful distinction between the weak and strong determiners concerns their use in referring expressions. Prototypically, the strong determiners occur in noun phrases that are “uniquely referring”. The universal quantifier is uniquely referring in the sense
that when it occurs with a bare noun head it tends to have a universal interpretation (*all cats are grey in the dark*), when it is followed by a definitiser or a partitive preposition phrase (*all (of) the cats have fleas*) it tends to be interpreted as the whole of the relevant contextually defined set. As for the definitisers, they are uniquely referring in the sense that they are prototypically used to refer to “a given or familiar referent” that the speaker can identify and that the speaker assumes the hearer can identify too: following Vangsnes, Brown (1997) refers to them as involving “specific reference”. The specifiers, the weak determiners, are not uniquely referring: the referent may or may not be identifiable to the speaker himself and the speaker does not assume that the referent is identifiable to the hearer. Again following Vangsnes, Brown refers to these as involving “non-specific” reference. The semantic functions of the various determiners can be summarised as follows:

<table>
<thead>
<tr>
<th>Universal quantifier</th>
<th>→</th>
<th>unique reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitisers</td>
<td>→</td>
<td>specific reference</td>
</tr>
<tr>
<td>Specifiers</td>
<td>→</td>
<td>non-specific reference</td>
</tr>
</tbody>
</table>

Brown shows how countability sub-classes have different co-occurrence restrictions with determiners, noting that it is these different restrictions that allow us to say that the countability of a noun is usually determinable from its attendant determiners.

Brown then moves on to a discussion of countability and partitives. Given the frequency with which certain nouns appear in partitive constructions (cf. Schmid 2000) particularly in academic texts (cf. Choi & Nesi 2000, Biber et al. 1999), it is certainly worth examining the relationship between this construction and countability. Partitive constructions have the form [(Det) N1 [pp of (the) N2]] as in a *row of beans*. Such expressions generally create bounded expressions by individualising or collectivising. Partitives individualise by gathering unbounded substances or pluralities into enumerable units or instances

<table>
<thead>
<tr>
<th>water</th>
<th>bucket [ of [ water]]</th>
</tr>
</thead>
<tbody>
<tr>
<td>substance</td>
<td>individual</td>
</tr>
</tbody>
</table>

or by selecting an individual from an aggregation of a collective

<table>
<thead>
<tr>
<th>clergy</th>
<th>member [ of [the clergy]]</th>
</tr>
</thead>
<tbody>
<tr>
<td>collective</td>
<td>individual</td>
</tr>
</tbody>
</table>
A group of ‘fractional partitives’ take a noun into an individual noun that is a fraction of the same noun

\[
\text{[brick]} \quad \rightarrow \quad \text{half [of [the brick]}]
\]

while a group of “number set partitives” creates aggregations

\[
\text{[birds]} \quad \rightarrow \quad \text{hundreds [of [birds]}]
\]

Since the function of unit partitives is to individualise, it is unsurprising that they occur freely with substance nouns or plural individual nouns as N2, enabling them to be denumerated, (\textit{a number of examples, two of the things, several bits of information}) or to select an individual out of an aggregation (\textit{an item of news}) or a collective (\textit{a member of a group}).

Unit partitives have been examined as predictive signals by Tadros (1985, 1994) and Choi & Nesi (2000). Tadros examines what she calls “enumeration pairs”, each consisting of a predictive member (the \textit{V} member) and the predicted member (the \textit{D} member). For example:

\begin{itemize}
  \item \textit{V}: It is useful to divide linguistic universals into \textit{two categories}
  \item \textit{D}: (i.) There are, \textit{first of all}, certain “formal universals”……
  \item \textit{D}: (ii.) \textit{In addition}, there are “substance universals”…..
\end{itemize}

As discussed in Chapter 1, Tadros defines enumeration as a form of prediction: “Prediction is binding: it is more in the nature of a legal contract, where the predictive signals are the writer’s signature confirming that he is committed to what he has said he will do” (1985:6).

Choi & Nesi (2000) have recently examined what Tadros calls Type C enumeration within a subsection (44 lectures) of the BASE (British Academic Spoken English) corpus. In this type of enumeration, the \textit{V} member is syntactically complete, contains a numerable and an enumerable, and presents new information. For example “There are \textit{a number of ways} by which risks can be reduced” (p.1). Most interesting for my own study is the list of “enumerables” extracted from the 44 authentic lectures examined: All 52 tokens are “countable, abstract” nouns and, while Schmid (2000) did not include such \textit{Of}-phrases in his analysis, many of these nouns appear in his index of shell nouns, and all of them would seem to be good candidates for inclusion in any “group” of nouns requiring specification within context. The top five “enumerables” found in the BASE corpus are \textit{ways} (16), \textit{things} (12), \textit{aspects} (12), \textit{points} (11),
and examples (5). Hence, not only are students faced with these nouns in the texts they read, but they also apparently play a prominent role in academic lectures, particularly in the structuring and sign-posting of such spoken texts.

On the whole, it is most useful for this study to adopt the view that is it impracticable to classify nouns in the lexicon as either count or mass tout court. Allan’s (1980) solution, as discussed above, is to determine the countability status of a noun in an instance of use from its syntactic and pragmatic context. Thus, if there is nothing inherently “shell-noun like” about any noun until it is used in a certain way, then surely we are saying that the syntactic environment (chosen by the speaker/writer) coerces the noun into one class or another - it matters very little which noun is finally used. Furthermore, if a definitiser (as listed above) is used by the speaker/writer, s/he is providing a specific reference and assuming that the hearer/reader will be able to successfully identify the intended referent of the noun phrase.

The position on countability that will be adopted for this study is thus summarised by the following two quotes: “If his listeners do not already know the (intended) countability of the NP reference, the speaker must make it known to them” (Allan, 1980:542; italics mine). “The fact that at least some nouns may occur either as mass or count does suggest that what has been called the mass/count feature distinction does not concern any true physical difference in referents, but that it reflects, rather, a difference in how a given referent is conceived in a given context - a difference in how a language user wishes to regard and present the referent at a given time” (Carroll, 1978:20).

2.4 Sense, Reference and Denotation
The term reference has, so far, been used without glossing. Staying with the notion of abstractness but leaving countability for the moment, it is crucial that we clarify the semantic distinction between sense and reference. This is particularly important in view of the way Winter, Francis, Ivanč and Schmid use the term “meaning” (see 2.1). We will also consider abstractness from the point of view of lexical semantics (cf. Lyons 1977 and Cruse 1986).

As Lyons (1977:174ff) points out, the word “meaning” has a number of distinguishable, but perhaps related, senses. It is customary, he notes, to draw a twofold distinction between sense and reference.
2.4.1 Sense

Sense is the term used by a number of philosophers for what others would describe simply as their “meaning”, or perhaps more narrowly as their cognitive or descriptive meaning (Lyons, 1977:197). For this reason the distinction of reference and sense is sometimes formulated as a distinction of reference and meaning.

Frege’s (1892) classic example, which is frequently used in discussions of sense and reference, is

a) The Morning Star is the Evening Star.

Frege pointed out that the two expressions “the Morning Star” and “the Evening Star” had the same reference, since they each referred to the same planet. But they could not be said to have the same sense. For if they did, (a) would be tautologous, or analytic, as in (b):

b) The Morning Star is the Morning Star.

But (a), unlike (b), is (potentially) informative: it can make the hearer aware of some fact of which he was not previously aware and which he could not derive simply from his understanding of the meaning of the sentence. It follows that “the Morning Star” and “the Evening Star” are not synonymous: i.e. they could not be said to have the same sense. So, states Lyons (1977:198), runs the standard argument. We need not go into the philosophical controversy that has risen up around this argument. Frege’s example simply illustrates in a general way the nature of his distinction between sense and reference. Sense, used by Lyons as a theoretical term in linguistics, is concerned with lexical relations and thus differs markedly from its customary use in philosophical writings.

He (1977:200) notes that the distinction between sense and reference is not bound to any single philosophical theory of meaning. Even if it proved possible to eliminate it for reasons of technical convenience, this distinction, he argues, is crucial once we take into account the utterance of sentences in actual contexts. His criterion for sameness and difference of sense is made directly dependent upon the descriptive meaning of utterances; “two or more expressions will be defined to have the same sense (i.e. to be synonymous) over a certain range of utterances if, and only if they are substitutable in the utterances without affecting their descriptive meaning” (1977:202).
Sense is thus defined by Lyons to hold between the words or expressions of a single language independently of the relationship, if any, which holds between those words or expressions and their referents or denotata (p.206). Importantly, both single vocabulary words (lexemes) and expressions are said to have sense (and denotation), whereas only expressions (and a subset of them at that) have reference.

2.4.2 Reference

Reference has to do with the relationship which holds between an expression and what that expression stands for on a particular occasion of its utterance (Lyons, 1977). In the traditional semantic view of reference, it is “the relationship which holds between words and things... words refer to things” (Lyons, 1968:404). This traditional view continues to be expressed in those linguistic studies (e.g. lexical semantics) which describe the relationship between a language and the world, in the absence of language users. Lyons (1977:177) points out however, that “it is the speaker who refers (by using some appropriate expression): he invests the expression with reference by the act of referring”. Brown and Yule (1983) note that it is this latter view of the nature of reference which the discourse analyst has to appeal to. In discourse analysis, reference is treated as an action on the part of the speaker/writer (1983:28).

Terminological difficulties derive from the failure, on the part of many writers, to distinguish between sentences and utterances and from the looseness with which terms like ‘word’ and ‘expression’ are commonly employed. As Lyons emphasises, reference is an utterance-dependent notion. That is, a referring expression consists of an NP, not just the head noun in an NP, let alone the lexeme realised by the noun.

When we make a simple descriptive statement, it is frequently appropriate to maintain that what we are doing involves saying, or asserting, something about somebody or something; and we do this characteristically by uttering a declarative sentence (Lyons, 1977:177). Lyons confines his attention to utterances of which it is reasonable to say, without straining normal usage, that they are intended to tell us something about some particular entity or group of entities. When a sentence like “Napoleon is a Corsican” is uttered to make a statement, we will say that the speaker refers to a certain individual by means of a referring expression. If the reference is successful, the referring expression will correctly identify for the hearer the individual in question: the referent. According to this conception of the relation of reference, it is thus the speaker who refers (by using some appropriate expression). When we ask “what does the expression ‘x’ refer to?”, we are asking the same question as we would when we ask “What is the
speaker referring to by means of ‘x’ (in uttering such-and-such a sentence)?” (1977:177). It is a condition of successful reference that the speaker should select a referring expression - typically a proper name, a definite NP or a pronoun - which, when it is employed in accordance with the rules of the language-system, will enable the hearer, in the context in which the utterance is made, to pick out the intended referent from the class of potential referents. If the expression is a definite NP operating as a definite description, its descriptive content will be more or less detailed according to the circumstances; and the manner of description will often depend upon the speaker’s assumption that the hearer is in possession of quite specific information about the referent. Thus, in some circumstances it might be necessary for the speaker to incorporate within the NP an adjective or relative clause, whose function it is to specify one particular member of a class of individuals. The various means of extending NPs in order to specify the intended referent will be discussed in detail in Chapter 5.

2.4.3 Denotation

By the denotation of a lexeme, Lyons (1977:207) refers to the relationship that holds between that lexeme and persons, things, places, properties, processes and activities external to the language-system. He uses the term denotatum for the class of objects, properties, etc. to which the expression correctly applies.

A philosophical distinction that must be mentioned at this point is that drawn between the intension and extension of an expression. Many philosophers would say that the extension of red is the class of all red objects and that its intension is the property of being red. This distinction has been regarded as one among a number of possible interpretations of Frege’s distinction of reference and sense. Lyons’s use of denotation, he emphasises, is neutral as between extension and intension. Thus dog denotes the class of dogs (or perhaps some prototypical member, or exemplar, of the class), but canine denotes the property, if there is such a property, the possession of which is a condition of the correct application of the expression.

Regarding the difference between denotation and reference, Lyons stresses again that reference is an utterance-bound relation and does not hold of lexemes as such, but of expressions in context. Denotation, on the other hand, like sense, is a relation that applies in the first instance to lexemes and holds independently of particular occasions of utterance. This does not imply that denotation and reference are unconnected. Whatever may be referred to in a given language is generally within the denotation of at least one, and usually several, lexemes in that language (1977:208).
2.5 The Abstractness of Nouns

Schmid (2000) points out that the most common way of conceiving of the abstractness of nouns is in terms of the nature of their denotata. From such an extensional perspective, nouns are referred to as abstract when their denotata are not part of the concrete physical world, cannot be experienced by any of the senses. So the lexemes realised by the nouns are not themselves abstract, but what they denote is and hence the nouns are used in an abstract way.

It is quite obvious that many of the nouns in question here, for example, fact, belief, idea, intention, purpose and view are used to refer to the world of intangible notions and ideas. For other nouns the case is less clear-cut. For example, the abstract nature of nouns such as area, region, and site is somewhat doubtful, since locations can be part of the concrete physical world. Even more questionable is the abstractness of nouns denoting activities, such as mistake, refusal and reaction.

Such a simple extensional conception of abstractness is clearly too crude. A conception of abstractness that promises deeper insights has been put forward by Lyons (1977:442ff). In place of the traditional two-fold dichotomy between concrete and abstract, Lyons introduces a three-way distinction between first, second and third-order entities. The guiding principle is the wish to apply the ontological assumptions underlying a so-called ‘naive’ realism. Leaving aside the philosophical technicalities involved at this stage (see Lyons 1977:109ff; Parsons 1990, Asher 1993), this means that he tries to suggest a common-sense classification of what there is in the world.

First-order entities are persons, animals, other organisms and physical objects, which are located in space and have fairly constant perceptual properties. Lyons suggests that these characteristics make them good targets for reference. Second-order entities are events, processes, states of affairs “which are located in time and which, in English, are said to occur or take place, rather than to exist” (Lyons 1977:443). Finally, third-order entities are ‘abstract’ entities such as concepts, propositions, or more generally, ideas outside place and time. As far as their linguistic realisation is concerned, Lyons points out that reference to both second-...and third-order entities is made most commonly, both in English and in other languages, by means of phrases formed by the process of nominalisations. But there is a fairly clear difference in English between the set of nominalisations that is appropriate
for the one purpose and the set of nominalisations that is appropriate for the other (cf. Vendler, 1967, 1968).

(Lyons 1977: 445)

The reference to Vendler’s work (see 1.5.1) can be taken as an indication that the term nominalisation must here be understood in the wider sense used by philosophers and linguists in the generative paradigm (e.g. Chomsky, 1976) as including not only the word-formation process of the transposition of a verb into the class of nouns, but also that-clauses, infinitives, ing-forms and other constructions which can function syntactically in lieu of nouns (Vendler 1967:125ff).

The major improvement of Lyon’s three-way distinction lies in the category of second-order entities. This class captures the intuition that events, states, processes and activities are more abstract than persons and things in the sense that they have no stable existence, but less abstract than ideas and propositions because they take place in the physical world. Second-order entities are “observable … and have a temporal duration”, while third-order entities “can be asserted or denied, remembered or forgotten” (Lyons 1977:445). A similar difference is operationalised in an explicitly perception-related, cognitive framework by Horie who distinguishes between “directly/physically perceived events” on the one hand, and “indirectly/mentally perceived events” (1991:234) on the other. For our purposes, the way Lyons discusses his three-way distinction is also useful: his focus is on the “phrases” used to refer to the different entities. In other words, by adopting his conception of “abstractness”, we are able to abandon the slippery (and often inaccurate) notions of “abstract” vs. “concrete” nouns and discuss instead the way speakers use their language to refer to (abstract) 2nd and 3rd order entities.

Schmid (2000:66) further subcategorises these 2nd-order and 3rd-order entities, tailoring the typology and the characterisation of the subtypes specifically for his study of shell nouns. The following is a summary of this categorisation:

1. Events (second-order entities): Activities [+ dynamic] [+ agentive]
   Processes [+ dynamic] [- agentive]
   States [- dynamic] [- agentive]

2. Abstract relations (third-order entities): Facts [states of affairs]
   Possibilities [facts in possible worlds]
   Ideas [objects of thought]
   Utterances [linguistic expressions of ideas]
While “both shell nouns and shell contents can represent either events or abstract relations”, (p.67) he argues that there is a crucial difference between the two: shell nouns and shell NPs “are conceptually incomplete. Taken in isolation, they cannot evoke fully-fledged, saturated thoughts in Frege’s (1977; 1918) sense” (p.67). Shell contents, on the other hand, are linguistically realised by clauses or even larger linguistic units and are therefore “saturated in this sense; they represent full propositions” (p.67). The material Schmid collected for his study suggested that shell contents representing abstract relations by far outweigh those representing events. He mentions too, in passing, that “even first-order entities can function as shell contents” (p.68). This is possible “when nouns like idea, notion and concept occur with of-prepositional phrases...however this case is comparatively rare” (p.68). Our focus in chapter 5 will be on the nature of these shell “contents”: we will then be in the position first, to counter the suggestion that such “contents” are realised “linguistically” at all, and secondly, to show that assuming “shell contents” will be “saturated”, in any sense, is misguided.

Regarding shell nouns themselves, Schmid (2000) argues that the “intuitively best examples like. fact, case, reason, idea, chance, possibility and aim all represent abstract relations” (3rd-order entities) (p.68). These nouns make up “the bulk and prototypical core of the class of shell nouns” (p.68). Nouns such as campaign, reaction, trick, or mistake “stand for observable physical events” (p.68) and are, in Schmid’s typology, therefore treated as denoting 2nd-order entities. While they can function as shell nouns as well, “they represent less typical cases because they are less frequent, collocationally less versatile than shell nouns denoting abstract relations and are often not directly linked to their shell contents by the relation of experiential identity” (p.68).

Regarding the categorisation as events and abstract relations, Schmid (2000) pays particular attention to the group of “superordinate nouns” such as state, event, action, act, activity, process and move. This group is interesting, he notes, because on one hand states, events, actions and processes are physically and directly observable. As a consequence, they must be regarded as event-denoting linguistic items and Lyons duly mentions them as “second-order nouns” (1977:446). On the other hand, “the nouns are highly abstract ways of expressing such observable events” (2000:70). Here, the crucial aspect is that “intentionally unspecific nouns are used to express events, and this brings about stylistic rather than extensional abstractness” (p.70).
2.6 Stylistic “abstractness”

A second aspect of “abstractness” that we must explore concerns the way speakers render their expressions linguistically. As Schmid (2000:70) describes it, experiences denoted by such nouns as event, state, and process are not so much abstract in extensional terms as they seem to be stylistically abstract ways of talking about physical and concrete events. “Abstract ways of talking about” things brings us back to “vagueness” and “underspecification” in text. First, as discussed in section 2.2.1 above, for the purposes of this study we will view “abstractness” as inextricably bound up in context: the distinction between the “abstract” and “concrete” use of a noun reflects how a given referent is conceived in a given context - “a difference in how a language user wishes to regard and present the referent at a given time” (Carroll, 1978:20). The most important aspect of context, for our purposes, will be the writer/speaker’s apparent conception of his/her intended reader/listener. Allan’s (1980:542) point that “if his listeners do not already know the countability of the NP reference, the speaker must make it known to them” assumes a co-operative speaker (in the Gricean sense). When looking at stylistic “abstractness”, we too will assume that the speaker/writer is being co-operative in the sense of providing sufficient information for his/her intended recipient such that s/he is able to make the best possible sense of what is said.

2.6.1 Under- and Over-specification

The aim in this section is to begin offering some suggestion as to why the mere presence of nouns used to refer to 2nd- and 3rd-order entities may result in an apparently “vague” text. The larger question of the difference between the way the published and student writers in this study use these nouns will be taken up in Chapters 4 and 5. This discussion simply builds on characteristics already associated with these nouns and is restricted to the realm of semantic relations.

As our concern is vagueness understood as “underspecificity”, it will be helpful to start out by looking at Cruse’s (1977:153ff) early ideas regarding “the pragmatics of lexical specificity”, and how these relate to the notion of hierarchical taxonomies (cf. Rosch et al., 1976; Saeed, 1997). Cruse (1977, 1986) notes that one of the linguistic variables under our control as speakers of a language is the specificity of the lexical items we choose to refer to something. All our options, he continues, are equally appropriate from the point of view of their inherent sense. Therefore, he asks, what sort of factors determine which word(s) a speaker will choose? For
example, what would motivate a speaker to use option (a) rather than option (b) in the following case?:

1. a) We found an old thing in the attic.
   b) We found a seventeenth century silver snuffbox in the attic.

If we wish to communicate effectively, Cruse argues, we must submit to certain constraints on the choice of level of specificity in particular situations. For instance, a referring expression must contain enough information for the addressee to be able to identify, or to conceptualise (e.g. in the case above) the intended referent (Cf. Grice’s ‘Maxim of Quantity’, 1975:45-6). The amount of information (and hence, in general, the degree of specificity) that is required will vary from situation to situation. The need to refer successfully thus sets a lower limit to the level of specificity of a referring expression (Cruse 1986:153).

In his earlier consideration of this issue (1977), Cruse explains his ideas on under- and over-specification through the notion of marked vs. unmarked utterances. For instance,

1. a) I think I’ll take the dog for a walk.
   b) I think I’ll take the animal for a walk.
   c) I’ll take the spaniel for a walk.

2. a) Get some apples please!
   b) Get some fruit please!
   c) Get some un-bruised Granny Smiths please!

As Cruse (1977:154) argues, most people would agree that the utterances marked (a) are in some sense more neutral than those marked (b) and (c). Not that there is anything unacceptable about the latter; they do however “seem to call for special contextual features, or carry implications” (p.154). Cruse therefore regards the (a) utterances as unmarked and the (b) and (c) utterances as marked. As such, “what is it about the (a) utterances that gives them their unmarked, or neutral quality?” (p.154). Noting that the Gricean principle of co-operation is a major determinant of the form and content of utterances in communicative exchanges, Cruse nevertheless argues that it is unable, on its own, to explain all the facts relating to the level of specificity of lexical items. “A full account of these incorporates Grice’s principle, but must in addition invoke the notion of an inherently neutral level of specificity” (1977:164). In the series animal-dog-spaniel, dog would
therefore be viewed as representing the “neutral level of specificity”. Research by Rosch and her associates (1976) on “basic-level effects” supports Cruse’s (1977) intuition. They found that the psychologically most basic level was in the middle of the taxonomic hierarchies:

<table>
<thead>
<tr>
<th>SUPERORDINATE</th>
<th>ANIMAL</th>
<th>FRUIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASIC LEVEL</td>
<td>DOG</td>
<td>APPLE</td>
</tr>
<tr>
<td>SUBORDINATE</td>
<td>SPANIEL</td>
<td>GRANNY SMITH</td>
</tr>
</tbody>
</table>

Among other things, Rosch found that the basic level is
- the highest level at which a single mental image can reflect the entire category,
- the level with the most commonly used labels for category members and,
- directly related to Cruse’s work, that it is the level at which terms are used in neutral contexts.

Thus, argues Cruse, “a marked level of specificity must either be an overspecification or an underspecification, relative to [the inherently neutral level of specificity]” (1977:159). Overspecification, he argues, is at least theoretically possible in most situations. Underspecification, however, “is highly constrained by context, and is not always possible” (p.159). For example, if either of the following were uttered in a context where only one animal could possibly be the intended referent, dog (3.b) would be an overspecification from the point of view of referential function, and the option would exist for marked underspecification, as in 3.a):

3.a) When are you going to take the animal to the vet?  
    b) When are you going to take the dog to the vet?

In a context where both a dog and a cat might be considered referential candidates, 3 (b) would still be unmarked, but the option of marked underspecification (as in 3.a) is far less likely to be available. The reason for this restriction is that, in such a context, 3 (a) would probably provide the listener with less information than s/he “conventionally has a right to expect” (1977:163, italics mine), that is, insufficient information to enable him/her to successfully identify, or conceptualise the intended referent.

Cruse suggests two ways for increasing the specificity of an expression (1986:155):
1. To add syntagmatic modifiers: the book, the red book, the tattered red book on the table in the hall, etc.
2. The second way, and the one he is more concerned with, is to replace one or more lexical items in an expression by hyponyms: It's an animal; It's a monkey; It's a colobus. This second method is usually preferred if suitable lexical items exist.

It seems then, that to account fully for the semantic contribution of certain lexical items to certain utterances in certain situations we need to know their location in a taxonomic hierarchy relative to the generic level. This is an inherent property of the network of relationships into which lexical items enter, and is not predictable from other aspects of meaning. So where are “shell nouns” located in this hierarchy?

In discussing their class of general nouns, Halliday and Hasan (1976:274) present nouns like question, idea, fact, and thing alongside people, man, creature etc. as “the superordinate members of major lexical sets. Such superordinates are used in establishing the cohesive relation of “reiteration”; e.g. She took the cat to the vet immediately. The poor creature was...

An important point that must be made with regard to a relationship like “superordinateness” is that it is not given in any way by the language, but created anew by each writer. As the research of Rosch (1976) and others shows, there are clearly many conventional hierarchies in the realm of 1st-order entities. That is, hierarchies that would allow the specificity of an expression to be increased by the choice of hyponyms, as suggested by Cruse above. However, when it comes to nouns used to refer to 2nd- and 3rd-order entities, it is not possible even to begin to suggest what might usually occupy the “base level” or “subordinate” level under the “superordinate” fact. Nevertheless, one can certainly see how such nouns could be used at the superordinate level. As Saeed (1997:68) points out, much of our vocabulary is linked by such systems of inclusion and the resulting semantic networks which in turn form hierarchical taxonomies. However, within any text a writer may well establish his/her own hierarchies, thus drawing attention to senses of words that are not usual or central. In her discussion of what she calls “anaphoric encapsulation”, Conte (1996) argues that the “encapsulating noun phrase” produces a higher level in the semantic hierarchy of the text. The noun phrase thus functions simultaneously as a cohesive device and as an organising principle in text structure. It seems far more sensible to view the operation of “shell/carrier” nouns in this way than to insist on “the characterising potential inherent in the context-independent meanings of shell nouns” or nouns being used “to create context-dependent conceptual shells” (Schmid, 2000:377). If, as Conte

1 cf. Francis’s (1994) “retrospective labels".
(1996) argues, the role of encapsulating noun phrases is very similar to that of bare demonstrative pronouns, the specificity of the preceding predicate will be crucial in enabling the reader to identify or conceptualise the intended referent of the noun phrase. As we have discussed above, context is what ultimately determines the level of specificity a reader/hearer “has a right to expect”. But if a noun phrase is “encapsulating” while also producing a higher level in the semantic hierarchy of the text, then the least that can be expected from the preceding predicate is that it be one “level” down, i.e. at some neutral, “basic level” where there is no apparent under- or over-specification. Let us now sum up the main issues by referring to the following illustrative text:

Two small yet piercing eyes. The attitude of a temperamental landmine. Ten years old and with timing that put my alarm clock to shame. This cat is what stood between me and my first cup of coffee every morning for the year I lived with Jane. The house reeked of senile tabby and the sofa was beginning to resemble one, yet she would not hear a bad word about the creature.

Brown and Yule (1983) argue that “despite the fact that ... the idea is put forward that some linguistic expressions have unique and independent reference, we shall insist that, whatever the form of the referring expression, its referential function depends on the speaker’s intention on the particular occasion of use” (p.205). If a speaker wishes to use a noun more usually associated with reference to 1st-order entities (e.g. cat) to encapsulate a “complex of concepts”, there seems to be nothing stopping him/her. Nor is it feasible to argue that such “full-content” nouns cannot be used as cohesive links or for what Schmid (2000) calls “temporary concept-formation”. Used as it is in the above passage, one could argue that cat, for all its stable, specific denotation, is certainly functioning to “encapsulate” a temporary concept, relevant only to the context in which it appears. Positioned as it is, cat in “This cat” must be interpreted together with the preceding information, and as such it is used to refer anaphorically in the same way as a “linking” pronoun would be. This function has been achieved by using a strong, “uniquely referring”, determiner (This), by topicalising characteristics not immediately identifiable as cat-like, then referring back to them with the label cat. Thus a noun with no “variable meaning” (Ivanič, 1991) which would not, in Schmid’s (2000) terms, contain any “semantic gaps” has been made “lexically unique” via the specificity of the intended referent.

Brown’s (1997:2) example of the grinding process (This room smells of cat / senile tabby) has been included as a reminder of this common “recategorisation” phenomenon. While such recategorisation has been discussed in terms of countability, it seems clear that in the process,
abstraction happens too, away from any concrete thing to a more ephemeral element of it that must be conceptualised without its concrete accompaniments. That is, the subordinate noun tabby is no longer used to refer to a bounded, 1st-order entity; rather we find it used to refer to an unbounded, 2nd-order entity - some “essence of cat”, as Brown (1997) puts it.

Finally, the creature in this case is used to refer specifically (endophorically) to cat as characterised in this passage - i.e. “temporary concept-formation” (context-dependence) has been established as well as a clear linking function. The reference is specifically anaphoric (surely triggering co-interpretation), and this “encapsulating noun phrase” certainly produces a higher level in the semantic hierarchy of the text (as does the NP “this cat”). The resulting “marked underspecification” is acceptable because there is no possibility for competition between potential referents. Finally, used in this way creature also obviously “characterises” in a way distinct from it or the cat - the writer’s attitude is captured in the choice of noun which, despite its broad range of reference, could also successfully be used later on in the text to refer to the same cat. Nevertheless, creature would be regarded as a full-content noun and not a shell noun by Schmid.

The distinguishing characteristics of carrier/shell nouns as postulated by Ivanič and Schmid are therefore not particularly convincing. This is not to say that no distinction should be drawn between nouns like cat and house and others like idea, concept etc. - Lyons’ (1977) three-way distinction between first, second and third-order entities is most helpful in this regard. However, the grounds for restricting the type of “encapsulating” function characterised by Schmid and others to only those nouns used primarily to refer to 2nd and 3rd-order entities seem insecure.

2.7 Summary

It was noted in Chapter 1 that the very nouns blamed for the vagueness in student writing are used frequently by professionals, both in written and spoken academic discourse. Thus, from the outset, it seems clear that merely studying the properties of the nouns themselves will provide us with little additional insight. However, as Schmid points out, a discussion of “abstractness” must take the traditional (semantic) approach into account as well as what might be called more “cognitive” views involving use. Hence I have tried to provide an overview of both approaches. As a result, it seems clear that a lexico-semantic approach is fraught with circularity.

First, we examined the difficulties apparent in categorising count and non-count nouns, noting that the traditional distinction involving the concreteness or abstractness of the denotata of
nouns seems to falter in the face of *use*. That is, a speaker of English has access to productive processes (the Universal Packager and Grinder for instance) which we have seen illustrated earlier in this chapter. Should this speaker choose to use a noun in an "abstract" way, s/he will almost certainly find a way to do it. Hence the problems inherent in the use of "countable and abstract" as defining criteria for a "group" of nouns. In light of these problems, I will follow Allan (1980; see 2.2.1) in assuming that countability is not in fact a characteristic of nouns, perse, but of NPs.

A further problem relates to the way many writers use the term "meaning". For example, in emphasising that "these nouns take the bulk of their meaning from context", Ivanić (1991; along with other writers) completely sidelines the distinction drawn in semantics between sense and reference. The sense/reference distinction is, however, a widely-understood, fundamental semantic concept. Hence building on this distinction seems a far more efficient way of arriving at descriptive clarity, than creating "new" distinctions between "constant meanings" and "variable meanings" (Ivanić, 1991) or "specific meaning" and "unspecific nominal elements" (Francis, 1994). The *sense* of any noun (carrier/shell or not) will stay constant. A speaker, however, has carte blanche when it comes to selecting the referent and constructing the referring expression - *reference*, as we have seen, is an utterance-dependent notion. The important point is that both lexemes and expressions are said to have sense (and denotation), whereas only expressions have reference: a referring expression consists of an NP, not just its head noun. Finally, while a noun used to refer to a 3rd-order entity may have an established "sense", it will require adequate constraint of its broad range of reference in order to be communicatively effective. Obviously, the higher up a noun sits in a 'categorising' hierarchy, the broader its potential range of reference will be. The nouns that have been categorised as shells, carriers etc. seem frequently to be used in texts as superordinates. I would not, however, go so far as to call them "superordinate nouns" (cf. Halliday & Hasan, 1976) because this situates "function" in the lexicon rather than in the speakers/writers who use it. It does seem possible to claim, however, that the use of nouns like *aim, purpose, idea* etc. as superordinates is likely to increase the potential for "vagueness" in a text. This claim will be explored fully in Chapter 5.

I have presented an array of approaches to abstractness and abstract nouns in order to provide not only a summary of what has been written on this topic, but also to show that no matter how disparate these may be, they must all tackle the issue of "use in context". The focus of this study is on why the *use* of certain nouns by one group of writers (students) leads to vagueness while the use of the same nouns by another set of writers (published) appears to be
invoked to support coherence. Context, both linguistic and extra-linguistic, is thus paramount, meaning one cannot usefully examine a group of words in isolation. The use of a noun entails a referring expression, which itself consists of an NP. An NP is a syntactic string, and the only agreed-upon defining criterion of carriers/shells/labels etc. that appears from Vendler onwards through to Schmid is the particular syntactic pattern most frequently associated with these nouns:

1. Det + (prem) + N + postmodifying that-, infinitive or wh-clause.
2. Det + (prem) + N + copular be + complementing that-, infinitive or wh-clause.

I will therefore be focussing on the Noun Phrase, first on its form as the syntactic host of "shell/carrier" nouns, and then on its function as a referring expression in my data. Before presenting the main analyses (Ch 4 and 5), I will set out in more detail what I understand about referring expressions then introduce some of the data used in my study (Ch 3).

2.8 Referring expressions: a Cognitive-psychological approach

Like Mira Ariel (1990, 1996a, 1996b), Cornish (1999) develops a cognitive-psychological approach to discourse anaphora: indexical expressions, whether used deictically or anaphorically, constitute specific tacit instructions to operate upon the mental discourse model which the addressee is constructing in collaboration with the speaker (p.5). This model is, ideally, a coherent representation of the discourse being evoked via the co-text and its context in terms of the speaker's/writer's hypothesized intentions. Anaphora and deixis are thus viewed as discourse-model management procedures designed to bring into conformity speaker's and addressee's models of the current discourse. This is achieved by altering or maintaining the saliency level of some discourse referent already represented within the discourse, or of one which is associated with a given entity already resident therein (p.5).

As Ariel (1996b:31) observes, the speaker's task in referring must be to choose a referring expression marking the level of cognitive accessibility of the intended referent. This level must match that which s/he assumes the entity in question currently enjoys in his or her addressee's mental model of the discourse under construction. If that referent is assumed not yet to be resident in the latter's developing discourse model, then it is incumbent upon the speaker to introduce it - for example, via an indefinite or quantified noun phrase or a 'long' definite description, including modifiers and restrictive or non-restrictive relative clauses; alternatively, s/he may assume that a representation of the intended referent is already present in the
addressee’s discourse model - but if in fact it is not, the latter will try to "accommodate" it using various methods of connection with referents which are already contained in it.

The speaker’s "task in referring", as set out above, seems an immensely complex one, regardless of his/her level of competence. Maratsos and Deák (1995) would refer to this as a fox activity. They set up what they call a basic "fox-hedgehog" distinction (based on Berlin 1954) between psychological structures or processes (p.378). The first kind of structures - relatively highly algorithmized, small and organised set of central elements - they call hedgehog structures. The second kind of processes - hard to algorithmize, a relatively large and diverse set of contributing elements - they call fox activities. For example, grammar, for all its complexity, is more of a hedgehog function for children acquiring their L1. While the same may not be altogether true of L2 learning, the core of grammar (as opposed to pragmatics for example) certainly lends itself more easily to being organised into a "how-to-do" list; something that can be consulted as a framework. Pragmatics, the use of language for social purposes, requires more foxlike, on-the-spot problem solving activities. While there are, no doubt, some basic principles behind pragmatics, application of these is a fox activity. Choosing an appropriate referring expression requires the speaker to apply Grice’s (1975) maxims within the framework of the physical context, as well as what they know about their interlocutor. As Maratsos and Deák (p.378) point out, figuring out what is informative to someone else requires figuring out what the other person already knows (or is likely to know), which may involve using what one knows (or guesses) of the other person’s history, manner of speech, previous remarks in the conversation, basis of current acquaintance, purpose of the present conversation, and any number of other factors. For that matter, one must figure out how much information the other person wants; they may tolerate only so much repetition. This task clearly acquires an added level of complexity when your addressee is not present; i.e. in written discourse. I mention this now because this kind of “game-playing” will be crucial to bear in mind when analysing the students’ writing for what are, essentially, the products of fox activities. Referring expressions are undoubtedly the result of such activities and, as Maratsos and Deák (p.380) note, it is not easy to say much about how anyone learns to do this.

So if the referent is correctly assumed to be in the addressee’s discourse model, then the speaker will use an indexical device consonant with the ease with which s/he predicts the addressee to be able to access it, at a given point in the discourse (Cornish, 1999:6). Given that

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2 For example, Grice’s (1975) Co-operative Principle, which subsumes the specific “maxims” of Quantity, Quality, Relation and Manner.
this is so, there are three possible situations (p.7): In case (1), the referent is assumed to be at the forefront of the addressee’s (and the speaker’s) consciousness, and there is no relevant competition between referents bearing the properties which the anaphor presupposes they possess; in this case an unaccented pronoun or zero will be used, a form whose use carries with it the assumption that the addressee will find no difficulty in retrieving the intended referent - at least, where the speaker is being “considerate” in so referring. The level of cognitive accessibility of the intended referent is therefore assumed to be high. In case (2), the assumption is that the intended referent is not in focus, but is both familiar to the addressee at that point in the discourse and “activated” (see Chafe 1994; Gundel 1996); under these circumstances, a demonstrative pronoun or accented third-person pronoun will tend to be used. The corresponding accessibility level of the expression’s referent is thereby marked as being intermediate, or medium. Translated into Gundel et al.’s (1993) or Chafe’s (1994) models, this would be “activated” and “accessible”, respectively.

Finally, in case (3), the referent is assumed to be inactive, that is, of low accessibility. Referents having this attentional status are ones which were discourse-active earlier in the discourse, but which have been supplanted by more recently introduced or evoked referents. Alternatively, they may be located in long-term memory as items of encyclopaedic, stereotypical, or personal knowledge.

As anaphora is generally concerned with “backward” pointing of some sort, the term antecedent is central. An antecedent, for Ariel, is a mental representation bearing a given saliency, or accessibility, level, and is not a segment of co-text (“different antecedents are stored in the addressee’s memory in different degrees of accessibility”, 1996b:17). See also Givón (1995: 376), who writes of a topical referent potentially having “an accessible antecedent in some external mental representation”.

The cognitive-psychological account of discourse-anaphoric reference is potentially open to criticism from the point of view of linguists who give greater priority to the tangible world of the co-text in accounting for discourse anaphora. That is, cognitive-psychological, memory-based accounts are claimed to downplay the role of the text in allowing the resolution of indexical expressions, and to be too unconstrained in that they do not exclude possible occurrences of anaphora where these are in fact impossible. The lexicalist account is expressed in terms of the pairing of an antecedent expression in the co-text with a given anaphor. It holds that it is a result of this co-textual pairing that the former’s independent sense and denotation are
transferred to the latter, which is non-autonomous in these respects, thereby giving it an interpretation.

Cornish (1999) points out the “syntacticist” stance adopted by proponents of this account, noting the kind of “armchair theorising” that usually goes along with it (p.1). For analysts who proceed in this way, anaphora is essentially a formal syntactic phenomenon wholly or mainly describable and explicable in terms of the language system (p.1). Thus discourse anaphora is often treated as if it were an inter-sentence level occurrence subject to the criterion of grammaticality. Brown and Yule (1983) highlighted the inadequacy of such accounts almost 20 years ago and, as Cornish (1999) goes on to argue, the lexicalist procedure in fact results in a quite serious distortion of the facts of discourse-level anaphora as well as deixis. First, anaphora is an utterance-level phenomenon, not a sentence-level one. For it is particularly sensitive to aspects of the context of utterance of the segment in which the anaphor at issue occurs, as well as to its left-hand and right-hand co-text. When we are dealing with discourse anaphora, where the distributional properties of given types of discourse anaphor have been respected in terms of the semantic-syntactic environments in which they occur, then the well-formedness of any given instance is a very delicate issue to resolve. For such instances have the status of (potential) utterances, and are subject to all the complexity and variability which contextualisation brings with it. “Indeed, the very raison d’être of discourse anaphors is actually to point to an element of the context in which they occur, and their text-forming role is well established in the relevant literature. Their use thus presupposes a particular type of context and creates a new context at one and the same time” (Cornish, 1999:2).

Of course anaphora is inherently a co-textual and contextual phenomenon, whose concrete manifestations in terms of the actual anaphor selected to realise it, in any given instance, are sensitive to the nature of the textual segment in which that anaphor occurs as well as its discourse function. At the same time, those concrete manifestations mark the existence of a particular type of discourse segment: zeros marking the tight cohesion typical of a grammatically realised connection between conjuncts, or within a single complex sentence; definite or demonstrative descriptions indicating the closure of the preceding segment and the start of a new one, to take three examples (Cornish, 1999:14). These textual distributions and functions are reflections of their cognitive-psychological values, as described by Ariel and Gundel and her associates, or by Givón, Chafe and others. As Givón (1995:343) suggests, “for the text comprehender, overt grammatical signals - syntactic constructions, morphology, intonation - cue the text processor, they guide him/her in the construction of a coherent mental representation of
the text”. Cornish (1999:15) supports the way Givón conceptualises the relationship between the textual-grammatical and the cognitive; that is, calling the signals created by the textual-grammatical, “mental processing instructions”, which prompt the understander to construct a coherent discourse model as a function of his/her perception of the context framing that discourse. At the same time, discourse anaphora as well as deixis have a clear cognitive, memory-based role.
Chapter 3

3.1 Introduction

The emphasis in Chapter 2 was on differentiating between nouns which have potentially vague denotation and NPs which (may) have vague reference. I concluded that I would be adopting an approach focussing on referring expressions and set out a more fine-grained approach to these expressions.

I now turn to my own study. In 3.2 I will introduce the research subjects and some background on the task they were given which elicited the texts I am analysing. We will then look at excerpts from the student and PW sub-corpora in an attempt to illustrate the type of "vagueness" apparent in the student writing. While I stated at the end of Chapter 2 that I would look first at NPs as the syntactic host of "shell/carrier" nouns, this quantitative analysis (presented in Chapter 4) does very little to indicate where I perceive the "vagueness" to lie in the student writing. It is therefore essential to take a step sideways, as I will be doing in this chapter, and introduce what will be taken up again in Chapter 5. In the final section of this chapter (3.3) we will begin looking at the background upon which the quantitative analysis in the following chapter is based. That is, the idea of syntactic patterns playing "hosts" to "shell" nouns, hence allowing/enabling them to perform a particular function. This last section will therefore serve as an introduction to Chapter 4.

3.2 Introduction to the study: Where does the vagueness lie in Student writing?

We saw an example early in Chapter 1 of how academic writing guides portray vague paragraphs. Such paragraphs contain large numbers of abstract nouns, and it is these nouns that are said to lead to vague writing, writing containing very little specific information. The purpose of Chapter 2 was to show, first, how difficult it is to pin down so-called abstract nouns and secondly, to distinguish clearly between abstract nouns (denoting entities that are not available to any of the senses) and referring expressions said to have vague reference. The argument, in sum, is that the "abstractness" of nouns themselves apparently contributes very little to the "vagueness" of writing like that illustrated in the aforementioned writing guides. What we are most concerned with is, rather, the referring expressions chosen by writers and the way these contribute to stylistic "vagueness".
3.2.1 Background on the Subjects and Task

All the subjects who contributed to this study were second-year undergraduate students at Rhodes University (RU) in the Eastern Cape province of South Africa. As mentioned in Chapter 1, while the South African education system is (in theory) no longer segregated according to race, most young people continue to attend secondary schools close to home; consequently many black students are still thought of as being subjected to a “disadvantaged educational system”. What this means, essentially, is that schools in poorer (mostly black) areas remain under-funded, with fewer facilities and, most importantly for our purposes, staff who are frequently not mother-tongue English speakers (even though English is the medium of instruction in most high schools). For many black students, university is therefore their first experience of being taught by native English speakers who do not code-switch.

All the L2 students who contributed to this study were native Xhosa speakers and many would have come from such “disadvantaged” educational backgrounds. The English-speakers, on the other hand, were all white students. In South Africa, most people of Indian and Pakistani origin also speak English as a first language. However, the population of “Indians” is very small in the Eastern Cape province; thus the vast majority of English speakers are white. All of these students received their secondary education in South Africa. However, there are different “types” of high-schools that they could have attended1. While many would have had state-subsidised secondary education, they would also have had access to the many “private” schools in the country. While some of these schools offer so-called “alternative” approaches to secondary education, many of them are old “mission” schools that have become, thanks to private funding, some of the best in the country. They have always been open to all races, but the very high tuition fees have made them inaccessible to all but a small proportion of black children.

The undergraduate degree structure at RU has changed recently; in fact control of this East London branch will, over the next year, be transferred from RU to the University of Fort Hare as part of the extensive restructuring happening in South African higher education. However, at the time my research subjects were enrolled, their degrees would have been structured as follows: regardless of whether a student registers for a Bachelor of Arts, Science, Social Science or Commerce degree, in the first year s/he is required to enrol in four or more subject courses. At least four courses will be examined at the end of the first year, and a minimum of 50% must be achieved in each course for the student to continue to the second year.

1The question of whether subjects (L1 & L2) attended state or private schools was not asked - a regrettable oversight on my part.
At least two of these courses have to be potential “majors”, i.e. they will be the focus of three years of study and examination of these two subjects will determine the final degree results. Thus, in the second year, a student will “carry” two subject majors from the first year, and must study two further subjects as “credits”. These may be more introductory courses or the continuation of courses begun in the first year. In the final year, all but the most competent students will study only their two majors. For example:

Year 1:  
English Language and Linguistics I  
Legal Studies I  
Cognitive Psychology I  
Journalism I  
Year 2:  
Cognitive Psychology II  
Legal Studies II  
Economics I  
Latin I  
Year 3:  
Cognitive Psychology III  
Legal Studies III

Importantly, for our purposes, Cognitive Psychology may be taken as a major in an Arts, Science, Social Science or Commerce degree. Consequently, the first and second year classes are usually the largest undergraduate classes in the university, and this is known to have an impact on the way the courses are taught and the types of assessment methods used.

In addition to the exams written at the end of each year, students are assessed throughout the year via tests and essays, as well as a mid-year exam. The combination of these results make up a “year-mark” which in turn contributes 20-30% of the final result. While this reduces some of the pressure on students during their final exams, it also means they are required to perform well on a variety of tasks throughout the year, many of which are expository essays.

The task resulting in the data used for this study was an assessed essay set towards the end of the students’ second year in Cognitive Psychology, the course being “Cognition: Change and Context”. While an almost equal number of first and second language speakers contributed data, the L2 corpus is smaller because L2 students generally write shorter papers. Students were given two and a half pages of “background information” on a study conducted in a rural community by their professor. They were then given a series of questions which they were

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2 16 L1 texts, 15 L2 texts.
required to answer during the course of the essay (see Appendix II for a copy of the assignment sheet). The structure of this assignment is not necessarily typical of the “essay questions” students usually have to respond to. The Professor who set this task is a leading proponent of teaching reform in the University. It is his belief that providing structured tasks such as this one reduces the pressure on students to “discover” and apply the mostly hidden rules of essay writing. However, as we will see later on, this type of assignment contains its own pitfalls and has had a large impact on the type of texts the students have produced.

In order to build a comparable corpus of published writing, I used articles from established Cognitive Psychology journals. My main concern was that the article be focused on “the nature of reasoning” and be comparing results across at least two different groups, as the students were required to do. The South African research upon which the students’ task is based was conducted in the early 1980s. The eight journal articles chosen for the PW corpus span the period 1990 - 1998, with one article from 1972.

3.2.2 Exemplifying the problem: Published v Student Writing

By way of introduction to my data, I will now provide some examples from the corpus used for this study. The following excerpt is from the sub-corpus of published writing (PW):

A. The century-old conviction that humans reason according to some content-independent logic, was shattered by a number of factors, among them research on the selection task introduced by Peter Watson (1966). In the selection task, the subject is asked to search for information that can violate or falsify a conditional rule. The main result of this research is that reasoning is guided by the content of the task, rather than by its formal structure.

There are apparently very many abstract nouns in the above paragraph. What we are really interested in, however, are the underlined structures det + (adj) + N; what Schmid (2000) would call “shell NPs”. Firstly, these are referring expressions that would, arguably, be considered to have vague referents out of context. That is, out of context, it is very doubtful that the writer’s intended referent would be successfully identified by the reader. As Brown and Yule (1983) put it, “whatever the form of the referring expression, its referential function depends on the speaker’s intention on the particular occasion of use” (p.205). The only way the producer of a written text can assist the reader in pinning down that intention is, as discussed in Chapter 2 (cf.
Ariel, 1996), by providing sufficient co-text to constrain interpretation. "Just as the interpretation of individual lexical items is constrained by co-text, so is the interpretation of utterances within a discourse" (Ariel, 1996:47). A referring expression that is labelled "vague" is one appearing in a written text lacking any, or sufficient, co-text to usefully constrain its interpretation.

What we need to look at now is how the writer of the above PW excerpt uses referring expressions, and establishes relationships between (and within) the NPs, in order to specify intended referents and hence avoid the sort of vagueness we are interested in. For the sake of maintaining some basis for comparison with Schmid’s (2000) study, I am looking only at minimal NP structures (and hence “referring expressions”) of the sort characterised by Schmid as “shell NPs” and underlined in the above paragraph. I will call these structures “micro NPs” in order to distinguish them from the full, maximal NP (henceforth “macro NP”). What follows is a rough “first-sweep”; the aim is simply to provide some idea of the data used in this study and the perceived problems. This analysis is formalised and presented in detail in Chapter 5.

Firstly, we need to take into account the surface features linking all three sentences: The second sentence begins “In the selection task”, referring anaphorically, via lexical repetition, to the immediately preceding micro NP. The micro NP “... this research” early in the third sentence refers back to “research on the selection task” in the first sentence of the paragraph. The use of lexical repetition within a definite NP (“In the selection task...”) indicates an assumption that while the referent identified by the expression can be considered “activated”, it is still a new topic of which very little has been said. The demonstrative micro NP, “... this research”, on the other hand, is a clear example of a presupposition that the intended referent is still in the current attention focus or is associated with it. There is no relevant competition between referents and the writer assumes that no particular cognitive effort on the addressee’s part need be expended in order to retrieve the intended referent. This is true too of the micro NP “its formal structure” as well as “the task” in “the content of the task”.

However, we are rather more interested in the referential functions of expressions such as “the main result...”, “a number of factors...”, and “The century-old conviction...”. While linking via lexical repetition etc. may result in surface cohesion, it does not provide the discoursal reference needed to narrow down the intended referent. So what other strategies can be employed for this purpose? For example, the potentially vague “The century-old conviction” is being introduced for the first time and hence it is incumbent upon the writer to introduce its referent too. This is achieved within the macro NP itself, via what Ariel (1996) calls a “long definite description”. On the whole, the evident pre-modification and apparent long definite
descriptions, indicate a writer who assumes that the majority of the referents require introduction. These definite descriptions are frequently provided by that-clauses, two of the three below being of the sort identified by Schmid (2000) as being peculiar to "shell" nouns and held by Biber et al. (1999:645) to "actually complete the content of the head noun". In extract (ii) below, that could be replaced by which and this clause would be excluded by Schmid. He does, however, identify information as a shell noun and it will be argued at a later point that the that-clause in a case like (ii) sets up a "shell-content relation" as adequately as noun complement clauses:

i. The century old conviction that humans reason....  
ii. ... search for information that can violate or falsify  
iii. .....main result of this research is that reasoning is guided by...

In the above examples, the referent of the italicised NP is specified within its own predicate. Such specification can also be achieved via cataphoric reference (referring forward in the text) or, as Tadros (1994) would put it, "prediction". For example "a number of factors, among them research on...

Finally, we have two examples of "vague NPs" that, although modified, clearly require the reader to draw on his/her background knowledge, in particular knowledge within the frame of "conducting research": "some content-independent logic" and "a conditional rule".

Now let’s have a look at an excerpt from the student writing:

B. How do Piaget and Vygotsky account for the respondents’ response to the experiment? Hence the two respondents responded differently to the similar tasks given to them by the researcher, this essay is going to show how Piaget and Vygotsky account for this variation. We will also look at the limits to arriving to some of these respondents' thinking. In explaining the respondents’ reasoning to the task Piaget would argue that the respondents’ defined the objects by relating them to the past actions that have been done to them (Wood 1998).

This excerpt is the opening paragraph of this student’s essay; i.e. there is no preceding discourse. What is crucial here, however, is the background information that these student writers were given (see Appendix II). To recap, the students were provided with the results of a study conducted by their professor, and were asked to explain the findings based on the theories they
had been studying. They were thus immediately in the position of not knowing how much information to give. Knowing who their readers would be, and that they had the same “background information” available to them, allowed the students to utilise *exophoric* reference, referring implicitly to information in another text. Thus this particular writer relies almost entirely on *definite* NPs, a form whose use carries with it the assumption that the intended referent is both familiar to the addressee at that point in the discourse and ‘activated’. A reader without the benefit of the background information is consequently faced with countless “vague” definite expressions, and almost no clues for identifying the intended referents.

As in the excerpt from the PW corpus, surface linking and lexical repetition are employed and some surface cohesion is achieved (“respondents” appears five times). A sensible reader is clearly able to draw on his/her background knowledge that psychological “studies” are likely to involve people (respondents), performing “tasks” that may involve “objects”, hence minimal coherence is established. From the first line on, however, the reader is faced with an accumulation of “vague” referring expressions: what were the “responses”? What was the “task”? What were the “objects”? Almost no specifying information is provided in order to ensure successful identification of the intended referent. My purpose at this point is simply to highlight the issue of vague referring expressions. The remainder of this dissertation is devoted to the detailed analysis of the writing from which this excerpt is taken, so I will not devote further space to an analysis of this example. Nevertheless, even such a shallow look at two examples shows quite clearly that blaming the “vagueness” apparent in student writing on “abstract nouns” (as defined in Ch. 2) is simply wrong.

### 3.3 The “Patterns” that play “Host” to “Shell Nouns”

We have now had a look at examples of writing from the student and PW sub-corpora in order to get some idea of the type of problem I am investigating in this study. We have explored the traditional classification of nouns and concluded that *abstract* and *countable* are shifting categories, depending on use, and hence simply do not suffice as defining criteria for a distinguishable group of carrier/shell nouns. It has therefore been claimed that the vagueness encountered in the students’ texts must stem from the way they use referring expressions rather than their inclusion of “abstract” nouns in their writing. It is also accepted that studying these nouns out of context is likely to be a futile exercise as they only perform “shell/carrier functions” when a speaker/writer chooses to use them in this way. Nevertheless, starting with an analysis of their narrow linguistic “context” may well provide the first clues as to how the *use* of these nouns
differs from published writing to student writing. As mentioned already, certain syntactic structures have been identified as the most common linguistic contexts for “shell nouns”; i.e. Vendler’s (1967) container sentences. Ivanič (1991) makes a noun’s ability to appear in these sentences a defining criterion, and Schmid’s (2000) entire study is based on the findings of searches he conducted for these same syntactic strings (shell NPs) within the Bank of English corpus. These syntactic patterns also appear in Biber et al.’s (1999) Longman Grammar of Spoken and Written English, along with discussions, distinguished according to genre, of the nouns appearing most frequently as head nouns of the patterns.

While both Ivanič and Schmid conclude that what they are dealing with is a functional linguistic class rather than a definable group of nouns, they nevertheless provide lists of what they consider to be core, or exemplary, members of this class. The implication, particularly in Ivanič’s paper, is that these are interesting “words” in themselves, and much argument is devoted to why they might constitute a unique group of nouns. The initial questions of my own study also revolved around the nouns as a group; is there any difference between the student and published writing with regard to the type of noun being used to fulfil carrier/shell functions? Is there any difference in the frequency with which students and PWs use the nouns already subcategorised by others? A sample analysis of the data soon made it clear that answers to these questions alone would do little to shed light on the source of “vagueness” in student texts. Nevertheless, answers to such questions are potentially interesting and a quantitative analysis would begin providing them, as well as putting some of the claims made for carrier/shell nouns to the test in a different corpus context.

What follows is thus something of a critique of both Schmid’s (2000) and Ivanič’s (1991) studies, as they make many of the boldest claims for these nouns. Highlighting these authors’ views will also draw attention to more of the problems in work hitherto conducted on the nouns. Of particular concern is the implication that there is a way of establishing or defining the “group” of nouns most suited to performing shell/carrier functions. From a pedagogical perspective, having a sub-category of “shell nouns” to teach may seem to provide a neat, vocabulary-driven option. However, such artificial grouping (involving “fuzzy” boundaries) results in drawing attention away from speakers/writers and their choices (the function of the nouns); something both Schmid and Ivanič do in fact draw attention to:

“The combination of determiner + carrier noun allows writers to provide very precise discourse-processing signals to readers (if they choose to).”  
(Ivanič, 1991:108)
“It is important to emphasise ... that it is always the speaker of an utterance who characterises some piece of information by choosing a particular shell noun and modifier. ... shell nouns provide speakers with powerful tools for the characterisation, perspectivisation, and indeed even manipulation, of their own and other speakers’ ideas.”

(Schmid, 2000:8)

Biber et al. (1999) note that the group of nouns able to take that-clauses as complement clauses seems to be controlled by a “closed set of head nouns”. However, this is not the only syntactic string we are concerned with here (see fig. 3.2 below). As Schmid (2000) discovered, the number of nouns able to occur in his “shell NPs” is endless - he lists 670, noting that the class is, however, “open-ended”. For my purposes, the emphasis in studies like those conducted by Ivanič and Schmid is wrong. Focussing on identifying “core” members of the “class” of shell/carrier nouns, and then discussing their functions, draws attention away from what we should be examining (and potentially teaching): how one uses nouns successfully to fulfil a shell/carrier function.

Let us now review Vendler’s (1967; fig. 3.1) container sentences and the expansion of these used as search strings by Schmid (2000; fig. 3.2):

<table>
<thead>
<tr>
<th>N. Nominalisation is</th>
<th>nominalisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where Nominalisation =</td>
<td></td>
</tr>
<tr>
<td>‘that’ clause \ N. = ‘container noun’</td>
<td></td>
</tr>
<tr>
<td>‘to’ clause</td>
<td></td>
</tr>
<tr>
<td>‘wh’-question clause</td>
<td></td>
</tr>
<tr>
<td>or a deverbal noun</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.1: Vendler’s container sentences

The above Figure 3.1 represents the syntactic patterns which Vendler (1967) identified as container sentences. This figure represents the idea that, “unlike other nouns, ‘container nouns’ can take a verbal complement in the form of a nominalisation or clause acting as a noun”. That is, “a container noun (N), such as purpose, can be the subject of a relational process verb (such as ‘is’), and take a noun clause as complement” (Ivanič, 1991:101). For example: “The purpose of the following section is to provide an elementary account of the magnetic properties of ferrites.” (from Ivanič, 1991:101)

Schmid (2000) expands Vendler’s patterns as follows:
Schmid argues for a relation he calls *experiential identity*, constituting the semantic and cognitive basis of the above “four major linguistic means of linking shell nouns to their contents”. For the communicative success of shell nouns it is vital, he states, that they are interpreted together with their content (2000:21). “Speakers trigger such a *co-interpretation* by means of a fairly small number of linguistic devices” (p.21), namely the lexico-grammatical patterns as set out in Figure 3.2. In his discussion of these lexico-grammatical patterns, Schmid seems at first concerned with distinguishing the nature of “shell contents” (the underlined element in the above figure 3.2). If he had restricted his patterns to noun complement clauses, he might be able to argue, like Biber et al. (1999), that “complement clauses differ from postmodifying clauses in that they do not have a gap corresponding in meaning to the head noun” (1999:645). Thus he might be able to characterise the “shell content” as somehow necessary information as opposed to non-necessary, additional information. However, he includes *to*-clauses (among others) in his list of postnominal clauses expressing shell contents and thus, like Biber et al., must admit that *to*-clauses following abstract head nouns have missing subjects just like post-modifying *to*-clauses and can only be separated from the latter on semantic grounds (2000:24). Schmid thus concludes that a “strict, general separation between postmodifiers and complements is impossible if one considers the whole range of possible sequences of abstract nouns followed by clauses” (2000:24). Therefore he chooses to use “the neutral term *postnominal clause*” in his study.

This conclusion suggests, in fact, that the linguistic devices with which speakers “trigger co-interpretation” are far from small in number. Rather, it seems any predicate could be said to
specify the “contents” of any head noun. For Ivanič, the most interesting instances of carrier nouns are “those which have clauses, sentences and whole stretches of discourse as their variable meaning” (1991:111) or, to use Schmid’s terminology, “shell content”. But the category carrier noun “also encompasses nouns which have their variable meaning supplied by phrases or single words” (Ivanič, 1991:111). Thus, apart from complement clauses, one really cannot make any general claim that we are dealing with clauses “controlled by a closed set of head nouns” (Biber et al., 1999:647). Schmid’s choice of the term “postnominal clause” also implies that there is little reason, other than the constraints inherent in analysing a large corpus, for excluding “which” from a search for wh-clauses. Schmid states, from the outset, that he is concerned with nouns that take appositive that-clauses, infinitives and wh-clauses, as well as nouns taking that-clauses, infinitives and wh-clauses as complements after the copula. He argues that “only the patterns N-cl and N-be-cl more or less guarantee that the noun in the nominal slot is actually a shell noun” (2000:40). One can be fairly sure about this, he claims, because what they are linked up with is by definition expressed by means of a whole clause, and when a clause rather than a noun phrase is used to describe some piece of experience, this is normally done because this piece of experience is too complex to be rendered by means of a minimal noun phrase (2000:40). Such complex types of experience “need to be turned into temporary concepts when they are to continue to play a role in a text or discourse. So the fact that clauses rather than noun phrases are the targets of reference in the patterns N-cl and N-be-cl is a fairly reliable indicator that temporary concept-formation is actually involved” (2000:41).

My reservations regarding Schmid’s fundamental notion of “temporary concept formation” have already been expressed. That is, by acknowledging the distinction between sense and reference, there is no need to posit any notion of “temporary concept formation”: on every occasion of utterance, a speaker will potentially specify a referent in such a way that necessitates the formation of a “temporary concept” on the part of the listener. Nevertheless, I mention Schmid’s explanation of why he sees these particular patterns as “reliable sources of shell nouns” to show that this, in itself, still provides no valid reason for excluding relative clauses. As Schmid points out, while the Bank of English corpus includes the tag CS (indicating conjunction), no automatic tagging is 100% accurate. Consequently, many examples of nouns with postmodifying relative clauses introduced by that found their way into his frequency lists. However, he claims that such hits should not give rise to great worries because “nouns that do not qualify for shell nouns can easily be spotted” and hence the true shell nouns (followed by these relative clauses) were not discarded (2000:50; emphasis mine).
It seems we can be relatively sure that the head nouns controlling that-complement clauses, to-infinitive clauses and N + is + that/to are a distinguishable group (see Biber et al., 1999). However, wh-clauses start one along a slippery path leading to th-N where N could, in principle, be absolutely any noun. Schmid restricts wh-clauses to where-, when- and why-clauses, but we can easily come up with examples like the following, where the noun is clearly not one we would want to include in a group of “shell” nouns:

1. The knitting bag where my grandmother always hides her sweets along with her current woollen projects.
2. The christening where the parents arrived still not having agreed on a name for their child.

Both Ivanič and Schmid argue that carrier/shell nouns constitute a much larger group than earlier studies imply. It is certainly true that many more nouns than have so far been identified are capable of performing a carrier/shell function within a discourse. However, broadening the potential syntactic criteria in the way Schmid does seems to place the entire notion of a distinguishable group of nouns on shakier ground than it was before. The noun process provides a good example of where the weakness lies in this sort of syntactic approach. Schmid notes (2000:11) that even those nouns excluded as A-nouns by Francis (1986) (for not fulfilling the criterion of metadiscursivity) are included in his group of shell nouns, including process. Having said this, process does not appear in his final index of shell nouns, simply because it does not occur in the patterns he selected as search strings. In a quick search of the Brown corpus (one million running words), I found that process occurred 50 times in the pattern process + of + -ing, e.g. “The process of obsoleting an old product and introducing the new one...”. Of-phrases will be discussed in more detail later. The point to be made here is simply that, semantically, process fulfils all the criteria for inclusion in a “group” of shell nouns. However process, along with aspect, part, analysis, context, basis, and feature, do not appear (with “significant” frequency) in the syntactic patterns selected by Schmid and Ivanič, based on Vendler. If we want to include them, does this mean we should also consider of-phrases as “syntactic hosts”? And if not, then how do we find a way to include the above nouns as “shell nouns”? In fact, Schmid was inclined to search for of + ing but got disappointing results from his corpus queries and consequently excluded the string. Clearly, the nature of the particular corpus one uses will have a significant impact on what one will and will not find, no matter how careful one is in selecting a “representative” sample of texts. Biber et al.’s (1999) findings indicate that the of + ing-clause,
as complement, occurs with the highest frequency in the academic register. This might help to explain why they occur with such high frequency in my small “academic” corpus, but provided disappointing search results in Schmid’s large, mixed genre corpus (Cobuild’s Bank of English).

What the analysis in Chapter 4 will indicate is:

- First, that there are many nouns appearing within the small sub-corpora used in my study that would be classifiable as denoting second and third-order entities. However, they fail to meet the specified syntactic criteria required for “shell nounhood”.
- Secondly, that “shell/carrier nouns” occur with high frequency in patterns other than those identified by Schmid as the common devices used to trigger co-interpretation. Within these other patterns the nouns appear, however, to be functioning in the same way.

Schmid emphasises that his list of 670 nouns are not all good examples of shell nouns. However, the real extent of just how many fall short of “good” shell-noun status is only evident when one examines his collocability figures. The frequency with which certain nouns appear in certain patterns allows one to calculate their apparent “dependence” on a pattern. Many apparently good examples, like problem, purpose, role etc. in fact have a very low dependence on the selected strings. That is, the degree to which they rely on the particular lexico-grammatical patterns selected by Schmid for their occurrence is, statistically, very low. Obviously, those nouns most dependent on the pattern N-that in Schmid’s study are the same nouns that Biber et al. (1999) show have become “specialised” as complement clause heads. These are nouns that can potentially take either a relative clause or a complement clause but, in actual use, rarely take a that-relative clause. For example: possibility, doubt, belief, assumption, hope, suggestion. At the top of Schmid’s list, one also finds realisation, proviso, premise, misapprehension, dictum, and fact. It is interesting to note what Biber et al. (1999) discovered about the way some of these “core” shell nouns are used:

- The noun fact, they note, is complicated in that it occurs with extraposed constructions and relative clause constructions, in addition to its frequent use with noun complement clauses (1999:650).
- Then there are nouns like reason and conclusion where, in academic prose, their occurrence with a that-clause represents a noun complement clause only 60% of the time (p.650).
- Result + that-clause in Biber et al.’s study represents a noun complement clause only 20% of the time in academic prose (p.650).
Schmid would undoubtedly argue that the point is whether or not the noun is able to take a that-clause as a noun complement clause. But the question remains: why should the information provided within an extraposed construction or relative clause construction not also be thought of as the specification of a head noun like fact? I turn now to describing my own research.
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Chapter 4

4.1 Introduction
What the findings of the following quantitative search will illustrate is, first, that many of the nouns appearing in the selected syntactic patterns are not included in Schmid’s (2000) list of 670 “shell nouns” yet arguably have the potential (on semantic and syntactic grounds) to be included in this group. Schmid’s list of Shell Nouns is used for comparative purposes because it is the largest to date and includes (most of) those nouns identified as “labels” (Francis, 1994) and “carriers” (Ivanič, 1991). Secondly, we will see that the syntactic strings identified most recently by Schmid as containing “shell NPs” are not the only way (or even the most frequent way) in which speakers may “shell” information, create “temporary concepts” etc. Finally, the analysis will draw attention to the sacrifices that must always be made when conducting an automated search of an electronic corpus.

4.2 Methodology
After scanning in the written texts in order to create small electronic corpora, they were edited by hand to rectify imperfections in the character-recognition software that had been used. The total number of words in each corpus is as follows:

Published Writing (PW): 28 923
English First Language Students (L1): 32 403
English Second Language Students (L2): 18 139

The PW corpus was made up of eight texts, the L1 corpus, 16 texts and the L2 corpus, 15 texts. The next step was to correct all the spelling. This study is not concerned with student spelling habits and it was crucial for subsequent automatic annotation that the spelling not interfere with an already sensitive process. Leech (1993:275) defines corpus annotation, or tagging, as “the practice of adding interpretative (especially linguistic) information to an existing corpus of spoken and/or written language by some kind of coding attached, or interspersed with, the electronic representation of the language material itself”. This study clearly involves only written texts, and as I knew what patterns would be included in the searches, it was only necessary to add part-of-speech (POS) tags to the texts. POS tagging is the process of attaching a word category tag to each word in a text. POS taggers are either rule-based (ENGCG), probabilistic (the
Birmingham Tagger, CLAWS) or “mixed” (TOSCA). They are fully automatic and, on the whole, quite successful. The average success rate (as of 1998) is about 95% (see Meunier, 1998).

When it comes to tagging learner corpora, or interlanguage, one is faced with the methodological question of whether it is necessary to use a specific tagger adapted to “learner” language. When the tagger is used on more advanced data, such as that considered here, research has shown that there is no need for a specific tagger (cf. Meunier, 1995). Nevertheless, there are still many programs available and their accuracy in annotating learner corpora will undoubtedly vary. For this reason, Pearson’s Education Division conducted an independent survey of all those available before tagging their own learner corpus. Their results showed that Langsoft’s commercial application, Prospero, was the most successful on all levels and they were kind enough to tag my texts with it. Prospero’s tagset is more detailed than was needed for this study, so once the corpus was tagged, I simplified the annotation to quite an extent. All this involved was using the “find and replace” feature of Microsoft Word. For example, the following line of original tagged text (a) was simplified to (b):

a. <W c=det f=b>the</W> <W c=n f=pl>theories</W> <W c=of>of</W> <W c=n f=pr>Piaget
b. <det>the  <Npl>theories <OF>of  <Npr>Piaget

This simplification made the tagged corpus far easier to work with and in the process any obvious inaccuracies in the tagging were corrected - something that would not have been possible with a larger corpus. With this completed, Mike Scott’s WordSmith Tools and a mini-concordancer for Macintosh (Conc 1.76) were used to analyse the corpus and what follows are the findings of this first quantitative analysis. In all cases comparisons are being made between three samples of different sizes. In order to make these kinds of comparisons, all the findings were subjected to a Z-Test: a statistical test for comparing proportions from two independent samples. A z-value greater than 1.96 indicates significance at the 5% level (p < 0.05), while a value greater than 2.58 indicates significance at the 1% level.

4.3 Lexically-motivated Searches
The first frequency established within each sub-corpus was the total number of nouns present. This allowed the calculation of the total number of nouns per thousand tokens in order to compare frequencies across the three sub-corpora. In view of the finding that academic prose
shows an overall preference for nominal rather than verbal structures (Biber et al., 1999:650) and that the language at the heart of scientific communication involves, above all, increased nominalisation (Halliday and Martin, 1993), it seemed appropriate to begin by comparing, very simply, the extent of “nominalisation” within the three sub-corpora.

Total no. of nouns (singular and plural) per 1000 tokens in each sub-corpus:
1. PW = 7537 (261 / thousand tokens)
2. L1 = 7868 (242 / thousand tokens)
3. L2 = 3957 (218 / thousand tokens)

The PW sub-corpus contains a significantly larger proportion of nouns than both the L1 (z = 5.07) and the L2 sub-corpora (z = 10.43; significance at the 1% level, z > 2.58). A comparison of L1 and L2 also indicates a significant difference (z = 6.28). While these differences may be statistically marked, we are not yet in any position either to declare the student writing “under-nominalised” or to suggest that this is problematic in any way. In Chapter 5 we will look more closely at the cognitive “effects” (on the reader) of using full NPs and the consequences of avoiding nouns where they may be expected.

4.3.1 Carrier Nouns

The next search conducted was for Ivanič’s (1991) carrier nouns (see Appendix I for the table of nouns and the raw frequencies). There is seemingly little to be gained from a bare search for this rather randomly selected group of nouns. Nevertheless, Ivanič provides a manageably sized list of “core” carrier nouns (also appearing in Schmid’s list of shell nouns) and, in view of the differences in nominalisation overall, it seemed sensible at least to ascertain whether or not
the student writers were using this selected sample of nouns. In this case, the total carriers in
each sub-corpus were compared as proportions per thousand *nouns*.

Total no. of “carrier” nouns per 1000 *nouns* in each sub-corpus:

1. PW = 561 (± 74 / 1000 nouns)
2. L1 = 519 (± 66 / 1000 nouns)
3. L2 = 249 (± 63 / 1000 nouns)

The answer to the question “Do these writers (both student and published) use Ivanič’s carrier
nouns?” is clearly yes. However, carrier nouns make up a significantly larger proportion of the
total nouns appearing in the PW sub-corpus than in either the L1 (z = 2.05) or L2 (z = 2.29).
There is no statistically significant difference between the L1 and L2 sub-corpora (z = 0.63), even
though the raw difference (519 vs. 249) looks very large. The reader is reminded that we are, at
all times, comparing *proportions* across corpora of different sizes. Raw totals will consequently
always be misleading especially, in this case, where the L2 corpus is smaller than the L1, *and*
contains a significantly smaller proportion of nouns.

If one accepts that papers published in journals (proof-read and edited at various stages)
come close to a “model” for writing, one might be tempted to view a frequency of 74 carriers per
thousand nouns as some sort of yardstick. In which case, one could argue that the student writers
in this study may well need to be “taught” them as Ivanič suggests. In view of the discussion in
Chapters 2 and 3, however, it is misguided to draw such conclusions based on nothing more than
the frequency of appearance of certain nouns within the texts. Given the advice students receive
from writing guides to stay away from such nouns, we may even wish to argue that the student
writing is *better* in some ways for being less nominalised. What we have to examine, however, is
the use of such nouns in context before we attempt to make such judgements. What may be worth
noting at this point is the similar frequencies of carrier nouns in the L1 and L2 writing. Also,
while the L1 writing may contain significantly more nouns generally than the L2, it still contains
markedly fewer than the PW. English second language writing at university level (in South
Africa) is often viewed as flawed simply due to “issues of language” and it is the L2 students at
whom all Academic English and “remedial” courses are aimed. L1 students, on the other hand,
receive little or no help with writing (unless they ask for it), contributing to the belief that an

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1 “±” indicates that these are not *exact* proportions. As it is not possible to have a “fraction of a word”, the totals
have been rounded off to the nearest whole.
ability to produce “good” academic writing is based primarily on a “decent command of English”. If this were the case, one might expect frequencies of nouns (and carrier nouns) in the L1 writing to be closer to those of the PW than they actually are. It may be that L1 and L2 writers are using them differently, but at this point they could both be viewed as displaying deficits in comparison to the PW.

4.3.2 Shell Nouns

We have established that student writers are using the nouns categorised as Carriers by Ivanic, but they are doing so significantly less often than the published writers. As Schmid (2000) has compiled a list of 670 “shell” nouns, conducting a search for all of them in my subcorpora was not feasible. However, it is certainly possible to find out what proportion of the 100 most frequent nouns in each sub-corpus are “shell” nouns. What we are also interested in is the percentage of nouns in these lists that do not feature in Schmid’s list of shell nouns yet seem to have the (semantic) potential to be included in this class. That is, what percentage of the nouns, not previously distinguished as shell nouns, denote second and third-order entities or are in fact synonyms of shell/carrier nouns? The figures presented below are gross figures, with singular and plural versions of each noun counted together. For example, the noun that appears most frequently in the PW sub-corpus is child/ren, while the most frequent “shell” noun is object/s.

**PW sub-corpus:** 43% of the 100 most frequent nouns in this sub-corpus appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th>Shell Noun</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object / s</td>
<td>162</td>
</tr>
<tr>
<td>Problem / s</td>
<td>136</td>
</tr>
<tr>
<td>Rule / s</td>
<td>98</td>
</tr>
<tr>
<td>Part / s</td>
<td>78</td>
</tr>
<tr>
<td>Theory / ies</td>
<td>70</td>
</tr>
<tr>
<td>Task / s</td>
<td>69</td>
</tr>
<tr>
<td>Analogy / ies</td>
<td>66</td>
</tr>
<tr>
<td>Contract / s</td>
<td>53</td>
</tr>
<tr>
<td>Difference / s</td>
<td>47</td>
</tr>
<tr>
<td>Example / s</td>
<td>45</td>
</tr>
<tr>
<td>Subject / s</td>
<td>43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carrier Noun</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response / s</td>
<td>43</td>
</tr>
<tr>
<td>Concept / s</td>
<td>38</td>
</tr>
<tr>
<td>Knowledge</td>
<td>35</td>
</tr>
<tr>
<td>Way / s</td>
<td>33</td>
</tr>
<tr>
<td>Effects / s</td>
<td>30</td>
</tr>
<tr>
<td>Question / s</td>
<td>29</td>
</tr>
<tr>
<td>Change / s</td>
<td>29</td>
</tr>
<tr>
<td>Solution / s</td>
<td>27</td>
</tr>
<tr>
<td>Context</td>
<td>27</td>
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<tr>
<td>Age</td>
<td>26</td>
</tr>
<tr>
<td>Time</td>
<td>24</td>
</tr>
<tr>
<td>Result / s</td>
<td>24</td>
</tr>
<tr>
<td>Goals</td>
<td>24</td>
</tr>
<tr>
<td>Information</td>
<td>23</td>
</tr>
<tr>
<td>View</td>
<td>22</td>
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<tr>
<td>Answer / s</td>
<td>21</td>
</tr>
<tr>
<td>Order</td>
<td>20</td>
</tr>
<tr>
<td>Evidence</td>
<td>20</td>
</tr>
<tr>
<td>Logic</td>
<td>20</td>
</tr>
<tr>
<td>Ability</td>
<td>19</td>
</tr>
<tr>
<td>Distinction</td>
<td>19</td>
</tr>
<tr>
<td>Version</td>
<td>18</td>
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<tr>
<td>Features</td>
<td>18</td>
</tr>
<tr>
<td>Things</td>
<td>18</td>
</tr>
<tr>
<td>Justifications</td>
<td>17</td>
</tr>
<tr>
<td>Cause</td>
<td>17</td>
</tr>
<tr>
<td>Tendency</td>
<td>17</td>
</tr>
<tr>
<td>Essences</td>
<td>15</td>
</tr>
<tr>
<td>Fact</td>
<td>15</td>
</tr>
<tr>
<td>Analysis</td>
<td>14</td>
</tr>
<tr>
<td>Permission</td>
<td>14</td>
</tr>
<tr>
<td>Case</td>
<td>13</td>
</tr>
</tbody>
</table>

70
57% of the 100 most frequent nouns do not appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th>Children</th>
<th>170</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set / s</td>
<td>89</td>
</tr>
<tr>
<td>Category / ies</td>
<td>86</td>
</tr>
<tr>
<td>Structure / s</td>
<td>80</td>
</tr>
<tr>
<td>Person / people</td>
<td>78</td>
</tr>
<tr>
<td>Group / s</td>
<td>73</td>
</tr>
<tr>
<td>Addition</td>
<td>58</td>
</tr>
<tr>
<td>Relation / s</td>
<td>56</td>
</tr>
<tr>
<td>Level / s</td>
<td>55</td>
</tr>
<tr>
<td>Tree / s</td>
<td>54</td>
</tr>
<tr>
<td>Language</td>
<td>52</td>
</tr>
<tr>
<td>Term / s</td>
<td>52</td>
</tr>
<tr>
<td>Kind / s</td>
<td>47</td>
</tr>
<tr>
<td>Alignment / s</td>
<td>47</td>
</tr>
<tr>
<td>Division</td>
<td>46</td>
</tr>
<tr>
<td>Experiment / s</td>
<td>42</td>
</tr>
<tr>
<td>Taxonomy / ies</td>
<td>40</td>
</tr>
<tr>
<td>Properties</td>
<td>39</td>
</tr>
<tr>
<td>Year / s</td>
<td>39</td>
</tr>
<tr>
<td>Persistence</td>
<td>38</td>
</tr>
<tr>
<td>Operation / s</td>
<td>38</td>
</tr>
<tr>
<td>Participants</td>
<td>38</td>
</tr>
<tr>
<td>Students</td>
<td>35</td>
</tr>
<tr>
<td>Type / s</td>
<td>33</td>
</tr>
<tr>
<td>Pair / s</td>
<td>32</td>
</tr>
<tr>
<td>Picture / s</td>
<td>32</td>
</tr>
<tr>
<td>Condition</td>
<td>31</td>
</tr>
<tr>
<td>Number</td>
<td>30</td>
</tr>
<tr>
<td>Continuity</td>
<td>28</td>
</tr>
<tr>
<td>Appearance / s</td>
<td>28</td>
</tr>
<tr>
<td>Adults</td>
<td>28</td>
</tr>
<tr>
<td>Ship</td>
<td>28</td>
</tr>
<tr>
<td>Cognition</td>
<td>27</td>
</tr>
<tr>
<td>Animals</td>
<td>26</td>
</tr>
<tr>
<td>Maintenance</td>
<td>25</td>
</tr>
<tr>
<td>Word</td>
<td>25</td>
</tr>
<tr>
<td>Studies</td>
<td>25</td>
</tr>
<tr>
<td>Continuant</td>
<td>22</td>
</tr>
<tr>
<td>Experts</td>
<td>22</td>
</tr>
<tr>
<td>Tulips</td>
<td>22</td>
</tr>
<tr>
<td>Selection</td>
<td>21</td>
</tr>
<tr>
<td>Transformation</td>
<td>21</td>
</tr>
<tr>
<td>Distance</td>
<td>20</td>
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<tr>
<td>Research</td>
<td>20</td>
</tr>
<tr>
<td>Performance</td>
<td>19</td>
</tr>
<tr>
<td>Domain</td>
<td>18</td>
</tr>
<tr>
<td>Genus</td>
<td>18</td>
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<tr>
<td>World</td>
<td>18</td>
</tr>
<tr>
<td>Availability</td>
<td>17</td>
</tr>
<tr>
<td>Parents</td>
<td>17</td>
</tr>
<tr>
<td>Content</td>
<td>17</td>
</tr>
<tr>
<td>Discussion</td>
<td>17</td>
</tr>
<tr>
<td>Landscape</td>
<td>17</td>
</tr>
<tr>
<td>Nature</td>
<td>17</td>
</tr>
<tr>
<td>Work</td>
<td>17</td>
</tr>
<tr>
<td>Transfer</td>
<td>16</td>
</tr>
<tr>
<td>Finding / s</td>
<td>13</td>
</tr>
</tbody>
</table>

The underlined items either have human referents or would be used to refer to 1st-order entities in the world. The remaining 43 nouns (75%) could all be said to denote 2nd and 3rd-order entities, however they were probably missed in Schmid’s searches because they were followed by “of-phrases”. It is possible to group most of these remaining nouns into “abstract” categories:

- Ways of dividing up/categorising the world: set, category, structure, group, level, taxonomy, domain, genus, content, number, world, year
- An “aspects” group: terms, kinds, properties, types, pairs
- Terms relating to research: experiment, studies, research, discussion, work, finding
- Nominalised equivalents of verbs: addition, relation, alignment, division, operation, persistence, maintenance, selection, transformation, performance, transfer
- Other: condition, nature, continuity, appearance, cognition, continuant, distance, availability, language.

All these nouns would be said to denote second- and third-order entities in Lyons’ tripartite taxonomy (1977:442-3). [To re-cap, second-order entities include events, processes, situations etc. which are located in time and which are said to occur or take place rather than to exist. Third order entities are “abstract” entities such as concepts, propositions, or more generally, ideas outside place and time (1977:443)]. Schmid states that “all these complex types of experiences need to be turned into temporary concepts when they are to continue to play a role in a text or discourse” (2000:41), implying that all nouns denoting second- and third-order entities have the potential to form “shell-content relations”. However, as Schmid points out himself, the “rigidity of the corpus queries” dramatically affected those nouns “often accompanied by prepositional phrases which express reference points in the particular relations that are involved” (2000:116).
Hence the above group’s absence from Schmid’s list. For the L1 and L2 sub-corpora similar groupings will be made of those nouns not included in Schmid’s list.

**L1 sub-corpus**: 41% of the 100 most frequent nouns in this sub-corpus appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th>Task / s</th>
<th>Response / s</th>
<th>Theory / ies</th>
<th>Object / s</th>
<th>Knowledge</th>
<th>Way / s</th>
<th>Answer / s</th>
<th>Information</th>
<th>Concept / s</th>
<th>Stage / s</th>
<th>Action / s</th>
</tr>
</thead>
<tbody>
<tr>
<td>213</td>
<td>152</td>
<td>149</td>
<td>135</td>
<td>121</td>
<td>114</td>
<td>104</td>
<td>101</td>
<td>100</td>
<td>98</td>
<td>78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question / s</th>
<th>57</th>
<th>Example</th>
<th>32</th>
<th>Part</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem / s</td>
<td>56</td>
<td>Differences</td>
<td>32</td>
<td>Point</td>
<td>20</td>
</tr>
<tr>
<td>Experience / s</td>
<td>47</td>
<td>Situation / s</td>
<td>32</td>
<td>Explanation</td>
<td>18</td>
</tr>
<tr>
<td>Approach</td>
<td>46</td>
<td>Function / s</td>
<td>31</td>
<td>Factors</td>
<td>18</td>
</tr>
<tr>
<td>Thought / s</td>
<td>43</td>
<td>Perspective / s</td>
<td>30</td>
<td>Result</td>
<td>17</td>
</tr>
<tr>
<td>Ability / ies</td>
<td>43</td>
<td>Logic</td>
<td>30</td>
<td>Time</td>
<td>17</td>
</tr>
<tr>
<td>Context</td>
<td>42</td>
<td>Order</td>
<td>27</td>
<td>Opinion</td>
<td>16</td>
</tr>
<tr>
<td>Limitations</td>
<td>40</td>
<td>Conclusion / s</td>
<td>24</td>
<td>Period</td>
<td>16</td>
</tr>
<tr>
<td>View / s</td>
<td>35</td>
<td>Reason / s</td>
<td>23</td>
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<tr>
<td>Place</td>
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<td>Assignment</td>
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<td></td>
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<tr>
<td>Things</td>
<td>32</td>
<td>Role</td>
<td>22</td>
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</tr>
</tbody>
</table>

59% of the 100 most frequent nouns do not appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th>Respondent / s</th>
<th>169</th>
<th>Nature</th>
<th>51</th>
<th>Interaction / s</th>
<th>33</th>
<th>Tree</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>132</td>
<td>Structure / s</td>
<td>50</td>
<td>Backgrounds</td>
<td>30</td>
<td>Pot</td>
<td>21</td>
</tr>
<tr>
<td>Person / People</td>
<td>131</td>
<td>Domain</td>
<td>45</td>
<td>Tools</td>
<td>29</td>
<td>Competence</td>
<td>20</td>
</tr>
<tr>
<td>Protocol / s</td>
<td>99</td>
<td>Life</td>
<td>44</td>
<td>Interviewer</td>
<td>29</td>
<td>Flower</td>
<td>20</td>
</tr>
<tr>
<td>Child / children</td>
<td>98</td>
<td>Study</td>
<td>43</td>
<td>Items</td>
<td>29</td>
<td>Performance</td>
<td>19</td>
</tr>
<tr>
<td>Culture / s</td>
<td>86</td>
<td>Levels</td>
<td>43</td>
<td>Bird</td>
<td>29</td>
<td>Zone</td>
<td>19</td>
</tr>
<tr>
<td>Language / s</td>
<td>81</td>
<td>Researcher</td>
<td>41</td>
<td>Essay</td>
<td>28</td>
<td>Area</td>
<td>18</td>
</tr>
<tr>
<td>Process / es</td>
<td>73</td>
<td>Activity / ies</td>
<td>40</td>
<td>Seed</td>
<td>27</td>
<td>Experiment</td>
<td>18</td>
</tr>
<tr>
<td>Use / s</td>
<td>68</td>
<td>System / s</td>
<td>39</td>
<td>Accommodation</td>
<td>25</td>
<td>Behaviour</td>
<td>17</td>
</tr>
<tr>
<td>Term / s</td>
<td>67</td>
<td>Environment</td>
<td>36</td>
<td>Assimilation</td>
<td>25</td>
<td>Bottle</td>
<td>17</td>
</tr>
<tr>
<td>Operation / s</td>
<td>67</td>
<td>Education</td>
<td>35</td>
<td>Intelligence</td>
<td>25</td>
<td>Food</td>
<td>17</td>
</tr>
<tr>
<td>Research</td>
<td>59</td>
<td>Man / men</td>
<td>35</td>
<td>Cognition</td>
<td>24</td>
<td>Number</td>
<td>17</td>
</tr>
<tr>
<td>World</td>
<td>56</td>
<td>Glass</td>
<td>35</td>
<td>Account</td>
<td>23</td>
<td>School</td>
<td>17</td>
</tr>
<tr>
<td>Wood</td>
<td>55</td>
<td>Spectacles</td>
<td>34</td>
<td>Log</td>
<td>22</td>
<td>Manner</td>
<td>16</td>
</tr>
<tr>
<td>Individuals</td>
<td>51</td>
<td>Sense</td>
<td>34</td>
<td>Group</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

36 (61%) of these nouns could be said to denote second- and third-order entities:

- Ways of dividing up/categorising the world: *structure, domain, levels, system, items, group, zone, area, number, world*
- An “aspects” group: *terms*
- Terms relating to research: *protocol, research, study, account, experiment*
- Nominalised equivalents of verbs: *development, process, use, operation, interaction, accommodation, assimilation, performance, behaviour*
- Nominalised equivalents of adjectives: *intelligence, competence, activity*
- Other: *culture, nature, environment, education, sense, background, cognition, manner, language*
**L2 sub-corpus:** 34% of the 100 most frequent nouns in this sub-corpus appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th>Task/s</th>
<th>Knowledge</th>
<th>Theory/ies</th>
<th>Action/s</th>
<th>Way/s</th>
<th>Stage/s</th>
<th>Response/s</th>
<th>Problem/s</th>
<th>Object/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>86</td>
<td>77</td>
<td>72</td>
<td>59</td>
<td>55</td>
<td>54</td>
<td>50</td>
<td>37</td>
<td>37</td>
</tr>
</tbody>
</table>

Information 37  Question/s 36  Role 31  Answer/s 30  Concept/s 28  Thought/s 28  Things 27  Thought/s 28  Things 27  Thought/s 28  Things 27

Difference/s 21  Terms 19  Function/s 17  Ability 15  Approach 15  Example 15  Fact 14  Limitations 13  Point 13

Instruction 12  Logic 12  Concept 11  Context 11  Argument 10  Age 9  Skill 8

66% of the 100 most frequent nouns do **not** appear in Schmid’s list of shell nouns:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>144</td>
<td>131</td>
<td>93</td>
<td>76</td>
<td>46</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>34</td>
<td>34</td>
<td>33</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>27</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>

Culture 24  Adult/s 24  School 22  Background/s 22  Accommodation 20  World 20  Interviewer 18  Bird 18  Wood 18  Theorists 16  Level 16  Log 16  Tree 15  Use 15  Zone 15  Instance 14  Psychologist/s 14  Principal 14  Cognition 14  Seed 13  Study 13  Glass 12  Spectacles 12  Axe 11  Control 11  Areas 11  Experiment 11  Flower 11  Intelligence 11  Research 11  Work 11  System 11  Influence 11  Hand 10  Assimilation 10  Speech 10  Behaviour 9  Communication 9  Consciousness 9  Hammer 9  History 9  Internalisation 9  Meditation 9  Years 9  Limits 8  Lecture 8  Life 8  Mind 8  Schemata 8

39 (59%) of the above nouns could be said to denote second- and third-order entities:
- Ways of dividing up/categorising the world: *structure, domain, level, zone, years, areas, system*
- An “aspects” group: *instance, limits*
- Terms relating to research: *study, experiment, research*
- Nominalised equivalents of verbs: *Development, operation, process, interaction, assimilation, accommodation, use, behaviour, communication, consciousness, internalisation, mediation, control, work, influence*
- Nominalised equivalents of adjectives: *intelligence, activity*
- Other: *nature, environment, culture, background, cognition, consciousness, history, mind, schemata, language.*
Schmid admits that the 670 nouns he lists in his taxonomy by no means form an exhaustive list of potential shell nouns. If the above lists are any indication, there are seemingly many more nouns one might wish to add should this be a worthwhile exercise. For our purposes, however, it is more interesting to establish that both the published and student writing contains a high number of nouns clearly used to refer to second- and third-order entities. Lyons suggests that first-order entities, being located in space and having fairly constant perceptual properties, are good prototypical targets for reference (1977:445). Reference to both second- and third-order entities, on the other hand, “is made most commonly, both in English and in other languages, by means of phrases formed by the process of nominalizations” (1977:445). That is, reference to second- and third-order entities is less straightforward and success relies somehow on the nature or quality of the nominal phrase formed.

What must be compared, finally, are the overall proportions of the most frequent 100 nouns in each sub-corpus that denote 2nd- and 3rd-order entities. These proportions are calculated by adding the proportion of “shell nouns” (e.g. 43% in the PW) to the proportion of “others” extracted because they can also be used to refer to 2nd- and 3rd-order entities (also 43% in the PW):

<table>
<thead>
<tr>
<th>Sub-corpus</th>
<th>Proportion of Shell Nouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW</td>
<td>86%</td>
</tr>
<tr>
<td>L1</td>
<td>77%</td>
</tr>
<tr>
<td>L2</td>
<td>73%</td>
</tr>
</tbody>
</table>

The difference between the PW and L2 is statistically significant (z = 2.27) while the difference between the PW and L1 is close to significant (z = 1.63). As was the case with “carrier nouns”, it is obvious that both the PW and student writers in this study are using “shell” nouns. However, the most frequent 100 nouns in the student writing are made up of a markedly smaller proportion of so-called “abstract” nouns than the PW. Thus, if the students are in fact using fewer “bad” nouns, in general, than their PW counterparts, one certainly cannot blame the vagueness in their writing on the mere presence of such nouns, let alone on their “overuse”.

The next section presents the nouns extracted from my sub-corpora after I conducted searches for the strings identified by Schmid and Biber et al. as being the typical contexts for shell nouns. The results for each syntactic string are presented in tabulated form and then discussed. Totals are shown as raw frequencies - the reader is reminded that the sub-corpora are of different sizes hence these totals cannot be compared as they are. They are tested (using the z-
test for proportions) as proportions of the total number of nouns in each sub-corpus. In all cases, where I say certain nouns are shell nouns, I mean they appear in Schmid’s index of 670 nouns.

The questions being asked in each case are, first, “of all the nouns in this corpus, what proportion appear in this syntactic pattern?” And secondly, “is there a significant difference between the proportions in each sub-corpus?”. A further comparison is made of the variety of nouns present in each pattern. For each pattern, a proportion is calculated as follows:

Total no. of different nouns (types)

---------------------------------------------
Total number of patterns counted

The higher the value in this case, the wider the variety of nouns being used in the pattern under discussion. Once again, in order to compare proportions from different sized samples, a z-test is used to check for statistically significant differences between the three sub-corpora.

In the second half of this discussion, I will present the results of searches for several strings not used by Schmid. The discussion following this presentation will then add to the argument initiated early in this chapter - that rather than delimiting a group of nouns, such a syntactic approach has the potential both to open the class up to almost any noun while also missing out on high numbers of those that, from a semantic and pragmatic point of view, seem to exhibit all the characteristics required for inclusion in this “group”.

4.4 Syntactically-motivated Searches

4.4.1 N - that (e.g. the fact that...)

Table 1. Pattern: (det) + (mod) + N + that

<table>
<thead>
<tr>
<th>Noun</th>
<th>Frequency</th>
<th>Noun</th>
<th>Frequency</th>
<th>Noun</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence</td>
<td>7</td>
<td>Fact *</td>
<td>10</td>
<td>Fact *</td>
<td>14</td>
</tr>
<tr>
<td>Object</td>
<td>4</td>
<td>Opinion *</td>
<td>9</td>
<td>Task</td>
<td>5</td>
</tr>
<tr>
<td>View *</td>
<td>4</td>
<td>Way</td>
<td>9</td>
<td>View *</td>
<td>4</td>
</tr>
<tr>
<td>Claim *</td>
<td>4</td>
<td>Idea *</td>
<td>7</td>
<td>Way</td>
<td>4</td>
</tr>
<tr>
<td>Extent</td>
<td>3</td>
<td>View *</td>
<td>7</td>
<td>Idea *</td>
<td>3</td>
</tr>
<tr>
<td>Fact *</td>
<td>3</td>
<td>Possibility *</td>
<td>3</td>
<td>Information</td>
<td>3</td>
</tr>
<tr>
<td>Notion *</td>
<td>3</td>
<td>Knowledge *</td>
<td>3</td>
<td>Notion</td>
<td>3</td>
</tr>
<tr>
<td>Way</td>
<td>3</td>
<td>Concept</td>
<td>2</td>
<td>Conclusion *</td>
<td>2</td>
</tr>
<tr>
<td>Assumption *</td>
<td>2</td>
<td>Sense *</td>
<td>2</td>
<td>Knowledge</td>
<td>2</td>
</tr>
<tr>
<td>Belief *</td>
<td>2</td>
<td>Argument</td>
<td>1</td>
<td>Suspicion *</td>
<td>2</td>
</tr>
<tr>
<td>Conviction *</td>
<td>2</td>
<td>Assumption *</td>
<td>1</td>
<td>Argument</td>
<td>1</td>
</tr>
<tr>
<td>Finding</td>
<td>2</td>
<td>Basis</td>
<td>1</td>
<td>Description</td>
<td>1</td>
</tr>
<tr>
<td>Idea *</td>
<td>2</td>
<td>Belief *</td>
<td>1</td>
<td>Indication *</td>
<td>1</td>
</tr>
<tr>
<td>Information</td>
<td>2</td>
<td>Condition</td>
<td>1</td>
<td>Possibility *</td>
<td>1</td>
</tr>
<tr>
<td>Likelihood</td>
<td>2</td>
<td>Doubt *</td>
<td>1</td>
<td>Premise</td>
<td>1</td>
</tr>
</tbody>
</table>
When conducting a search of this sort, it is difficult to exclude that-relative clauses unless the part-of-speech tagging is extremely accurate or the corpus is parsed. Biber et al. (1999) and Schmid (2000) used corpora annotated to distinguish complement clauses from relative clauses, although, as mentioned above, relative clauses still appeared in Schmid’s results. My corpus was not tagged to distinguish that-relative from that-complement clauses. However, it is comparatively very small which made manual checking possible: in any case where that was clearly introducing a complement clause, the noun was included. Where that could be replaced by which (i.e. it introduced a relative clause) the noun was included only if it appeared in Schmid’s (2000) list of shell nouns. Using this method, very few nouns occurring in this pattern were excluded - of those that were, most were plural. The exclusion of plurals was based on the finding that “almost all that-[complement] clauses have a singular head (over 95%)” (Biber et al., 1999).

There is no statistically significant difference in the proportion of nouns occurring in this pattern across the three sub-corpora (in all cases z < 1.96). Nor is there any difference with regard to the variety of different nouns appearing in this pattern within the sub-corpora. As indicated in the table, almost half the nouns occurring in this pattern in all three sub-corpora are those which were found by Biber et al. (1999) to occur frequently as head nouns of that-complement clauses. They note that 14 of the 23 most common are nominalised equivalents of verbs or adjectives that can control that-complement clauses. Based on their findings, Biber et al. indicate how that-

| Possibility* | 2 | Evidence | 1 | Thought* | 1 |
| Process | 2 | Example | 1 |  |
| Question | 2 | Notion* | 1 |  |
| Rule | 2 | Part | 1 |  |
| Solution | 2 | Problem | 1 |  |
| Change | 1 | Question | 1 |  |
| Conclusion* | 1 | Reason | 1 |  |
| Criticism | 1 | Time | 1 |  |
| Discovery* | 1 |  |  |  |
| Doubt* | 1 |  |  |  |
| Event | 1 |  |  |  |
| Factor | 1 |  |  |  |
| Guarantee | 1 |  |  |  |
| Hope* | 1 |  |  |  |
| Hypothesis* | 1 |  |  |  |
| Impression* | 1 |  |  |  |
| Knowledge | 1 |  |  |  |
| Logic | 1 |  |  |  |
| Message | 1 |  |  |  |
| Probability* | 1 |  |  |  |
| Theory | 1 |  |  |  |
| Thing | 1 |  |  |  |
| 43%* | 72 | 44%* | 68 | 53%* | 49 |

* = A head noun occurring with a that-complement clause over twice per million words in Biber et al. (1999).
clauses functioning as noun complement clauses are one of the primary devices used to mark stance in academic prose: “In these constructions, the that-clause reports a proposition, while the head noun reports the author’s stance towards that proposition” (1999:648). Two primary kinds of stance information are given by the most common head nouns: “an assessment of the certainty of the proposition in the that-clause, as with fact, possibility, claim, notion, assumption, hypothesis, rumour ... [and] an indication of the source of the knowledge expressed in the that-clause. Three primary sources can be distinguished: linguistic communication, as with claim, report, suggestion, proposal, remark, cognitive reasoning, as with assumption, hypothesis, idea, observation, personal belief, as with belief, doubt, hope, opinion” (1999: 648). In Chapter 5 we will look more closely at whether or not this pattern is used to reflect “stance” in the student writing.

4.4.2 N-to (e.g. the tendency to...)

Table 2. Pattern: (det) + (mod) + N + to

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>Frequency</th>
<th>L1 Sub-corpus</th>
<th>Frequency</th>
<th>L2 Sub-corpus</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tendency*</td>
<td>14</td>
<td>Ability*</td>
<td>20</td>
<td>Ability*</td>
<td>8</td>
</tr>
<tr>
<td>Ability*</td>
<td>9</td>
<td>Capacity*</td>
<td>7</td>
<td>Capability</td>
<td>4</td>
</tr>
<tr>
<td>Failure*</td>
<td>7</td>
<td>Approach</td>
<td>4</td>
<td>Capacity*</td>
<td>4</td>
</tr>
<tr>
<td>Reason</td>
<td>3</td>
<td>Knowledge</td>
<td>4</td>
<td>Opportunity*</td>
<td>2</td>
</tr>
<tr>
<td>Attempts*</td>
<td>2</td>
<td>Need</td>
<td>4</td>
<td>Need</td>
<td>2</td>
</tr>
<tr>
<td>Effort*</td>
<td>2</td>
<td>Way</td>
<td>4</td>
<td>Attempt*</td>
<td>1</td>
</tr>
<tr>
<td>Way</td>
<td>2</td>
<td>Opportunity*</td>
<td>3</td>
<td>Inability*</td>
<td>1</td>
</tr>
<tr>
<td>Willingness*</td>
<td>2</td>
<td>Disability (?)*</td>
<td>2</td>
<td>Incapacity*</td>
<td>1</td>
</tr>
<tr>
<td>Capacity*</td>
<td>1</td>
<td>Failure*</td>
<td>2</td>
<td>Incapacity</td>
<td>1</td>
</tr>
<tr>
<td>Choice</td>
<td>1</td>
<td>Potential</td>
<td>2</td>
<td><em>Npl</em></td>
<td>4</td>
</tr>
<tr>
<td>Courage</td>
<td>1</td>
<td>Idea</td>
<td>1</td>
<td>Limits</td>
<td>6</td>
</tr>
<tr>
<td>Motivations</td>
<td>1</td>
<td>Tendency*</td>
<td>1</td>
<td>Adaptations</td>
<td>2</td>
</tr>
<tr>
<td>Opportunity*</td>
<td>1</td>
<td><em>Npl</em></td>
<td>1</td>
<td>Contributions</td>
<td>2</td>
</tr>
<tr>
<td>Power</td>
<td>1</td>
<td>Limits</td>
<td>1</td>
<td>Opportunities*</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Limitations</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alternatives</td>
<td>1</td>
</tr>
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<td></td>
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<td></td>
<td>Approaches</td>
<td>1</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Attempts*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Means</td>
<td>1</td>
</tr>
</tbody>
</table>

PW vs. L1 → Z = 1.31
PW vs. L2 → Z = 0.6
L1 vs. L2 → Z = 0.55

* = A head noun occurring with a to-complement clause over 10 times per million words in Academic writing in Biber et al. (1999).

Apart from the plural forms listed, all these nouns are included in Schmid’s index of shell nouns. Biber et al. (1999:653) note that unlike that-clauses, the head nouns with to-complement clauses
do not typically present a stance towards the complement clause. Instead, the common head nouns taking to-clauses represent human goals, opportunities, or actions; for example, chance, attempt, effort, ability, opportunity, decision, plan, bid. This, they claim, results in a focus on human goals and actions rather than on the attitudes of the writer. At the same time, the head nouns taking to-clauses are similar to those taking that-clauses in that many of them are nominalised equivalents of verbs or adjectives controlling to-complement clauses. Of the 24 most common head nouns listed by Biber et al., 15 are of this type. However, they found that there is almost no overlap between head nouns taking that-clauses and those taking to-clauses (p.653). A comparison of the nouns appearing in the above tables 4.4.1 and 4.4.2 seems to support their finding.

4.4.3 N-wh-clause (e.g. a situation where...)

Table 3a. Pattern: (det) + (mod) + N + wh-clause

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>Frequency</th>
<th>L1 Sub-corpus</th>
<th>Frequency</th>
<th>L2 Sub-corpus</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td></td>
<td>Noun</td>
<td></td>
<td>Noun</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>4</td>
<td>Situation</td>
<td>3</td>
<td>Operation/s</td>
<td>4</td>
</tr>
<tr>
<td>Question</td>
<td>4</td>
<td>Action</td>
<td>1</td>
<td>Questions</td>
<td>2</td>
</tr>
<tr>
<td>Event</td>
<td>1</td>
<td>Manner</td>
<td>1</td>
<td>Stage</td>
<td>2</td>
</tr>
<tr>
<td>Version</td>
<td>1</td>
<td>Point</td>
<td>1</td>
<td>Control</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Position</td>
<td>1</td>
<td>Domain</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Setting</td>
<td>1</td>
<td>Place</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Situations</td>
<td>1</td>
</tr>
</tbody>
</table>

PW vs. L1 → Z = 0.56  
PW vs. L2 → Z = 2.23  
L1 vs. L2 → Z = 2.76

Those nouns in bold appear in Schmid’s index of shell nouns but were never encountered by him in the N-wh strings. Those nouns in normal type are the shell nouns that he did find in this string, and those “bold” are not on the list of shell nouns. While this pattern is relatively infrequent in all three sub-corpora, it does appear significantly more often in the L2 sub-corpus than in the other two. At this point there is no apparent explanation for this difference.
Table 3b. Pattern: (det) + (mod) + N + which ...

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Which appears</strong></td>
<td><strong>Which appears</strong></td>
<td><strong>Which appears</strong></td>
</tr>
<tr>
<td>50% of the time</td>
<td>67% of the time</td>
<td>64% of the time</td>
</tr>
<tr>
<td>with a shell noun:</td>
<td>with a shell noun:</td>
<td>with a shell noun:</td>
</tr>
<tr>
<td><strong>Noun</strong></td>
<td><strong>Frequency</strong></td>
<td><strong>Noun</strong></td>
</tr>
<tr>
<td>Kinds</td>
<td>2</td>
<td>Tasks</td>
</tr>
<tr>
<td>Problem</td>
<td>2</td>
<td>Concept /'s</td>
</tr>
<tr>
<td>Capacities</td>
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<td>Period</td>
</tr>
<tr>
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<td>1</td>
<td>Structure /'s</td>
</tr>
<tr>
<td>Criterion</td>
<td>1</td>
<td>Action /'s</td>
</tr>
<tr>
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<td>1</td>
<td>Object /'s</td>
</tr>
<tr>
<td>Domains</td>
<td>1</td>
<td>Information</td>
</tr>
<tr>
<td>Entities</td>
<td>1</td>
<td>Logic</td>
</tr>
<tr>
<td>Environments</td>
<td>1</td>
<td>Schema /'s</td>
</tr>
<tr>
<td>Experiment</td>
<td>1</td>
<td>System /'s</td>
</tr>
<tr>
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<td>1</td>
<td>Variables</td>
</tr>
<tr>
<td>Information</td>
<td>1</td>
<td>Activity /'ies</td>
</tr>
<tr>
<td>Level</td>
<td>1</td>
<td>Answer /'s</td>
</tr>
<tr>
<td>Objection</td>
<td>1</td>
<td>Environment/'s</td>
</tr>
<tr>
<td>Option</td>
<td>1</td>
<td>Function /'s</td>
</tr>
<tr>
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<td>1</td>
<td>Issues</td>
</tr>
<tr>
<td>Progression</td>
<td>1</td>
<td>Item /'s</td>
</tr>
<tr>
<td>References</td>
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<td>Limitation /'s</td>
</tr>
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<td>Property /'ies</td>
</tr>
<tr>
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<td>1</td>
<td>Question /'s</td>
</tr>
<tr>
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<td>Stages</td>
</tr>
<tr>
<td>Tasks</td>
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<td>Theory</td>
</tr>
<tr>
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<td>1</td>
<td>Assumptions</td>
</tr>
<tr>
<td>Way</td>
<td>1</td>
<td>Categories</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Frequency</strong></th>
<th><strong>Frequency</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>91</td>
<td>39</td>
</tr>
</tbody>
</table>

Conducting a search for N-which resulted in the lists above, where more than half the occurrences of such relative clauses have Schmid's shell nouns as heads, 67% in the case of the L1 sub-corpus. Both the L1 and L2 sub-corpora exhibit a significantly higher proportion of this pattern
Conducting a search for *N-which* resulted in the lists above, where more than half the occurrences of such relative clauses have Schmid’s shell nouns as heads, 67% in the case of the L1 sub-corpus. Both the L1 and L2 sub-corpora exhibit a significantly higher proportion of this pattern than the PW (significance at the 1% level). There is no difference, however, between L1 and L2. The same holds when comparing the variety of nouns appearing in this pattern: 25 different nouns are used in the 28 occurrences of this pattern in the PW and 50% of these are shell nouns. In comparison, significantly less variety occurs in both the L1 (\(z = 3.56\)) and L2 (\(z = 2.53\)).

In the L1, 67% of the nouns are shell nouns while in the L2 64% are shell nouns. The results of the search for *N-which* in the PW support Schmid’s decision to exclude the string on the basis of “noise”: there is nothing restricting what type of noun might head such clauses. The student writing, on the other hand, indicates a distinct tendency for “shell nouns” to be used as the head noun in *which*-relative clauses. Furthermore, many of those nouns appearing in this pattern that are not on Schmid’s list of shell nouns (i.e. those in **bold**: *system, activity, item, category, process, regulation*) are either synonyms of identified shell nouns or display semantic characteristics such that there seems little reason for them to be excluded.

While Schmid uses *N-wh* (interrogative) as a search string, Biber *et al.* find that such clauses are much less common than, for example, *N-to* infinitive clauses, and are restricted mostly to occurrence with the head noun *question*. They find that the *of + wh*-clause variant is actually more common than simple *wh*-clauses as noun complements, especially in news and academic prose (1999:656). Further, this variant occurs with a wider range of head nouns. These include:

- Speech communication - *question, story, explanation, description, account, discussion*.
- Exemplification - *example, indication, illustration*
- Problems - *problem, issue*
- Cognitive states or processes - *knowledge, understanding, sense, analysis, idea, notion*.

### 4.4.4 *N-of* *wh*-clause (e.g. *a question of whether...*)

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noun</strong></td>
<td><strong>Frequency</strong></td>
<td><strong>Noun</strong></td>
</tr>
<tr>
<td>Question</td>
<td>10</td>
<td>Example</td>
</tr>
<tr>
<td>Issue</td>
<td>2</td>
<td>Basis</td>
</tr>
<tr>
<td>Assessment</td>
<td>1</td>
<td>Feature</td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td>Interpretation</td>
</tr>
<tr>
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<td></td>
<td>Outline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problem</td>
</tr>
</tbody>
</table>

Table 4. *Pattern: (det) + (mod) + N + of + wh-clause*
Comparing Table 3a with the above Table 4, it is clear that N-wh occurs with similar frequency to N + of + wh- in the PW and L1 corpora, while occurring with a higher frequency in the L2 writing (13:4). There is far less variety in the nouns used in the PW in this pattern as compared to either the L1 (z = 3.19) or L2 (z = 2.7). There is, apparently, no difference between the L1 and L2 with regard to variety; neither sub-corpus exhibits any tendency for particular nouns to favour this pattern. In the PW, however, we get clear use of what is certainly one of the most common nouns appearing in this pattern: question.

4.4.5 N - be - that (e.g. the problem is that...)

Table 5. Pattern: (det) + (mod) + N + be + that

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>Frequency</td>
<td>Noun</td>
</tr>
<tr>
<td>Explanation</td>
<td>2</td>
<td>Theory</td>
</tr>
<tr>
<td>Possibility</td>
<td>2</td>
<td>Concept</td>
</tr>
<tr>
<td>Result</td>
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<td>Problem</td>
</tr>
<tr>
<td>Argument</td>
<td>1</td>
<td>Reason</td>
</tr>
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<td>Claim</td>
<td>1</td>
<td>Stage</td>
</tr>
<tr>
<td>Difference</td>
<td>1</td>
<td>Alteration</td>
</tr>
<tr>
<td>Fact</td>
<td>1</td>
<td>Criticism</td>
</tr>
<tr>
<td>Factor</td>
<td>1</td>
<td>Critique</td>
</tr>
<tr>
<td>Point</td>
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<td>Difference</td>
</tr>
<tr>
<td>Problem</td>
<td>1</td>
<td>Focus</td>
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<tr>
<td>Reason</td>
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<td>Issue</td>
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<tr>
<td>Relation</td>
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<td>Notion</td>
</tr>
<tr>
<td>Result</td>
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<td>Point</td>
</tr>
<tr>
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<td>Theory</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>View</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Those nouns in **bold** are the only ones *not* found in Schmid’s index of shell nouns; i.e. the majority of nouns occurring in this pattern were identified in his study as “shell” nouns. This seems to indicate, as predicted in the earlier discussion, that this pattern is perhaps controlled by a “closed set” of head nouns. With regard to the variety of nouns used, there is no significant difference between the three sub-corpora (z = 1.11 for PW vs. L1, z = 0.29 for L1 vs. L2, z = 0.52 for PW vs. L2), all of them exhibiting a similar variety of (primarily) shell nouns in this pattern.
4.4.6 \textit{N-be-to} (e.g. the initial concern is to...)

Table 6. \textbf{Pattern:} (det) + (mod) + N + be + to

<table>
<thead>
<tr>
<th>Sub-corpus</th>
<th>Frequency</th>
<th>Sub-corpus</th>
<th>Frequency</th>
<th>Sub-corpus</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>PW</td>
<td>L1</td>
<td>L2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Noun</td>
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<td></td>
</tr>
<tr>
<td>Concern</td>
<td>1</td>
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<td>2</td>
<td>Goal</td>
<td>1</td>
</tr>
<tr>
<td>Job</td>
<td>1</td>
<td>Issue</td>
<td>1</td>
<td>Suggestion</td>
<td>1</td>
</tr>
<tr>
<td>Practice</td>
<td>1</td>
<td>Purpose</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
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<td>Quest</td>
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<td></td>
</tr>
<tr>
<td>Task</td>
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<td>Task</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vision</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>7</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$PW \text{ vs. } L_1 \rightarrow Z = 0.54$  $PW \text{ vs. } L_2 \rightarrow Z = 0.92$  $L_1 \text{ vs. } L_2 \rightarrow Z = 0.52$

Again, all the nouns in the above table are listed as shell nouns with the variety of nouns appearing in the pattern being similar between the three sub-corpora.

4.4.7 \textit{N-be-wh-} (e.g. the question is when...)

Table 7. \textbf{Pattern:} (det) + (mod) + N + be + wh-

<table>
<thead>
<tr>
<th>Sub-corpus</th>
<th>Frequency</th>
<th>Sub-corpus</th>
<th>Frequency</th>
<th>Sub-corpus</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW</td>
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<td>L2</td>
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<td></td>
<td></td>
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<tr>
<td>Noun</td>
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<td></td>
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<td></td>
<td></td>
</tr>
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<td>Question</td>
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<td>Part</td>
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<td>Accommod-ation</td>
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<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
</tbody>
</table>

$PW \text{ vs. } L_1 \rightarrow Z = 0.39$  $PW \text{ vs. } L_2 \rightarrow Z = 1.66$  $L_1 \text{ vs. } L_2 \rightarrow Z = 1.32$

Very few examples of this pattern appeared in the corpus.

Using the nouns found within the patterns \textit{N-cl} and \textit{N-be-cl}, Schmid searched directly for their occurrence in the patterns \textit{th-N} and \textit{th-be-N}. That is, the frequency with which they correlate with “this”, “that”, “these”, “those”, “another”, and “such”. He adopted this approach due to the enormous number of unwanted “concrete” nouns which would have turned up if he had counted \textit{th-N} and \textit{th-be-N} in the same open-ended way as the other patterns. He notes that this decision had an impact on how the functional definition of shell nouns is operationalised in his study of the corpus: all nouns which occurred in noteworthy numbers (between 2-5 times) in the pattern \textit{N-cl} and/or \textit{N-be-cl} were accepted as potential shell nouns. Nouns which were found to occur only, or more frequently, in the patterns \textit{th-N} and \textit{th-be-N} were not regarded as shell nouns, even if they seemed to have the semantic and grammatical capacity to occur in the patterns \textit{N-cl}.
or N-be-cl (2000:42). This relatively arbitrary decision, he argues, was a necessary step to focus on the most representative examples of shell nouns and to keep the amount of data in controllable proportions.

Because I am working with a much smaller sample of text, the search for th-N and th-be-N was not restricted in any way. Apart from those nouns with human referents, like “people”, “men” etc., nothing is excluded from the following lists. Those nouns appearing in these patterns that are not in Schmid’s index of shell nouns are presented in bold type.

### 4.4.8 *this* - N (e.g. *this view*...)

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>Frequency</th>
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<th>Frequency</th>
<th>L2 Sub-corpus</th>
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<td>Problem</td>
<td>1</td>
<td></td>
<td></td>
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</tbody>
</table>
Excluding nouns with human referents, an open search of the sub-corpora for Th-N interestingly results in the finding that 50-70% of the time, the "N" in this pattern is a shell noun. In those cases where it is not, the list once again includes many nouns that could arguably be included in the group. While there is no statistically significant difference in the frequency of this pattern across the three sub-corpora, the difference between the PW and L2 is close to significant (higher frequency in the PW). Furthermore, the differences between both student sub-corpora and the PW is notably larger than the difference between the L1 and L2. With regard to the variety of nouns appearing in the pattern, there is also significantly more variation in the PW than in the L1 ($z = 2.97$). There is no difference when comparing PW with L2, or L1 with L2. In Chapter 5 we will look closely at the use of *This + N* as a demonstrative nominal anaphor. The significance of the differences between the PW and student writing, highlighted in this chapter, will then become apparent.
4.4.9 *these - N* (e.g. *these findings...*)

Table 9. **Pattern: these + (mod) + N**

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>Frequency</td>
<td>Noun</td>
</tr>
<tr>
<td>Findings</td>
<td>7</td>
<td>Objects</td>
</tr>
<tr>
<td>Differences</td>
<td>3</td>
<td>Tasks</td>
</tr>
<tr>
<td>Problems</td>
<td>3</td>
<td>Processes</td>
</tr>
<tr>
<td>Results</td>
<td>3</td>
<td>Questions</td>
</tr>
<tr>
<td>Subjects</td>
<td>3</td>
<td>Schemas</td>
</tr>
<tr>
<td>Concepts</td>
<td>2</td>
<td>Theories</td>
</tr>
<tr>
<td>Levels</td>
<td>2</td>
<td>Concepts</td>
</tr>
<tr>
<td>Questions</td>
<td>2</td>
<td>Differences</td>
</tr>
<tr>
<td>Solutions</td>
<td>2</td>
<td>Factors</td>
</tr>
<tr>
<td>Theories</td>
<td>2</td>
<td>Ideas</td>
</tr>
<tr>
<td>Answers</td>
<td>1</td>
<td>Items</td>
</tr>
<tr>
<td>Beliefs</td>
<td>1</td>
<td>Limitations</td>
</tr>
<tr>
<td>Categories</td>
<td>1</td>
<td>Operations</td>
</tr>
<tr>
<td>Concerns</td>
<td>1</td>
<td>Schemes</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>1</td>
<td>Stages</td>
</tr>
<tr>
<td>Details</td>
<td>1</td>
<td>Studies</td>
</tr>
<tr>
<td>Distinctions</td>
<td>1</td>
<td>Systems</td>
</tr>
<tr>
<td>Items</td>
<td>1</td>
<td>Tests</td>
</tr>
<tr>
<td>Pairs</td>
<td>1</td>
<td>Ways</td>
</tr>
<tr>
<td>Preferences</td>
<td>1</td>
<td>Abilities</td>
</tr>
<tr>
<td>Procedures</td>
<td>1</td>
<td>Areas</td>
</tr>
<tr>
<td>Properties</td>
<td>1</td>
<td>Categories</td>
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<tr>
<td>Ranks</td>
<td>1</td>
<td>Changes</td>
</tr>
<tr>
<td>Reflections</td>
<td>1</td>
<td>Characteristics</td>
</tr>
<tr>
<td>Rules</td>
<td>1</td>
<td>Considerations</td>
</tr>
<tr>
<td>Stimuli</td>
<td>1</td>
<td>Demands</td>
</tr>
<tr>
<td>Studies</td>
<td>1</td>
<td>Developments</td>
</tr>
<tr>
<td>Uses</td>
<td>1</td>
<td>Domains</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Explanations</td>
</tr>
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<td></td>
<td></td>
<td>Features</td>
</tr>
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<td></td>
<td></td>
<td>Functions</td>
</tr>
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<td></td>
<td></td>
<td>Inferences</td>
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<td></td>
<td></td>
<td>Modes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opinions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perspectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positions</td>
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<td></td>
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<td>Principles</td>
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<td></td>
<td>Responses</td>
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<td></td>
<td></td>
<td>Skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Structures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variables</td>
</tr>
</tbody>
</table>

47 (62% with shell nouns) 89 (69% with shell nouns) 21 (86% with shell nouns)

**Schmid** does not include any plurals as they were excluded from the original searches for *N-that*. However, for the sake of argument, those nouns in the above table in normal type are the plural forms of nouns included in the list of shell nouns. Once again we find the majority of nouns in this pattern to be shell nouns. This pattern appears significantly more frequently in the L1 sub-
corpus than in the other two, but there is no marked difference between the three with regard to the variety of nouns appearing in the pattern. The frequency within the L1 corpus is arguably due to the nature of the task the student writers were given: comparing the responses of two subjects within the frameworks of two or more theories they had studied.

4.4.10 *th - copula - det - N* (e.g. *this is the crucial issue...*)

Table 10. **Pattern: th- + copula + det + (mod) + N**

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>Frequency</td>
<td>Noun</td>
</tr>
<tr>
<td>Issue</td>
<td>2</td>
<td>Answer</td>
</tr>
<tr>
<td>Case</td>
<td>2</td>
<td>Concept</td>
</tr>
<tr>
<td>Consequence</td>
<td>1</td>
<td>Example</td>
</tr>
<tr>
<td>Evidence</td>
<td>1</td>
<td>Opinion</td>
</tr>
<tr>
<td>Expectation</td>
<td>1</td>
<td>Outline</td>
</tr>
<tr>
<td>Level</td>
<td>1</td>
<td>Period</td>
</tr>
<tr>
<td>Result</td>
<td>1</td>
<td>Process</td>
</tr>
<tr>
<td>Task</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>View</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Way</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

The fact that this pattern does not appear in the L2 sub-corpus suggests that it may be a complex enough construction for L2 writers to avoid using it.

With regard to the nouns appearing in the *Th-N* pattern overall, less than 10% (in any of the sub-corpora) represent first-order entities. This is no doubt related to the genre, but there are grounds to argue that from a pedagogical perspective, this pattern may be the most fruitful place to begin introducing “shell” nouns. On the whole, the pattern is used less often by the L2 writers than by the PW or L1. The clear anaphoric (deictic) function of “this/these” would also facilitate the introduction of how one uses nouns specifically to label or encapsulate preceding discourse.

The final searches were motivated by systematic “misses” in Schmid’s queries. Firstly, he excluded plurals, noting that they do not tend to be embedded in the patterns of the types N-cl and N-be-cl. I did not exclude them and, as is clear from the tables above, they occur regularly in the pattern N-to and Th-N. The next searches were for NPs containing the “zero relativiser”, NPs in which post-modification was in the form of a prepositional phrase, specifically an “of-phrase” and, finally, NPs containing “in which”.

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4.4.11 The “zero relativiser” (the way we respond to...)

The search for the zero relativiser was prompted by two things: firstly, Schmid notes in his discussion of the limitations of his analysis that when the conjunction “that” is deleted, a notoriously common phenomenon in both spoken and written English, his search query would have missed the shell noun. The fact that this phenomenon is truly not limited to spoken English is what made it worth looking at more closely. While Biber et al. found that retention of the that complementiser is the norm for academic prose, they were surprised to discover that the frequency of relativiser omission is about the same in academic prose as in conversation (1999:620). They state that the choice to omit the relativiser results in a less formal style, thus bringing a more colloquial tone to dense informational prose. If one extends this a little, one could argue that novice producers of academic prose may well adopt a more colloquial tone simply because they are less familiar with the more formal style of academic writing. Should this be the case, it would certainly be interesting to examine their texts for the “zero relativiser”, and thus gather in another group of NPs that would otherwise have been missed. The importance of this, for our purposes, is to ensure that cases where writers are in fact providing postnominal specification are not excluded.

The search for this “missing” element was made possible by Biber et al.’s finding that in all registers, the zero relativiser is strongly favoured by the presence of a personal pronoun as subject in the relative clause. Because most pronouns distinguish between subject (nominative) and object forms, the presence of a subject pronoun, they note, unambiguously marks the beginning of a new clause. Thus, these pronouns provide a grammatical clue for the beginning of a relative clause, even without a relativiser:

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>Frequency</th>
<th>L1 Sub-corpus</th>
<th>Frequency</th>
<th>L2 Sub-corpus</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun Problem/s</td>
<td>2</td>
<td>Noun Way</td>
<td>14</td>
<td>Noun Way</td>
<td>3</td>
</tr>
<tr>
<td>Sets</td>
<td>2</td>
<td>Experience</td>
<td>1</td>
<td>Domain</td>
<td>2</td>
</tr>
<tr>
<td>Procedures</td>
<td>1</td>
<td>Knowledge</td>
<td>1</td>
<td>Things</td>
<td>2</td>
</tr>
<tr>
<td>World-view</td>
<td>1</td>
<td>Object</td>
<td>1</td>
<td>Answers</td>
<td>1</td>
</tr>
<tr>
<td>Position</td>
<td>1</td>
<td>Conclusions</td>
<td>1</td>
<td>Developments</td>
<td>1</td>
</tr>
<tr>
<td>Values</td>
<td>1</td>
<td>Influence</td>
<td>1</td>
<td>Knowledge</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information</td>
<td>1</td>
<td>Action</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceptions</td>
<td>1</td>
<td>Something</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Replies</td>
<td>1</td>
<td>Objects</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Responses</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Structures</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decisions</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td>Choices</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Pattern: “zero relativiser” (e.g. the way we respond to...)

<table>
<thead>
<tr>
<th></th>
<th>PW vs. L1 → Z = 2.97</th>
<th>PW vs. L2 → Z = 2.88</th>
<th>L1 vs. L2 → Z = 0.21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>26</td>
<td>14</td>
</tr>
</tbody>
</table>

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This pattern appears with significantly higher frequency in the L1 and L2 than in the PW. With regard to shell noun usage, the most striking difference is between the PW and the L1 sub-corpora: the PW exhibits very few examples and half of them are not shell nouns. In the L1 writing, however, this pattern not only occurs with higher frequency than many of patterns used by Schmid (see Tables 3, 4, 5, 6, 7 above) but is also populated primarily by shell nouns (92%).

4.4.12 “Of-phrases” (e.g. the nature of the responses to...)

Schmid (2000) was forced to discard certain unwanted matches found in his search. For instance, insertions of linguistic material between a shell noun and the postnominal or complementing clause resulted in search findings such as “government”. This match would have resulted from a string such as the following: “The energy policy of the government is to have no energy policy at all”. Furthermore, in the sentence “the next part of the project is to go back and to identify where these products come from”, “of the project” would have had to be regarded as “inserted” material preventing the desired string (N-is-to) from being found. Schmid is very much aware that while “government” and “project” will have been scored incorrectly and hence discarded, he will have missed “policy” and “part”. He points out, in fact, that for some nouns as many as 30 to 40% of uses as shell nouns are not included in the frequency scores in his study because of such “insertions”. Considering this claim, as well as the finding of Biber et al. (1999) that prepositional phrases occur as postmodifiers with the highest frequency in academic prose, it seemed worthwhile to explore this further. I focused specifically on “of-phrases” because Schmid’s examples of “insertions” all involve an of-phrase and, in their discussion of four-word lexical bundles, Biber et al. show that the most widely used patterns in academic prose (highest number of four-word lexical bundles) involve NPs with of-phrase fragments and prepositional phrases with embedded of-phrase fragments. They also refer specifically to what they call stance nouns + of prepositional phrases (p.985): the most common nouns they found in this pattern are possibility, value, evidence, importance, problem, understanding, significance, validity, and risk. Several of these nouns occur in this pattern over 50 times per million words in their academic corpus, whereas in News they never occur more than 20 times per million words and are almost non-existent in the Fiction and Conversation corpora. It is interesting to note this in view of the fact that “linguistic products from media sources” account for 70% of Schmid’s corpus.
<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>Frequency</th>
<th>L1 Sub-corpus</th>
<th>Frequency</th>
<th>L2 Sub-corpus</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
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<td>Noun</td>
<td></td>
<td>Noun</td>
<td></td>
</tr>
<tr>
<td>Number / s</td>
<td>30</td>
<td>Nature</td>
<td>37</td>
<td>Nature</td>
<td>35</td>
</tr>
<tr>
<td>Type / s</td>
<td>27</td>
<td>Way / s</td>
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<td>22</td>
</tr>
<tr>
<td>Structure / s</td>
<td>23</td>
<td>Process / es</td>
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<td>Theory / i es</td>
<td>18</td>
</tr>
<tr>
<td>Set / s</td>
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<td>Level / s</td>
<td>24</td>
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</tr>
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<td>23</td>
<td>Stage / s</td>
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<tr>
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<td>22</td>
<td>Level</td>
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<td>Process / es</td>
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<td>Group / s</td>
<td>14</td>
<td>Number</td>
<td>17</td>
<td>Point / s</td>
<td>9</td>
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<td>Understanding</td>
<td>14</td>
<td>Type / s</td>
<td>17</td>
<td>Process / es</td>
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<td>15</td>
<td>Response / s</td>
<td>9</td>
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<td>Stage / s</td>
<td>15</td>
<td>Form / s</td>
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<td>15</td>
<td>Concept / s</td>
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<td>Development</td>
<td>14</td>
<td>Use</td>
<td>7</td>
</tr>
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<td>14</td>
<td>Aspect / s</td>
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</tr>
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<td>Nature</td>
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<td>10</td>
<td>Use / s</td>
<td>12</td>
<td>System</td>
<td>6</td>
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<tr>
<td>Arguments</td>
<td>9</td>
<td>View</td>
<td>12</td>
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<tr>
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<td>8</td>
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<td>Interpretation / s</td>
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<td>Property / i es</td>
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<td>7</td>
<td>Example / s</td>
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<td>Role</td>
<td>3</td>
</tr>
<tr>
<td>Level / s</td>
<td>7</td>
<td>Feature / s</td>
<td>8</td>
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<td>3</td>
</tr>
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<td>Numerosity/ i es</td>
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<td>Notion</td>
<td>8</td>
<td>Critique</td>
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<td>Set</td>
<td>8</td>
<td>Experience / s</td>
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<tr>
<td>View</td>
<td>6</td>
<td>Amount / s</td>
<td>7</td>
<td>Function</td>
<td>3</td>
</tr>
<tr>
<td>Construction</td>
<td>6</td>
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<td>Activity</td>
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<td>6</td>
<td>Area / s</td>
<td>3</td>
</tr>
<tr>
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<td>6</td>
<td>Method / s</td>
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<td>Competence</td>
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</tr>
<tr>
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<td>Part</td>
<td>6</td>
<td>Construction</td>
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</tr>
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<td>Performance</td>
<td>6</td>
<td>Culture</td>
<td>3</td>
</tr>
<tr>
<td>Comparison / s</td>
<td>5</td>
<td>Role</td>
<td>6</td>
<td>Group / s</td>
<td>3</td>
</tr>
<tr>
<td>Content / s</td>
<td>5</td>
<td>Choice / s</td>
<td>5</td>
<td>Importance</td>
<td>3</td>
</tr>
<tr>
<td>Domain / s</td>
<td>5</td>
<td>Critique</td>
<td>5</td>
<td>Kind / s</td>
<td>3</td>
</tr>
<tr>
<td>Example / s</td>
<td>5</td>
<td>Experience / s</td>
<td>5</td>
<td>Limitations</td>
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</tr>
<tr>
<td>Member / s</td>
<td>5</td>
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<td>Result / s</td>
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<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>PW vs. L1 → Z = 0.85</td>
<td>PW vs. L2 → Z = 1.02</td>
<td>L1 vs. L2 → Z = 1.74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shells = 41% 983  Shells = 83% 990  Shells = 47% 543

For reasons of space, only those nouns appearing in this pattern two or more times are listed in the above table. The totals provided are, however, the real totals; i.e. including those nouns appearing only once in this pattern. The reader is reminded again that these totals must be compared as proportions of different sized samples, and thus should not be misled by what appear to be large differences in the raw totals.

There is no statistically significant difference in the frequency of this pattern across the three sub-corpora, although it is clearly the most prolific of all the patterns extracted as sources of
potential shell nouns. The difference between L1 and L2 is, however, close to significant (z = 1.74), while the difference between these two with regard to the percentage of “shell” nouns appearing in this pattern is statistically significant at the 1% level (z = 5.3). This is true too when comparing the L1 with the PW in this regard (z = 6.1). This not only indicates that these phrases are indeed a potential “source” of shell nouns (in an academic corpus), but also raises more questions regarding speakers'/writers’ preferred means of specifying information or setting up “shell-content relations.” Finally, one other marked difference is in the variety of nouns appearing in this pattern: there is significantly more variation in the L1 as compared to the L2 (z = 3.8) or the PW (z = 3.4).

4.4.13 **Phrases containing “in which” (e.g. the context in which we...)**

The results were low for the query N+wh (see 4.4.3 above), whereas unsystematic observation of the corpus suggested that “in which” was being used quite frequently. Considering that one could substitute “in which” for *where* in certain cases, a search was conducted for the string *N+ in + which*.

Table 13. **Pattern: N - in - which**

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>Frequency</td>
<td>Noun</td>
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<td>Ways/s</td>
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<td>Context</td>
</tr>
<tr>
<td>Equations</td>
<td>2</td>
<td>Process/es</td>
</tr>
<tr>
<td>Errors</td>
<td>2</td>
<td>Situation/s</td>
</tr>
<tr>
<td>Situation/s</td>
<td>2</td>
<td>Activities</td>
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<td>Area</td>
</tr>
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<td>Circumstances</td>
<td>1</td>
<td>Community</td>
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<tr>
<td>Condition</td>
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<td>Factor</td>
</tr>
<tr>
<td>Event</td>
<td>1</td>
<td>Practices</td>
</tr>
<tr>
<td>Exchange</td>
<td>1</td>
<td>Surroundings</td>
</tr>
<tr>
<td>System</td>
<td>1</td>
<td>Tasks</td>
</tr>
<tr>
<td>Taxonomies</td>
<td>1</td>
<td>World</td>
</tr>
<tr>
<td>Transformation</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shells = 77%</th>
<th>22</th>
<th>Shells = 83%</th>
<th>35</th>
<th>Shells = 44%</th>
<th>9</th>
</tr>
</thead>
</table>

Again, this pattern appears more frequently than many of those examined by Schmid and, in the PW and L1 writing, it is occupied between 77-83% of the time by shell nouns. While the comparison of L1 and L2 does not indicate a significant level of difference (z = 1.83), the z-value is high enough to suggest that this is another pattern with which L2 writers may not be particularly familiar.
potential shell nouns. The difference between L1 and L2 is, however, close to significant \((z = 1.74)\), while the difference between these two with regard to the percentage of “shell” nouns appearing in this pattern is statistically significant at the 1% level \((z = 5.3)\). This is true too when comparing the L1 with the PW in this regard \((z = 6.1)\). This not only indicates that these phrases are indeed a potential “source” of shell nouns (in an academic corpus), but also raises more questions regarding speakers’/writers’ preferred means of specifying information or setting up “shell-content relations.” Finally, one other marked difference is in the variety of nouns appearing in this pattern: there is significantly more variation in the L1 as compared to the L2 \((z = 3.8)\) or the PW \((z = 3.4)\).

4.4.13 Phrases containing “in which” (e.g. the context in which we...)

The results were low for the query N-wh (see 4.4.3 above), whereas unsystematic observation of the corpus suggested that “in which” was being used quite frequently. Considering that one could substitute “in which” for where in certain cases, a search was conducted for the string N+ in + which.

Table 13. Pattern: N - in - which

<table>
<thead>
<tr>
<th>PW Sub-corpus</th>
<th>L1 Sub-corpus</th>
<th>L2 Sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>Frequency</td>
<td>Noun</td>
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<td>Process/es</td>
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<td>Situation/s</td>
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<td>Taxonomies</td>
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<td>Transformation</td>
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<td></td>
</tr>
</tbody>
</table>

Shells = 77% 22  Shells = 83% 35  Shells = 44% 9

Again, this pattern appears more frequently than many of those examined by Schmid and, in the PW and L1 writing, it is occupied between 77-83% of the time by shell nouns. While the comparison of L1 and L2 does not indicate a significant level of difference \((z = 1.83)\), the \(z\)-value is high enough to suggest that this is another pattern with which L2 writers may not be particularly familiar.
4.5 Summary of the Findings

Table 14: Summary of Statistical Differences (Schmid’s patterns)

<table>
<thead>
<tr>
<th>Pattern:</th>
<th>L1 vs. L2</th>
<th>PW vs. L1</th>
<th>PW vs. L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>N + that</td>
<td>Z = 1.85</td>
<td>Z = 1.21</td>
<td>Z = 0.76</td>
</tr>
<tr>
<td>N + to</td>
<td>Z = 0.55</td>
<td>Z = 1.31</td>
<td>Z = 0.6</td>
</tr>
<tr>
<td>N + wh-clause</td>
<td>Z = 2.76  (L2 more)</td>
<td>Z = 0.56</td>
<td>Z = 2.23 (L2 more)</td>
</tr>
<tr>
<td>N + be + that</td>
<td>Z = 0.67</td>
<td>Z = 0.18</td>
<td>Z = 0.53</td>
</tr>
<tr>
<td>N + be + to</td>
<td>Z = 0.52</td>
<td>Z = 0.54</td>
<td>Z = 0.92</td>
</tr>
<tr>
<td>N + be + wh-</td>
<td>Z = 1.32</td>
<td>Z = 0.39</td>
<td>Z = 1.66</td>
</tr>
<tr>
<td>This + N</td>
<td>Z = 0.67</td>
<td>Z = 1.33</td>
<td>Z = 1.79</td>
</tr>
<tr>
<td>These + N</td>
<td>Z = 3.06  (L1 more)</td>
<td>Z = 4.6  (L1 more)</td>
<td>Z = 0.3</td>
</tr>
<tr>
<td>Th- + cop + det + N</td>
<td>Z = 1.67</td>
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</tr>
</tbody>
</table>

The first point that must be made here is with regard to the frequency of N + that (complement clause). The student writers appear to use this pattern with similar frequency to the published writers: a pattern which Biber et al. (1999) suggest is the primary marker of stance in academic writing. It is also the pattern Schmid (2000) would argue is the primary means of linking a noun to its “contents”, i.e. of specifying, or providing more information about the noun. This finding presents us with more interesting questions than conclusions - in particular, could we argue that the student writers are thus adept at adopting stance in their writing? Is this really what they achieve when using this pattern? And if the comparatively frequent use of this pattern implies
that they set up “noun-content relations” as often as the PWs, what are they doing to produce the sort of “vagueness” they so often stand accused of? Chapter 5 will attempt to provide answers to these questions.

A second point related to the pattern N + that (complement clause) is that L2 writers are also using those nouns, identified by Biber et al. as “specialised heads” of complement clauses, more often: 53% of the nouns occurring in this pattern in the L2 writing have been classed as such, compared to 44% in the L1 writing (see Table 1). This finding may reflect a more restricted lexicon within the L2 group - fewer nouns being used more often. What it certainly shows is that the L2 writers at this level are familiar with many of the nouns regarded as “prime” shell/carer nouns; i.e. they do not need to be taught them. However, we still need to investigate the possibility of more repetitive, formulaic writing, on the part of the L2s. Something we will examine in the following chapter is how many of the patterns present in the student writing are also present in the assignment sheet given to them. That is, how much the potentially “repetitive” style is the result of “borrowing” from the assignment sheet.

With regard to N + to, Biber et al. have suggested that this construction draws attention away from the attitude of the writer and focuses attention on human goals and actions. They also find that there is no overlap between the group of head nouns controlling that-clauses and to-clauses as complements. What is interesting, for our purposes, is that within the L1 writing there seems to be a balanced use of the N + that and N + to patterns. In the L2 writing, on the other hand, N + that occurs significantly more often (z = 2.28) than N + to. This suggests that both groups of writers could benefit from being made aware of the potential use of these structures - how to adopt a stance (N + that) or how to avoid it (N + to) - as well as the most common nouns that have become “specialised” heads of such phrases.

The possible reason for the differences between L1 and L2 with regard to This + N and These + N (used over twice as often by the L1s than the L2s) may well be related to how often the writers use This and These alone, as anaphoric pronouns. We will discuss this phenomenon in some detail in Chapter 5 when we examine NPs as referring expressions rather than as syntactic strings.
Table 15: Summary of Statistical Differences ("Extra" patterns)

<table>
<thead>
<tr>
<th>Pattern:</th>
<th>L1 vs. L2</th>
<th>PW vs. L1</th>
<th>PW vs. L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>N + which</td>
<td>Z = 0.84</td>
<td>Z = 5.56  (L1)</td>
<td>Z = 4.11  (L2)</td>
</tr>
<tr>
<td>N + of + wh-clause</td>
<td>Z = 0.41</td>
<td>Z = 0.97</td>
<td>Z = 1.16</td>
</tr>
<tr>
<td>N + in + which</td>
<td>Z = 1.83</td>
<td>Z = 1.56</td>
<td>Z = 0.63</td>
</tr>
<tr>
<td>&quot;zero&quot; relativiser</td>
<td>Z = 0.21</td>
<td>Z = 2.97  (L1)</td>
<td>Z = 2.88  (L2)</td>
</tr>
<tr>
<td>N + of - phrase</td>
<td>Z = 1.74</td>
<td>Z = 0.85</td>
<td>Z = 1.02</td>
</tr>
</tbody>
</table>

*N + which* is used significantly more frequently by the L1 writers (63% of the time N = a “shell” noun) than by the L2 or PW, and, within the L1 corpus, it is used more frequently than *N + that*. This difference within the L1 sub-corpus is not statistically significant (z =1.83) but is close enough to warrant mentioning in view of the percentage of shell nouns that are used. The reason for conducting the search for *N + which* was to examine how frequently Schmid’s (2000) shell nouns occurred in *which*-relative clauses in my corpora. According to Collins’ English Usage (1997:581), “non-defining relative clauses beginning with ‘which’ can be used to say something about the whole situation described in the main clause” e.g. “I never met Brando again, which was a pity” (italics mine). Pity is included in Schmid’s list of shell nouns, appearing as it does in the following construction: “It is a pity *that* I never met Brando again”. The frequency of occurrence of *N + that* relative clauses has not been established, nor do we know the ratio of defining vs. non-defining relative clauses in the sub-corpora. It may be that L2 writers use *that* more often as a relativiser than the L1s - something which might also explain the difference between the two with regard to the “in which” pattern. Whatever the case may be, there is clearly enough room for choice when “saying something more about the noun” that even the findings within such a small corpus indicate some clear writer-specific preferences.

The frequency of the zero-relativiser is significantly higher in the student writing than in the PW. As mentioned earlier, omission of the relativiser results in a more colloquial tone (Biber *et al.*, 1999) but is certainly not “wrong”. It is, however, something one could easily draw students’ attention to after comparing their writing with that of published writers: not only is the inclusion of the relativiser a distinguishable characteristic of more “formal” writing, but by using it, that writing can also be made more reader-friendly. For example, the omission of “that” can result in a so-called “garden-path sentence” such as the following: *the student knew the answer to the question was wrong*. There are numerous theories as to why such sentences result in processing ambiguity, but we will not go into these. I merely wish to make the point that in attempting to help students make their writing clearer, and more considerate, indicating to them
such simple ways in which they can lighten the processing task for their readers would be very useful.

Finally, the search for of-phrases resulted in totals that support Biber et al.'s (1999) finding that NPs with of-phrase fragments, and prepositional phrases with embedded of-phrase fragments, are the most widely used patterns in academic prose. There is no difference in the frequency of this pattern across the three sub-corpora. The presence of shell nouns, however, differs markedly between the L1 and L2 writers within the group of nouns appearing twice or more in this pattern: less than half (47%) in the L2 writing include shell nouns, whereas 83% of the of-phrases in the L1 writing include shell nouns. In an attempt to explain such differences we will, in the following chapter, examine the impact of the way the students’ assignment was specified on the texts they finally produced.

In conclusion, let us recall the conflicting advice on “abstract” nouns first mentioned in Chapter 1:

a) Student writers should not use them because they “cause” vague writing.

b) Student writers should be taught them as “core” academic vocabulary.

The findings of the quantitative analysis conducted in this chapter indicate that:

1) Both the student and published writers in this study use “bad”, “abstract” nouns with a predictably high frequency.

2) The student writers also utilise many of the syntactic patterns said to host “shell/carrier” nouns along with other patterns, such as N + in + which, not necessarily associated with such nouns. This suggests that these writers are familiar with what Schmid (2000) considers to be the syntactic means available for “triggering co-interpretation”. The outcome therefore seems to be that the students do use both these nouns and the syntactic patterns associated with their so-called “shell/carrier functions”. Hence simply teaching lists of the nouns, or some sort of “shell noun grammar”, would be unhelpful. On other hand, the student writing is “vague” - providing the impetus for the more qualitative analysis presented in Chapter 5.

3) The 670 nouns indexed in the largest study conducted to date (Schmid, 2000) appear, in some cases, to perform their “shell” function more frequently through patterns other than those identified as shell noun “hosts”. On the other hand, many nouns (such as process), not appearing in Schmid’s index, do appear in these so-called “shell NP” constructions and also present the semantic characteristics (representation of second- and third-order entities) required for inclusion in the “group”. Frequently they are obvious synonyms of identified “shell” nouns. This finding calls into question Schmid’s claim (p.55) that “relatively specific lexico-grammatical patterns
serve as hosts for nouns which are not completely successful linguistic signs on their own because they are too unspecific”.

While this analysis has not given us any information regarding a potential source of “vagueness” in the student writing, it has provided some useful findings: first, it has highlighted a number of structures that could be considered for inclusion in “academic writing” classes. Secondly, this analysis has reinforced how much academic writing differs from other discourse; even small sub-corpora such as those analysed in this study yield large numbers of patterns which Schmid did not find in any useful quantity in a much larger, media-oriented corpus. An analysis of these specifically academic corpora thus supports Biber et al.’s corpus findings which show very clearly the influence of genre on the choices made by writers. Finally, the testing of Schmid’s claims on specifically “academic” corpora, as well as on less-than-perfect “learner” corpora, suggests the extent to which his characterisation of “shell nouns”, and their functions, depends on the type of corpus he used to find those nouns. For example, the “relatively specific” patterns highlighted as the hosts for “conceptually incomplete” nouns possibly are the most frequent in the language of the media; beyond that, however, claims regarding a restriction on these patterns do not hold. Furthermore, there is a tacit suggestion in these claims that the mere appearance of such a noun in one of these patterns will ensure that it becomes conceptually “complete”. However, in the student texts included in this analysis, “shell” nouns appear in “shell-NP” constructions and yet apparently remain underspecified.

We have shown, therefore, that even an investigation of small corpora, such as those used in this study, considerably extends Schmid’s (2000) index of 670 shell nouns, as well as the set of syntactic structures in which they can appear and still be said to be performing a “shell” function. We therefore have no reason to suppose that it is possible to delimit the number of nouns which should be included in any useful way; different topic areas within academic writing will certainly throw up words which have not yet been included in the set of “shell” nouns.

The focus of Schmid and others, which has influenced this study so far, has been on the potential, inherent in certain types of noun, to be used to perform a specialised “shell” function. From now on, however, my guiding assumption will be that any noun, when used in such a “shell” position, requires adequate specification if it is to be used to refer successfully.
5.1 Referring expressions - Introduction

We discussed reference as distinct from “sense” in Chapter 2 and thus highlighted the difference between nouns which have potentially vague denotation and NPs which have vague reference. In Chapter 4 we discussed the detailed analysis of “shell” NP constructions as syntactic patterns and the findings so far have suggested that, firstly, despite the claims of many “writing guides”, the vagueness in student writing cannot simply be situated in the semantic abstractness of the nouns which writers choose to use. Secondly, a quantitative analysis of the corpora has shown that student writers are using shell/carrier nouns, and they are doing so within the syntactic patterns Schmid has identified as the most common “hosts” of such nouns. The presence of a “shell noun” in combination with one of these syntactic patterns should, according to Schmid’s (2000) findings, result in a “shell noun complex” and thus fulfil one or more of the many functions attributable to nouns in these positions. However, despite the presence of these constructions, or “complexes”, in the student writing, the writing remains “vague”. That is, the successful functioning of shell nouns appears to depend on other criteria, in addition to the presence of a certain type of abstract noun within a particular syntactic context. While several quantitative differences between the PW and student sub-corpora have been identified and discussed, the fact remains that the published writers in this study use semantically under-specified nouns as frequently as, if not more frequently than, student writers but somehow manage to produce texts that are not considered vague. If we rephrase this statement in terms of discourse reference, the PWs in this study make use of referring expressions that are successful in enabling the reader to identify the intended referent.

Up to now we have conducted a broadly quantitative analysis of three corpora; bodies of text, independent of the context in which they were constructed. However, successful reference “depends on the hearer’s (reader’s) identifying, for the purposes of understanding the current linguistic message, the speaker’s intended referent, on the basis of the referring expression used” (Brown & Yule, 1983:205; my addition in parentheses). Having failed to pinpoint the source of vagueness in the student texts via quantitative, corpus-analysis methods, we must now focus more narrowly on the texts making up these corpora, as well as the context in which they were produced.
The student texts used in this study were produced in the context modelled above; one quite different from that of the PWs:

When discussing the differences between the student and PW texts, it is therefore essential that we now take these different contexts into account. For our purposes this entails making the reader of these texts the focus, because the "vagueness" of a text is, after all, no more than a judgement made by its reader. If a reader must identify a writer’s intended referent on the basis of the referring expression used, what characteristics of that expression could be said to assist, or hinder, the reader in this task? Or, as Breheny (1999) asks “what does a text do to the mind of the reader/hearer and what does the reader have available to him/her before ever encountering the text?” When asking these questions, it is important that we make the following assumption: that
in every case the writer “believes that, by using this expression, he will enable his hearer to pick out the intended referent” (Brown & Yule, 1983:205). We will not assume that any of the writers in this study set out deliberately to mislead their readers or to produce “vague” texts. We must therefore take into account the writers’ assumptions about what their readers “had available to them before ever encountering the text” and how these assumptions influenced the referring expressions they chose to use.

As Brown and Yule (1983:58) point out, there “must be principles of interpretation available to the hearer (reader) which enable him to determine... a relevant and reasonable interpretation of an expression ... on a particular occasion of utterance”. One of these principles they call the principle of local interpretation. This instructs the hearer “not to construct a context any larger than he needs to arrive at an interpretation” (p.59). The effect of “co-text” in limiting the interpretation of what follows is most important in the application of this principle: “the initial setting of the co-text determines the extent of the context within which the hearer will understand what is said next” (Brown & Yule, 1983:59). The crucial difference between the subcorpora we are examining lies in the nature of this “co-text”: the texts used to build the PW subcorpus were created within the broad co-text of the established discourse of their discipline, for example, previous publications on the same topic. However, because the readers form a largely unknown, (inter)national audience they must still rely primarily on the text itself to create a context for interpretation. In the case of the student texts, the writers are working within the context of their assignment sheets and are writing for one well-known reader. Both the context and co-text create what Venneman (1975) has called a “presupposition pool”, containing a set of discourse subjects presumed to be shared by all participants in the discourse. “Because it is part of the shared assumptions of the discourse participants that these discourse subjects exist, they do not need to have their existence asserted in the discourse” (Brown & Yule, 1983:80). The assignment sheet co-text thus delimits the context for interpretation to such an extent that any reader without access to it will struggle to apply the principle of local interpretation.

In this chapter the focus will be on the specificity of certain referring expressions and how this specification is achieved within the text, bearing in mind the context (and co-text) in which the text was created. The selection of expressions for inclusion in this analysis was based on the following considerations:

1) The findings of the analysis in Chapter 4 reinforced the fact that there is no closed list of identifiable “shell nouns”. Therefore the analysis in this chapter cannot be restricted to only those referring expression containing “shell nouns”. However, the finding (Ch 4.3.2) that 73-
86% of the 100 most frequent nouns across the three sub-corpora are used to refer to 2nd and 3rd-order entities, indicates the very high potential for “shell noun usage” within the texts we are examining. It also indicates the apparently high potential for vagueness. Based on this finding, no matter how referring expressions are selected for this analysis, we are likely to encounter a high number of NPs containing nouns used to refer to 2nd or 3rd-order entities.

2) In order to examine the use of possible “shell NPs” as referring expressions, we cannot continue to look at isolated, decontextualised “patterns” and must turn to considering larger texts. However, because this analysis has to be conducted manually, it is necessary to find a way of restricting the size of comparable “samples”, while still ensuring they are large enough to allow us to take context into account.

3) In addition to this need, if we want to make any comments about writers’ assumptions, and how these have influenced the choice of referring expressions, we must use extracts of text for which there exist no earlier, “invisible” sections of text. We must therefore look at the opening paragraphs of texts.

4) Francis (1986:27) makes appearance within a definite noun phrase, or in close association with a definite reference item, an essential criterion for identifying A-nouns. Schmid (2000:25) notes, in passing, that “indefinite noun phrases do not create as strong conceptual boundaries as the definite noun phrases in which shell nouns tend to occur”. He does not provide any statistics to support this “tendency”, nor does he pursue any further the role of definiteness in the functioning of “shell content complexes”. Nevertheless, based on the fact that Schmid used a large, general corpus, it will be assumed that this claim, as to the tendency of shell nouns to appear in definite NPs, arose as a result of the amount of evidence present in his corpus.

5) In order to meet all the above requirements, the decision was made to examine only definite referring expressions in the first 200 words of each text making up the three sub-corpora. There are other reasons, aside from Schmid’s claim above, for considering only definite expressions, and these will be discussed further on in this introduction.

The analysis is based on further quantitative analysis, as well as closer, qualitative discussion where this usefully draws out the real value of the quantitative findings. We will draw, once again, on Lyons’ tripartite taxonomy (1977:442-3). To re-cap, first-order entities are persons, animals, other organisms and physical objects, which are located in space and have fairly constant perceptual properties. Second-order entities include events, processes, situations etc. which are located in time and which are said to occur or take place rather than to exist. Third order entities are “abstract” entities such as concepts, propositions, or more generally, ideas.
independent of place and time (1977:443). The aim is to highlight the interplay between reference and the semantically under-specified nouns we have focused on so far.

Underlying this change of focus are several assumptions about the role that referring expressions play in discourse. In order to provide some explanation of what surfaces during the following analysis, we will draw on functional-cognitive linguistic notions regarding the impact of reference and referring expressions on text comprehension. Hence it is important to begin with a broad description of the thinking influencing this chapter and we will draw again on some of the ideas first introduced in Chapter 3 (e.g. Ariel, 1994, 1996; Cornish, 1996, 1999).

5.2 Referring Expressions - A Functional-cognitive approach

First, it is important to note that in the field of linguistics (as in any other field) there has never been consensus on what constitutes a referring expression. Russell (1905) and his followers in the logico-semantic tradition, for instance, maintained that only proper names and definite expressions could refer, since only the referents of these expressions could be said to exist in the real world. Others, among whom Lyons (1977), defend the view, now widely accepted in linguistic theory, that reference need not be restricted to real world entities, but should also pertain to fictional and abstract entities (Keizer, 1992). Functional grammar takes an even more liberal stand: the entities to which reference can be made are regarded as “mental constructs”, i.e. as existing in a mental world (Dik, 1989:112). Since entities are conceived of as “mental constructs”, it is not only 1st-order entities (persons/objects) that can be referred to, but also 2nd- and 3rd-order entities. As Keizer (1992) notes, this is not to say that expressions used to refer to these different types of entities are all equally good examples of referring expressions1. Nevertheless, as our focus in this study is on those nouns used to represent 2nd- and 3rd-order entities, it is only relevant that we adopt the view that it is possible to refer to such higher order entities.

Ideas, such as Givón’s (1989, 1992, 1995), about the role of grammar in discourse processing have been helpful in interpreting the findings in this chapter. Givón illustrates how the grammar of referentiality (e.g. the use of definite versus indefinite determiners, the use of more explicit anaphors like full noun phrases versus less explicit anaphors like pronouns) provides “processing instructions” that guide the text comprehender: “for the text comprehender, overt grammatical signals - syntactic constructions, morphology, intonation - cue the text

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1 In terms of prototypicality, “expressions referring to specific first order entities may be regarded as prototypically referring, i.e. as best examples of the category of referring expressions” (Keizer, 1992:9).
processor, they guide him/her in the construction of a coherent mental representation of the text” (Givón, 1995:343; see Sanford & Garrod, 1981 and Garrod & Sanford, 1985 for a very similar view). Importantly, these textual distributions and functions are but reflections of their cognitive-psychological values. Thus, as Cornish (1999:14) puts it, Givón expresses the relationship between the

“textual-grammatical and the cognitive in exactly the right way in calling the signals created by the textual-grammatical, ‘mental processing instructions’, which prompt the understander to construct a coherent discourse model as a function of his/her perception of the context framing that discourse. At the same time, discourse anaphora as well as deixis have a clear cognitive, memory-based role”.

From a cognitive linguistic perspective, a well-established view of discourse production and comprehension is that people build up mental representations (or mental models; e.g. Johnson-Laird & Garnham, 1979) of discourse. The question that must surely follow is, how does this happen? From a psycholinguistic perspective, mental models are

“representations of situations in the world. They are built up incrementally as a discourse is processed, and they contain representations of individuals, properties, and events that can be referred to in the upcoming discourse. They also contain information on what the participants know about each other, and this information is used to select appropriate, comprehensible, referring expressions” (Garnham, 1999:337).

In the search for the source of vagueness in student writing, the selection of “appropriate” referring expressions based on “what participants know about each other” is of particular interest. Garnham (1999:336) notes that “the computation of appropriate referring expressions is a crucial part of language production, and that the computation of the referents of those referring expressions is a crucial part of comprehension.” For the sake of conducting a systematic analysis of definite expressions in the opening paragraphs of my texts, it had to be assumed that all the writers involved in this study were experienced enough as “language producers” to construct what they believed to be appropriate referring expressions. That is, they believed the cues they were providing would be sufficient to guide the reader of the text. However, as data in this study, these texts had to be coded by an “ignorant” reader - one that was certainly not the type of reader students had in mind when preparing their essays. The result of such context-independent reading is that enough evidence of writers’ assumptions becomes available to indicate how these
assumptions influenced the coherence and specificity of the text: the “crucial part of comprehension”, as Garnham puts it, may be seriously hampered for the majority of readers if a writer has selected referring expressions, or cues, with only one, well-known, reader in mind.

Psycholinguistic models like Sanford and Garrod’s Memory Focus Model of discourse comprehension (1981; Garrod & Sanford, 1994) developed out of an interest in referential coherence and anaphoric resolution (Garrod & Sanford, 1977). Like most work carried out in this tradition, their focus has been on anaphoric resolution, or how the various referents in a text (primarily personal pronouns) become associated with their antecedents in the text. The type of referring expressions that we must examine, however, are predominantly nominal anaphors (NAs). That is, “a non-pronominal NP, i.e. (i.) a proper name or (ii.) a definite/demonstrative determiner followed by at least a simple noun or (iii.) a combination of both”, which is used to refer to an “antecedent in the previous discourse” Maes (1995:6). While it is certainly possible to mark and describe the way NAs become associated with textual antecedents, our interest is really in NAs as “mental processing cues”, intended to help the addressee access the appropriate representations of the discourse referent. Thus, while we will be taking textual anaphor into account, we will view NAs as cues used by the addressee to access representations of the referent within “the world of discourse”. By “world of discourse” is meant the “accumulating shared and mutual knowledge that the text can refer to and add to as the discourse unfolds” (McCarthy, 1994:268). Following Brown and Yule, reference items will be viewed as referring to entities in the discourse world, which noun phrases have originally created in that world (1983:201). Entities may be retrievable as noun phrases in the text, or as clauses, sentences or whole paragraphs, but reference, as such, is to those entities in the discourse representation and not to the linguistic forms that encode references.

The question then is “how does a referential expression trigger an appropriate (i.e. intended) discourse referent?” (Maes, 1995:5). As Maes notes, this question, central to all studies on the establishment and maintenance of referential coherence, presupposes “a view of referential expressions as devices with a specific referential potential, which enable language users to give access to a particular range of discourse referents” (Maes,1995:5). From this follows the approach to referential coherence adopted in this study: referring expressions are regarded as linguistic devices, accessing or creating representations of discourse referents. The form or type of a referential expression is viewed as signalling a particular degree of expected accessibility or an assumed cognitive status of the underlying discourse referent. The idea of referential expressions accessing representations of discourse referents has been given many different labels,

As Maes (1995:7) notes, this functional view of discourse reference is attractive in that it enables one to make predictions with respect to the behaviour of anaphoric as well as non-anaphoric referential expressions, two research areas which for a long time received separate attention. The connection between types of expressions and cognitive statuses of discourse referents holds independent of whether or not expressions are anaphoric; "for both anaphoric and non-anaphoric expressions, the accessibility view predicts that the lexical specificity or explicitness of expressions is inversely proportional to the accessibility of the underlying referent" (Maes, 1995:7). We will come back to this point in our discussion of NAs in the texts.

5.3 NPs as definite referring expressions

Fundamental to the analysis presented in this chapter is the claim that "non-pronominal noun phrases" (Maes, 1995:6) and pronouns differ in their portrayal of the relationship between the referent and the discourse context. As van Hoek (1997:31) summarises it, a complete nominal expression (i.e. an NP) demonstrates an *instance* of a nominal type, and carries some information about its relationship to the discourse context (such as definiteness). Instances are distinguished by having unique locations in a conceived domain such as physical space. As such, the question we will be asking is: what does the form of the expression tell us about the writer's assumptions with regard to the hearer/reader's mental model? It is well-known that in languages like English, "hearer-status is marked, more or less, by the definite/indefinite distinction" (Walker & Prince, 1996:292; cf. Hawkins 1978, Heim 1983, Fraurud 1992). Thus the definite / indefinite contrast is taken to indicate whether the speaker believes that the addressee can make mental contact with the unique intended nominal instance, given the current discourse context (see Hawkins 1978, 1991; Langacker 1991:98).
“The definite nominal the cat presupposes that the addressee can identify the unique instance of cat intended - typically because of prior mention in the discourse or because of shared background knowledge” (van Hoek, 1997:32)

However, based on three different corpus studies of altogether 1475 definite NPs, Fraurud (1992) found that less than one third were based on previous mention; i.e. first-mention definites are in fact quite common. Thus, in their remark cited above, Walker & Prince (1996) use “more or less” for a good reason: the match between hearer-status and definiteness-marking “is not isomorphic because things are more complex than a simple binary distinction. In particular, the category of Inferrable entities simultaneously introduces complexity and efficiency into the system” (1996:292-3). They note that if there were only two possible hearer-statuses in the world, hearer-old and hearer-new, then, grammaticization aside, definiteness-marking could be isomorphic with hearer-status. However, this would result in intolerable discourses such as the following:

* I bought a book yesterday. The book had a cover. The cover was torn.

What makes this discourse “intolerable” is that, just as speakers/writers have assumptions about what entities hearers already know, “they also have assumptions about other sorts of things in hearers’ knowledge-stores, and these other things must be taken into account as well in felicitous discourse” (Walker & Prince, 1996:293). However, the problem with such inferrables, is, “how do you mark an entity for which the hearer cannot be expected to already have a filecard but whose existence (in the discourse-model) the hearer can certainly be expected to arrive at inferentially, on the basis of general knowledge s/he is assumed to have?” (Walker & Prince, 1996:293). What they discovered is that in English and other languages looked at, NPs evoking such entities are in fact marked in the same way as NPs evoking hearer-old entities (1996:293). Moreover, a statistical analysis of NPs in a naturally-occurring text revealed that the syntactic distribution of NPs evoking inferrable entities was statistically indistinguishable from NPs evoking hearer-old entities that had not yet been mentioned in the discourse (Prince, 1992). As a result of these findings, Walker & Prince arrive at the following, very simple hearer-status algorithm:
"When evoking an entity which you believe the hearer already ‘knows about’ or else already has the requisite knowledge and reasoning capability to infer, mark the NP representing the entity as definite. When evoking an entity which you believe the hearer does not yet ‘know about’ and cannot infer, mark the NP representing the entity as indefinite.”

(Walker & Prince, 1996:294)

As an outside observer of all the texts used in the analysis, my approach to the text-coding was guided, at first, by this simple view of “hearer-status”. Every definite NP was regarded as potentially evoking an entity the writer believed the hearer already “knew about” or could infer. The next step then involved comparing the definite NPs produced by the PWs with those produced by the student writers. Considering we know that the PW texts were written for a “general audience” while the student texts were written for a very limited audience (their lecturer), any differences found in the definite NPs should give an idea of how assumed hearer-status affects not only the definite / indefinite choice, but more complex decisions regarding the specifying expansions of the NPs.

5.3.1 Definite determiners in Academic Writing

As the focus will be on definite nominals, it is useful to begin with definite determiners, and what is already known about the way they function in English academic writing. With regard to articles, their overall frequency is, according to Biber et al.’s (1999) study, highest in academic prose as compared to newspapers, speech, etc. They also find that in the written registers, the definite article is much more common than the indefinite article because it has a greater range of uses. First, it combines with both countable and uncountable nouns, as well as both singular and plural nouns. In addition, the definite article is often used for subsequent mention, and when used cataphorically, it can also introduce new referents. In all three sub-corpora in my study there are, as expected, approximately three times as many definite articles (the) as indefinites (a / an).

<table>
<thead>
<tr>
<th>THE</th>
<th>A / AN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW</td>
<td>1681</td>
</tr>
<tr>
<td>L1</td>
<td>2123</td>
</tr>
<tr>
<td>L2</td>
<td>1164</td>
</tr>
</tbody>
</table>

Figure 5.3 - Frequency of def / indef articles
In their discussion of the forms of anaphoric expressions across the various registers analysed, Biber et al. (1999:237) note that definite articles with repeated nouns are most common in news and academic prose:

"... there is a dense use of nouns and hence a great deal of potential competition among referents. These registers therefore require more specific anaphoric devices... Use of a repeated noun is most common in academic prose, presumably because it allows a more exact form of reference." (Biber et al., 1999:238)

They note too that

"academic prose (also) has a relatively higher frequency of noun phrases with demonstrative determiners ... as these provide a precise form of reference (used with a noun to refer to the immediate linguistic context)." (Biber et al., 1999:238)

In academic prose, where this/these are abundant, reference is often anaphoric, signalling reference to the immediately preceding text (Biber et al., 1999:263). "Like definite articles, demonstrative determiners specify that the referent of the noun phrase is assumed to be known to the speaker and the addressee. If the knowledge is based on the preceding text, we speak of anaphoric reference" (Biber et al., 1999:263). However, despite the perception that definite noun phrases are usually used for anaphoric reference, they are more commonly used for other purposes: cataphoric reference represents 30-40% of the definite noun phrases in news and academic prose (Biber et al., 1999:263). "The special advantage of definite noun phrases as compared with pronouns is that they are more precise and allow expansion in addition to a specification of identity" (Biber et al., 1999:263, italics mine). Using only a selection of the patterns analysed in Chapter 4, the following table indicates the percentage of patterns which are definite micro NPs:

<table>
<thead>
<tr>
<th>Patterns</th>
<th>% of selected patterns which are definite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PW sub-corpus</td>
</tr>
<tr>
<td>(det) + N + that</td>
<td>(e.g. the idea that...)</td>
</tr>
<tr>
<td>(det) + N + to</td>
<td>(e.g. the tendency to...)</td>
</tr>
<tr>
<td>(det) + N + be + that</td>
<td>(e.g. the fact is that...)</td>
</tr>
<tr>
<td>Of-phrases appearing 5x or more</td>
<td>(e.g. the value of... )</td>
</tr>
</tbody>
</table>
There is a statistically significant difference between PW and student writers in their use of (det) + N + that as a definite NP: both the L1 and L2 students produce this pattern as a definite nominal significantly more often than the PWs (L1 vs. PW, z = 2.89; L2 vs. PW, z = 2.86). With regard to the pattern (det) + N + to, the difference between the PWs and L2 students is close to statistically significant (z = 1.68). Again, it is the student writers who produce definite NPs more often. These findings are important for several reasons: first, the above patterns represent the archetypal “shell noun environments” and hence these findings support the earlier claim that an analysis of only definite NPs is likely, by default, to include a high number of “shell NPs”. Secondly, application of Walker & Prince’s (1996) simple hearer-status algorithm to these findings would suggest, superficially, a higher tendency on the part of the students writers to assume they are evoking entities “the hearer already ‘knows about’ or otherwise already has the requisite knowledge and reasoning capability to infer” (Walker & Prince, 1996). Finally, in view of our overall characterisation of the student writing as “vague”, the finding that in a sample of NPs they produce definite nominals more often than the PWs requires that we read Biber et al.’s statement regarding definite noun phrases with a slightly different emphasis: “The special advantage of definite noun phrases...is that they are (potentially) more precise and allow expansion in addition to a specification of identity” (Italics mine, 1999:263). Our focus in the following analysis will be on how writers realise this potential in definite NPs.

5.4. An Analysis of Opening Paragraphs

A definite description is one of the constructions assumed to be marked in the grammar as a trigger of elementary (or potential) presupposition (Krahmer, 1998:5). If use of a definite nominal indicates an assumption of shared knowledge then a prevalence of these structures in the opening paragraphs of student writing should allow us to make some predictions with regard to the overall coherence of the texts². While coherence is essentially an “interpretative process” created by the reader while reading the text (McCarthy, 1991:26), its study can generally be approached in two ways:

a. text-based coherence (properties of cohesion and topic flow), and
b. reader-based coherence (expectations of form and content).

² “Familiarity theory” is open to criticism (see Abbot 1999; King, 2001) but our interest lies in how the writer’s presupposition may contribute to vagueness if not fully shared by the reader. The “definiteness” of an expression is thus a useful way in.
In an effort to expand on some of the quantitative findings in Chapter 4, both these approaches will be used. We begin by looking at the opening paragraphs (first 200 words) of all the texts making up the three sub-corpora. This will hopefully accomplish two things: Firstly, from a "text-based" point of view, quantifying the types of specifying expansions used in each opening extract should allow us to make some fairly reliable predictions as to whether a text will maintain coherence further on. With some clue as to the typical structure of information in each text, we will be able to comment on what impact the design of the writing task had on the students' texts. The impact of the task design will be discussed further in section 5.5.7.

Secondly, we will expand the "reader-based" approach. Regardless of writers' intentions or, in the case of the L2s, the appropriateness of their use of definite expressions, an analysis of the NAs in the first 200 words will indicate some of the ways readers' expectations are raised by these opening paragraphs. This is particularly true in view of my position as an "outside observer" of the data. As Sanford and Moxey (1993) note, "as the writer produces a text, his or her job is to make that text unfold in such a way as to optimally manipulate the mind of the reader. To understand this, we ultimately need to know what a text does to the mind of a reader on a moment-to-moment basis" (p.164).

I am not the reader these student writers had in mind. In this position I am therefore obliged to look to the text for guidance and, as such, I am able to identify where this guidance fails. Native English lecturers in South African universities often claim that they "make a concerted effort to look past the language problems" when assessing L2 texts (Caldwell, 1997). However, it is highly unlikely that even "sensitive" readers will be aware of how they are being guided by such subtle signals as the use of definite versus indefinite determiners. It is important that reader-based coherence remain focal in this analysis, as there is no way of measuring how much of what the L2 subjects produce is based on their assumptions about the reader, and how much is to do with the fact that their native Bantu language (Xhosa) does not have articles, and hence their use of English articles may not always be appropriate.

While we have a number of quantitative indications that there are more similarities than differences between the L1 and L2 sub-corpora, we cannot ignore the possible influence of the L2 writers' mother-tongue. While Xhosa does not have articles, it has demonstratives (three deictic "positions"), relative pronouns, personal pronouns, as well as words meaning 'some', 'other', etc., which are usually analysed as falling into the determiner class (van der Spuy, 2001). Most significantly for our purposes, Xhosa marks the distinction between 'given' and 'new'
information. If a noun phrase (subject, direct object or indirect object) represents GIVEN information, this is commonly indicated by marked agreement with the verb. Thus:

Umuntu u-yahamba, ‘the person walks’. The u- agrees with ‘umntu’ [u+m+ntu].
Nda-m-bona umntu, ‘I saw the person (already referred to)’. The -m- agrees with ‘umntu’.
Nda-m-nika isipho umntu. ‘I gave a gift to the person (already referred to)’. Again, the -m- agrees with ‘umntu’.

If a noun phrase represents NEW information, the verb will not agree with it (and sometimes the word order will be different).
Ku-hamba umntu, ‘There walks a person’, i.e. ‘Some person (not previously referred to) is walking’. The ku- is the ‘impersonal subject prefix’, and does not agree with any noun.
Nda-bona umntu, ‘I saw (some) person’ - no agreement on the verb.
Nda-nika umntu isipho, ‘I gave (some) person a gift’ - no agreement on the verb.

(van der Spuy, 2001)

There is no way of knowing how English articles were taught to the 15 Xhosa speakers who contributed to this study. If articles were presented as possible “alternatives” for the overt NP-verb agreement marking presented above, we would have some basis for treating the use of articles in the L1 and L2 texts in the same way. However, the most that can be argued is that when writing in English, the influence of their mother-tongue will no doubt encourage Xhosa speakers to find ways of marking information as newly introduced or as “shared knowledge”. It is outside the scope of this study to establish what strategies Xhosa speakers use to achieve such marking in English, though such a study certainly needs to be undertaken.

5.4.1 Method of Analysis

At the end of Chapter 4 it was argued that a more interesting approach to the analysis of Schmid’s (2000) “syntactic patterns” would be to examine their use as referring expressions in context. In order to do this, and allow for some comparison between the findings in Chapter 4 and in this chapter, the method of coding the “patterns” in the opening paragraphs is almost entirely non-standard. As justification for the approach developed for this analysis, the following
summary will reiterate the relevant points raised by previous writers to which I am responding and which, hopefully, will be clarified:

Ivanič (1991:108) states that “the combination of determiner + carrier noun allows writers to provide very precise discourse-processing signals to readers (if they choose to)”. It was established in Chapter 4, however, that the student writers in this study frequently use the combination det + carrier noun, yet their texts are arguably lacking in “precise discourse-processing signals”. In the search for Schmid’s “shell nouns” in Chapter 4, several syntactic patterns were isolated as the common linguistic “contexts” in which carrier/shell nouns are used. All the patterns begin det + (adj) + N, with many followed by:

- that - complement clauses
- to - infinitive clauses
- wh - clauses
- “be” + that clauses
- “be” + to clauses
- “of” phrases
- “in which” phrases

As a reminder of Schmid’s characterisation of these patterns, let’s consider the example

• *The President said the Taliban had to face the fact that the rest of the world was against them.*

The relationship between the micro NP the fact and the following that-complement clause that the rest of the world was against them is characterised by Schmid (2000) as the establishment of a “shell/content relationship”. The noun fact is seen as an empty vessel whose “contents” are provided by the remaining part of the complex NP. Schmid acknowledges that almost any noun is capable of entering into “shell/content relations” and consequently argues that a noun becomes a shell only when a speaker chooses to use it in this way. Furthermore, he argues that shell nouns can only be studied in conjunction with their “contents” thus implying that a shell noun will, of necessity, be followed by a “content-rich” phrase or clause. The discussion in Chapter 2 (section 2.3) of the distinction traditionally drawn between sense and reference, highlighted the confusion inherent in Ivanič’s idea of “variable meanings” and Schmid’s notions of “empty shells” and
“shell/content relations”. Nevertheless, we have focussed on the patterns first identified by Vendler, and expanded by Schmid, because it has become apparent that these patterns have a role to play in the vagueness encountered in student writing.

As mentioned, Biber et al. (1999:263) note that “the special advantage of definite noun phrases ... is that they are more precise and allow expansion in addition to a specification of identity”. The primary concern in this chapter is the *specificity* in the student writing. Thus the following analysis will, primarily, be comparing the nature of the expansion and specification in the PW and student opening paragraphs. While I am extracting the same comparable substructures, such as the *fact that the rest of the world was against them*, the underlined clause will be characterised as a *specifying expansion* which constrains the referent of the NP the *fact*, and thus assists the reader in its successful identification. As the interest here is very much in function (rather than form), the *det* slot in the pattern *det + (adj) + N* will be treated as a *specifier* slot. “Specifier” is not a form class but rather a label for the function that the form class serves in that position in the phrase (Van Valin, 2001:125). An expression is definite if it is “referring to something which can be identified uniquely in the contextual or general knowledge shared by speaker and hearer” (Quirk & Stein,1990:265). In this analysis the focus is restricted to *definite* “micro” NPs and, therefore, it will include those where the specifier slot is occupied by either a definite article (*the*), a demonstrative determiner (*this, that, those, these*) or a possessive (*his, her, their, Respondent A’s, Piaget’s etc.*). The use of all such forms indicates reference to a specifiable entity and an assumption, on the part of the writer, that such an entity will somehow be identifiable by the reader. Even where the expansion formally occurs within the same macro NP, I still consider each structure of the form *spec + (adj) + N* to be a micro NP and the rest of the NP as its expansion. Thus a complex (macro) NP may contain a number of micro NPs of the structure *spec + (adj) + N*, each of which is treated as an NP in its own right, as well as (potentially) being (part of) the expansion of the previous NP.

In the analysis conducted in Chapter 4 we were not able to quantify, or examine, what was not there. That is, considering there is no closed group of “shell nouns”, it was not possible to extract cases where these nouns appeared *without* any following expansion. Clearly it would also have been impossible to comment on when this was problematic and when not. However, an analysis of the first 200 words of each text constrains the data set enough to make manual coding possible. Furthermore, we can be sure there is no preceding text and this allows the following assumptions to be made:
Where the structure \( spec + (adj) + N \) appears for the first time (a first-mentioned definite) it will, arguably, require some manner of expansion in order to specify the referent of \( N \).

Where the structure \( spec + (adj) + N \) appears for the first time without any specifying expansion, the writer, arguably, assumes the referent is accessible to the reader, based on a shared “world of discourse”.

The coding was carried out as follows: All definite, micro NPs \( (spec + (adj) + N) \) occurring within the first 200 words of each text in the three sub-corpora were underlined. In some cases a single complex NP will yield two or more of these structures; in all cases we are interested primarily in how these simple structures are expanded. Let’s take the following sentence from the PW as an example:

Recently a number of studies of the analogical abilities of young children have challenged the generally accepted notion that reasoning by analogy is a developmentally sophisticated skill.

The two underlined NPs will be identified as fitting the pattern \( spec + (adj) + noun \). These micro NPs in combination with the phrases in bold are the same “patterns” which made up the search strings in Chapter 4. In this case, however, we are interested in the way the “of-phrase” and the that-complement clause function as specifying expansions of the micro NP in the immediate environment. Together with the adjectives in both cases, they serve to specify the intended referent of the noun. The micro NPs we are interested in are specified in several different ways and are coded accordingly:

- **ESP (expansion / specification)** - ESP is used to label an expansion as described above. The important thing, for our purposes, is that the structure \( spec + (adj) + N \) is followed in some way by an expanding description which helps to specify the intended referent of \( N \). In each case the micro NP is underlined and marked \( ESPx \); the following expansion is eo-indexed (\( ESPx \)) and italicised.

  e.g. ...of (ESP1) the analogical abilities (ESP1) of young children have challenged...

- **A (anaphoric)** - When the (specifying) description of a definite NP is an antecedent in the preceding text, anaphoric reference is established. In each case, the micro NP is underlined and marked \( Ax \); the preceding specifying description is co-indexed (\( Ax \)) and appears within square brackets [ ].
e.g. ...that [reasoning by analogy is a developmentally sophisticated skill] (A1). (A1) This notion arose...

- **TXT (text reference)** - Any definite, micro NP referring “metadiscursively” to the paper/essay/assignment in which it appears itself:
  
e.g. We begin (TXT) this article with...

- **GEN (generic)** - Definite, micro NPs where the referent is clearly intended to be generic: “The world”, “the child” etc. Lyons calls these “general expressions”, referring to classes of individuals rather than individuals (1977:178), and notes the problems attached to the interpretation of such expressions. For our purposes, the concern is primarily to distinguish these expressions as not requiring further specification due to their intentionally general nature. Following Lyons (1999:179)

  “Generic noun phrases are those in which reference is made to an entire class, or, perhaps more accurately, which are used to express generalisations about a class as a whole - the class in question being that consisting of all the entities satisfying the description inherent in the noun or nominal.”

  e.g. ...an interplay between (GEN) the world-information available in (GEN) the environment.

- **NFS (no further specification)** - Any definite, micro NP appearing with no further specification in the immediate environment. That is, none of the relationships described above (ESP, A, or GEN) are applicable.

  e.g. (NFS) The language is a barrier toward (PN) Respondent A as he may not fully understand (NFS) the task ...

→ **PN (proper name)** - A specific sub-group of NFS. A “proper noun” in the main text whose referent receives no further specification is labelled PN. In the context of academic writing, PN indicates a clear assumption of shared knowledge on the part of the writer: these are usually theorists presupposed to be known by anyone reading in a particular area:

  e.g. (PN) Piaget proposed that analogical reasoning was...

Additionally, in the student texts, the two respondents involved in the study they are discussing are frequently introduced as Respondent A and Respondent B. In such cases,
where no further specification is given, these are treated as proper nouns. Names appearing in brackets as references are excluded from this coding: the convention of pointing to a bibliography, an expanding text in itself, indicates the writer is not necessarily assuming any knowledge on the part of the reader.

5.4.2 Findings

As the quantitative findings in 5.4.3 will reflect, the first 200 words of all 39 texts making up the corpora were used to conduct the analysis reported in this chapter. The following three texts best exemplify the features identified in each sub-corpus and are intended to give the reader an idea of the “raw” findings after the coding system was applied:

• PW Opening Paragraph:

Recently, a number of studies of (ESP1) the analogical abilities (ESP1) of young children have challenged (ESP2) the generally accepted notion (ESP2) that [reasoning by analogy is a developmentally sophisticated skill.](A1) (A1) This notion arose from [two sources](A2/A4): from (A2/ESP3) the performance (ESP3) of children in [intelligence tests](A3) such as (A3) the Stanford-Binet, and from (A4/ESP4) the theoretical work (ESP4) of Piaget [(Inhelder & Piaget, 1958; Piaget, Montagero, & Billeter, 1977)](A5). (A5) Piaget proposed that [analogical reasoning was (ESP5) the hallmark (ESP5) of formal operational thinking, emerging in early adolescence](A6), and a large body of work has found evidence apparently consistent with (A6) this developmental position (e.g., Gallagher & Wright, 1977; Levinson & Carpenter, 1974; Lunzer, 1965; Sternberg & Nigro, 1980). (A7) This recent work has not gone unchallenged.

• L1 Opening Paragraph:

(ESP1) The purpose (ESP1) of (TXT) this assignment is to inform (GEN) the reader about (ESP2) the nature (ESP2) of (ESP3) the responses (ESP3) [to (NFS) the attached experiment.](A2) (A2) We shall take a look at how theory accounts for (ESP4) the different responses (ESP4) to (NFS) the tasks and so too, we will expose (ESP5) the limitations (ESP5) with regard to (NFS) the theory! Before we go further let us define Cognition as
"... a person's mental capacity to engage in thinking, reasoning, interpretation, understanding, knowledge acquisition, remembering, organising information, analysis and problem solving" (Mwamwenda, 1995, p. 89). It is clear that (NFS) both respondents were thinking while performing (NFS) the task. But [each thought in a different way](A1). (ESP6) the notion (ESP6) is that (ESP7) the processes (ESP7) that underlie thinking are mostly not directly observable and we will explore (A1) the differences. How can we understand (A1) these differences?

NATURE OF (ESP8) THE REASONING (ESP8) TO (NFS) THE TASK:
Respondent A:
With regard to (PN) Respondent A I will attempt to outline how (PN/ESP9) Vygotsky, and (ESP9) (PN) his 'situated action theory' would account for (A2) the responses. If one considers (NFS) [Respondent A’s responses:] (A3) the answers surround (GEN) his daily living experiences, situations and preoccupations. Louw and Edwards (1997, p. 375) clarify this by saying (ESP10) "the way (ESP10) we think about (ESP11) the practical matters (ESP11) of everyday life has a ..."

• L2 Opening Paragraph:
(TXT) This essay describes (ESP1) the nature (ESP1) of reasoning of (ESP2) [the respondents](A1) (ESP2) who were given [tasks to solve](A4). It is discussing about (ESP3) the theories and concepts (ESP3) that underly (A1/ESP3) their way (ESP4) of reasoning. (ESP5) the theories (ESP5) that are going to be discussed are (ESP6) the theories (ESP6) of (PN) [Piaget and (PN) Vygotsky.](A2) (A2/ESP7) [Their views (ESP7) about thinking are different](A3), so in (TXT) this essay, (A3) that differentiation will be explained.

Also it is also stated that there are limitations concerning (ESP8) the way (ESP8) (A4) the tasks were done and (ESP9) the way (ESP9) theories are described by theorists is limited. In (TXT) the conclusion there will be a summary of (TXT) the essay.

1.Content
(ESP10) The Nature (ESP10) of (ESP11) the respondents' reasoning (ESP11) on (A4) the task
(ESP12) The nature (ESP12) of reasoning in both of (NFS) [the two men](A5) is a bit ambiguous. It is clear that they both come from different backgrounds educationally but they both have intellectual skills. To explain (A5/ESP13) their nature (ESP13) of reasoning, one would say, because they are coming from different education backgrounds, they differ in (ESP14) their way (ESP14) of thinking and reasoning. (A5) The first man given (A4) the tasks associated them with (ESP15) his local background: (ESP15) He is illiterate and living in a rural and isolated community affected (ESP16) his way (ESP16) of solving or answering (A4) the task. He associate (A4) the tasks with (NFS) the things ...
5.4.3 Quantitative differences across the Sub-Corpora

<table>
<thead>
<tr>
<th>Sub-Corpus</th>
<th>ESP</th>
<th>A</th>
<th>TXT</th>
<th>GEN</th>
<th>NFS</th>
<th>PN</th>
<th>Total rels/wrds</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW 1600 words</td>
<td>57 (50%)</td>
<td>31 (27%)</td>
<td>3 (.02%)</td>
<td>15 (13%)</td>
<td>0</td>
<td>5 (.06%)</td>
<td>111</td>
</tr>
<tr>
<td>L1 3200 words</td>
<td>153 (41%)</td>
<td>63 (17%)</td>
<td>20 (.05%)</td>
<td>26 (.07%)</td>
<td>58 (16%)</td>
<td>51 (14%)</td>
<td>371</td>
</tr>
<tr>
<td>L2 3000 words</td>
<td>148 (37%)</td>
<td>47 (12%)</td>
<td>25 (.06%)</td>
<td>32 (.08%)</td>
<td>59 (15%)</td>
<td>86 (22%)</td>
<td>397</td>
</tr>
</tbody>
</table>

Figure 5.5 - No. of relationships coded in opening extracts

The PW sub-corpus consists of eight texts (200 words x 8 = 1600 words), the L1 consists of 16 texts (= 3200 words) and the L2, 15 texts (= 3000). In this section, statistical significance is calculated using proportions per total number of words in the opening paragraphs analysed. Thus, in 15 L2 opening paragraphs there are 3000 words, with 148 ESP relationships established in total. In 8 PW opening paragraphs, there are 1600 words with 57 ESP relationships established in total. We are therefore establishing significance by comparing 148/3000 and 57/1600 using the Z-test for proportions. In this way, whatever claims are made, based on these findings, are restricted to the opening paragraphs (z > 1.96 indicates significance at the 5% level, z > 2.58 indicates significance at the 1% level.). It should be noted that the total number of "relationships/words", (as indicated in the final column of figure 5.5) coded in the students' opening extracts is significantly higher in the PW extracts: L1 vs. PW, z = 4.9; L2 vs. PW, z = 6.3. Furthermore, there are also significantly more relationships coded in the L2 sample than in the L1 (z = 1.96). This difference between the student and PW opening extracts is not surprising in view of how seldom TXT, NFS, and PN appear in the PW sample; there is obviously less variety in the types of relationships distinguished in the PW openings. It is important to bear this in mind when considering the "statistically significant" differences calculated in the relationships / no. of words. For example, the student texts may exhibit significantly more ESP relationships (per no. of words) than the PWs. However, when viewed as a proportion of the total relationships coded, ESP is the most frequent pattern in the PW sample and forms a significantly larger proportion of the total relationships (57/113 = 50%) than it does in the L1 and L2 sample. In figure 5.5, the percentage figures shown in brackets in each column indicate these proportions per the total relationships.

With regard to text anaphora, there are no significant differences in the number of A relationships established across the three sub-corpora. However, between two and three times as many ESP relationships are established as A relationships in the first 200 words; in all three sub-corpora, the difference in the frequency of ESP vs. A in the opening extracts is significant (PW: z
There is no significant difference between the numbers of ESP relationships established in the L1 and L2 opening paragraphs. However, as mentioned, there are significantly more ESP relationships (per no. of words) in the L2 texts than the PW texts ($z = 2.1$) and the difference between the L1 and PWs is very close to statistically significant ($z = 1.94$).

While most of these ESP relationships could not be categorised as cataphoric referring expressions, they do have an important feature in common: whatever expansion is provided in order to specify the intended referent, it appears after the NP has been introduced. Thus in both cases the reader is required to look forward to find whatever extra information they might need to identify the intended referent in this instance. The high frequency with which these ESP relationships occur, broadly supports findings by Biber et al. (1999) that definite noun phrases are used very frequently for cataphoric reference in academic discourse. If cataphoric reference seems to function most often as a means of specifying a referent via a long description, student writers are clearly capable of doing this. They are also apparently capable of setting up ESP relationships and thus expanding the noun; the student writers in this study appear do so statistically more frequently than the PWs. What we will therefore look at more closely in our discussion is any apparent qualitative differences in the expansions (see 4.5.1 below).

With regard to definite NPs coded TXT, there is once again no statistical difference between the student writers’ opening paragraphs. However, the difference between the students and PWs is significant in both cases, with the students using far more of these meta-discursive markers (L1 vs. PW, $z = 2.06$; L2 vs. PW, $z = 2.68$). There is no difference in the frequency of NPs coded as GEN. Finally, relationships coded in the student opening extracts, that are almost entirely absent from those of the PWs, are definite NPs labelled either NFS or PN. PN appears 7 times in the set of PW opening extracts, 51 times in the L1 and 86 times in the L2. When these counts are compared as proportions, the difference between the PW and the two student samples is statistically significant in both cases: PW vs. L1, $z = 3.9$; PW vs. L2, $z = 5.9$. The difference between L1 and L2 is also statistically significant in this case: $z = 3.4$. In academic discourse there must always be scope for the assumption of shared knowledge, if for no reason other than economy of space. In the case of the student writers, however, the extremely frequent use of theorists’ names without any specifying description is the first indication of what impact the assumption of shared knowledge had on the referring expression used in their writing.

With regard to NFS, there were 58 of these expressions in the L1 opening excerpts, 59 in the L2 and none in the PW. Use of definite referring expressions without further specification
within the first 200 words indicates some assumption on the part of the writer that the reader needs no further guidance in accessing the intended referent (from broad back-ground knowledge, via another text etc.)

5.5 Discussion
The following discussion will examine more closely the broad differences between the opening extracts reported above. For the sake of expository clarity, the discussion will be segmented according to the six coding categories used in the analysis. However, many of the issues that will be highlighted in each sub-section either overlap or are closely related. The sections are therefore presented in a way that will allow each discussion to draw on ideas raised in its predecessor.

5.5.1 ESP relationships: Qualitative differences in the nature of “specifying expansions”

As noted above, there are significantly more ESP relationships established in the opening extracts of the student texts - a finding that, on the surface, seems to contradict our overall view of the student writing as underspecified. However, when we consider these frequencies as proportions of the total number of relationships coded in the opening extracts, the impression changes considerably. Each “relationship” coded in these opening extracts represents the presence of a micro definite NP that is either expanded and specified, or not. Of the total relationships coded in the PW opening extracts, 50% are ESP. This figure is 41% for the L1 and 37% for the L2 respectively. In this case, the difference between PW and L2 is statistically significant (z = 2.5) while for the L1 extracts, the difference is close to statistically significant (z = 1.74). In other words, significantly more of the total definite micro NPs appearing in the PW opening extracts (50%) are expanded via ESP relationships.

The real significance of the frequency of ESP relationships/no. of words in the student openings lies in its indication of the high number of definite micro NPs appearing overall in their opening extracts compared to the PWs: at this early stage in a text, these ESP relationships represent, for the most part, first-mentioned definites followed by some manner of expansion in order to specify the referent of N. The fact that these are the opening extracts of the texts means we need to consider very carefully one of the questions posed earlier: what does the form of the expression tell us about the assumptions the writer is making about the reader’s mental model? We know that, typically, a definite nominal “presupposes that the addressee can identify the

3 However, the reader is reminded of the caveat with regard to the L2 writers discussed on pages 118-119.
unique instance...intended...because of prior mention in the discourse or because of shared background knowledge" (van Hoek: 1997:32). In the case of these opening extracts “prior mention in the discourse” is, for the PWs at least, ruled out. Should we therefore consider all the ESP relationships established as (potential) indicators of an assumption of “shared background knowledge”? First we need to remember that, from the viewpoint of accessibility, the lexical specificity or explicitness of expressions is (typically) inversely proportional to the perceived accessibility of the underlying referent. Secondly, an ESP relationship is, by definition, one in which a definite micro NP is followed by an expanding description which helps to specify the intended referent of N. So how do we reconcile the implications of “definiteness” with those of “accessibility”? That is, what can we tell about the writers’ assumptions from their use of a definite expression (assumption of shared knowledge / “given” information), that appears early on in the texts (first-mentioned definite) and that is also specified in some way, thus indicating an assumption that the reader will need some assistance in accessing the intended referent. Prince & Walker’s (1996) analysis of inferrables, mentioned earlier (see section 4.3), shows that in English, NPs evoking such entities are marked in the same way as NPs evoking hearer-old entities (1996:293). In fact, “full noun phrases introduced by a definite or indefinite article...are by far the most common form for inferrables” (Gundel, 1996:143-4). On the other hand, in a comparison of written and spoken corpora, Abbot (1999; c.f. Fraurud, 1992) found that written texts included a far greater number of definite descriptions that introduce new discourse entities than did the spoken texts. The presence of a definite article is therefore not always an indication of assumed familiarity with the referent. But how do we tell the difference?

Let’s look first at the ESP relationships established in the PW opening extract given above (5.4.2):

- ... (ESP1) the analogical abilities (ESP1) of young children ...
- ... (ESP2) the generally accepted notion (ESP2) that reasoning by analogy is a developmentally sophisticated skill ...
- ... (ESP3) the performance (ESP3) of children in intelligence tests ...
- ... (ESP4) the theoretical work (ESP4) of Piaget ...
- ... (ESP5) the hallmark (ESP5) of formal operational thinking ...
- ... (ESP6) the use (ESP6) of analogy in learning tasks ...
- ... (ESP7) the difficult "item" or classical (a:b::c:d) analogies (ESP7) used in intelligence testing ...
- ... (ESP8) the notion (ESP8) that very young children are unable to reason by analogy ...

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Of the eight relationships above, seven involve of-phrases or that-complement clauses, the structures most frequently used to specify the referent of a “shell NP” in academic texts (Biber et al., 1999:648 & 985). The micro (underlined) NP in all eight relationships also includes a noun representing a 3rd-order entity: abilities, notion, performance, work, hallmark, use, analogies. In papers written for a relatively general audience, such as those making up the PW sub-corpus, these definite “shell” NPs so early on in the text can surely not indicate any assumption of “shared knowledge” on the part of the writer. It seems, therefore, that these eight ESP relationships are examples of how definite expressions are used where beliefs, knowledge or sets of entities are not necessarily already shared by the writer and reader at the moment of utterance.

In Hawkins’ (1991) account of definiteness, we find a useful framework for understanding how such sharing of beliefs or sets of entities can happen “on-line” (in the linguistic and/or situational information provided), brought about by the fact that the reference act occurred. Nunberg (1978, 1979) made the important point that our interpretation of expressions such as the performance and the notion, “when used referentially, is based on our pragmatic knowledge of the range of reference of such expressions, which is, on a particular occasion of use, strictly constrained and ‘determined by the nature of the predication, and by the conversational context’ (1978:31)” (Brown & Yule, 1983:213). In Hawkins’s (1991) terms, the context, or “world of discourse”, can be thought of as consisting of a number of pragmatically delimited sets (P-sets), relative to which the existence and uniqueness of a referent hold. In ESP1 above, the writer and reader need not share any set in which the analogical abilities exist and are unique - their existence and uniqueness is relative to the set formed within the noun phrase they occur in: the analogical abilities of young children. In light of Sperber and Wilson’s (1986) relevance theory, Hawkins (1991) analyses this phenomenon as “mutual manifestness on-line”. The speaker/writer does not have to assume previous knowledge of the referent on the hearer’s/reader’s part, but s/he has to assume that the referents will be (able to become) manifest to his/her interlocutor in the present context. Let us look more closely at examples of “P-sets formed on-line from the information provided within the definite expression itself” (Hawkins, 1991):

* ... (ESP8) the notion (ESP8) that very young children are unable to reason by analogy ...
* ... (ESP3) the performance (ESP3) of children in intelligence tests ...
In the above examples, the presence of the definite article allows us to view the notion and the performance as inferrables; short-hand, so to speak, for “there is a particular notion/performance relative to all others in the world”. The uniqueness (indicated by the definite article), on this occasion of utterance, is “strictly constrained and determined by the nature of the predication”, because no previous P-sets exist in which either of these referents would be unique. The P-sets in which their uniqueness holds, respectively, have been established linguistically within the full (macro) NPs in which they appear. How these P-sets have been established, such that intended referents are “able to become” manifest in the context, is a question we will take up in more detail later.

Looking at the ESP relationships in this way allows us to argue that the type of “shell/carrier function” described by Schmid and Ivanič (see Chapter 1) is not restricted to “shell/carrier nouns”. While a noun representing a 1st-order entity, such as cat, does identify a type, it can also be used to perform what is essentially a “shell function”:

- The cat that stood between me and my coffee every morning.

If it appears in the NP “the cat”, without any previous mention, the definite article signals to the hearer/reader that there is a P-set, mutually manifest to speaker/writer and hearer/reader on-line, in which the existence and uniqueness of the definite referent holds. “Existence and uniqueness” are part of the logical meaning of the; thus it is the definiteness of the full expression, not something in the nature of the noun alone, that cues the hearer/reader to search for the P-set in which the unique referent will be found. With regard to plurals (excluded by Schmid), Hawkins makes a distinction “between reference to a set and quantification over all its members” (1991:409). For uniqueness to encompass plural expressions, it is claimed that the signals that “there is some unique maximal set of entities within a P-set to which a definite expression refers” (Hawkins, 1991:410). The unique maximal set in the case of singular expressions comprises just one member.

The article does not, however, provide the hearer/reader with any clue as to which P-set they should be looking for; this selection depends on the reader’s search for “relevance” (Sperber & Wilson, 1986). In the above example, cat in the micro NP the cat would provide the reader with the first clue as to which P-set would be most relevant. Nunberg (1978, 1979) claimed that “we frequently succeed in referring by using a definite noun phrase which contains a description that has a specific relation to the intended individual referent. The hearer’s knowledge of this specific relation is assumed” (cited in Brown & Yule, 1983:213). Nevertheless, in a developing
discourse, P-sets will continuously compete for relevance. The referent will be found in the P-set which the reader/hearer perceives to be most relevant in the context (i.e. one containing a *cat* in the example above) - a task to which the speaker/writer is presumed to be contributing by "strictly constraining" the range of reference.

Using Hawkins' notion of "definiteness" to frame the operation of ESP relationships allows me to speak directly to Schmid's formulation of the "shell-content relationship"; the ESP relationships established in the PW opening excerpts could clearly be re-categorised as "shell-content complexes":

"the link between shell nouns and shell contents is that they activate identical or closely related components of the cognitive model. This co-activation is the cognitive counterpart to the pragmatic concept of co-interpretation and it is experienced by language users as experiential identity... mean[ing] that two or more separate linguistic elements contribute to the formation of one thought". (Schmid, 2000:29)

Adopting a more pragmatic view of these "complexes" seems preferable for the following reasons:

1) It enables a discussion of how nouns are *used* to perform "shell functions" from the perspective of *reference*. It is thus unnecessary for strict distinctions to be drawn between the cognitive and the pragmatic, or between what Schmid calls "core" and "marginal" examples of "shell nouns". This is not to say that there is no difference between a noun like *problem* and one like *cat* - there will of course be a cline between such nouns because a 1st-order type noun does contain, in itself, far more specific information than one representing a 2nd- or 3rd-order entity. However, by shifting the focus away from the nouns to the NP and its components, we are able to look far more effectively at the "shell function" as something users of English do, rather than as something the language does.

2) Most importantly, a more pragmatic view highlights the role played by *definiteness* in setting up "shell functions". Neither Schmid (2000) nor Ivanič (1991) pay any attention to the role it plays, despite the finding that, in a large corpus, "shell nouns tend to occur" in definite noun phrases (Schmid, 2000:25).

3) Finally, it enables a shift of focus to an aspect of shell/carrier functions that seems taken for granted in previous studies of "flawless" text: that there will always be something substantial to "carry" or create a "shell" around.
Being able to carve up the “world of discourse” (the cognitive discourse model) into pragmatically delimited sets provides a springboard from which to examine the impact of the “contents” on these shell-content complexes. It is important to mention this as we move on to look at the student examples; we will now need to pay closer attention to how the information provided within the definite expression itself, enables the referent to “become manifest online”.

There are 11 ESP relationships in the above L1 opening excerpt and 16 in the L2, so the following represent only a sample from each:

L1:

- ...(ESP2) the nature (ESP2) of (ESP3) the responses (ESP3) to (NFS) the attached experiment.
- ...(ESP4) the different responses (ESP4) to (NFS) the tasks …
- ...(ESP5) the limitations (ESP5) with regard to (NFS) the theory!
- ...(ESP6) the notion (ESP6) is that (ESP7) the processes (ESP7) that underlie thinking are mostly not directly observable …
- ...(ESP10) "the way (ESP10) we think about (ESP11) the practical matters (ESP11) of everyday life has a …

L2:

- ...(ESP1) the nature (ESP1) of reasoning of (ESP2) the respondents (ESP2) who were given tasks to solve.
- ...(ESP3) the theories and concepts (ESP3) that underlie (A1/ESP3) their way (ESP4) of reasoning.
- ...(ESP5) the theories (ESP5) that are going to be discussed are (ESP6) the theories (ESP6) of (PN) Piaget and (PN) Vygotsky.
- ...(ESP12) The nature (ESP12) of reasoning…
- ...(ESP16) his way (ESP16) of solving or answering (A4) the task.

Once again, the underlined micro NPs in all the relationships include a noun representing a 2nd- or 3rd-order entity: nature, responses, limitations, notion, way, theories, concept. While of-phrases predominate, we also have examples of N-to, N-wh, that-relatives, the “zero” relativiser, and “non-standard” usage such as “the limitations with regard to the theory”. However, when comparing the nature of these ESP relationships to those in the PW, there are two more outstanding differences:

1) Those established by the students are, overall, much longer and seemingly more complex, involving the embedding of several ESP relationships within one clause.
2) There appears to be far less pre-nominal modification in both the micro NPs and the “expansions” in the student ESP relationships. Both these “differences” relate to the nature of the specifying expansion and, hence, to the nature of the P-sets that can be accessed or formed.

MacWhinney (1977) has claimed that the conceptualiser needs to be able to “get inside the clause” in order to comprehend it. In the case of the ESP relationships in the PW excerpts, it seems that something in the nature of the P-sets, established linguistically within the full NPs, provides the “way into” the clause. We now need to consider what that “something” is, that either enables (or disables) this process. To begin, let’s compare two extreme examples, one PW and one L1:

PW:  (ESP1) the analogical abilities (ESP1) of young children …

L1: (ESP4) the different responses (ESP4) to (NFS) the tasks.

Van Hoek (1997) posits a model (building on Chafe, 1987, 1994; Langacker, 1991 and MacWhinney, 1977) of clause-internal and phrase-internal reference point organisation. The following characterisation of “getting inside” phrases such as those above is inspired by this model.

The analogical abilities would be considered the “subject” (starting point) of the phrase, and therefore the primary reference point within the phrase. All other nominals in the phrase (in this case, young children) are in its dominion; i.e. constitute material which is “construed in relation to the reference point” (van Hoek, 1997:55). Van Hoek’s model posits a conceptual path which leads from one nominal to the next within the clause/phrase: the intuitive notion of “getting inside” is captured in the conception of mental contact proceeding from a reference point to its dominion (van Hoek, 1997:57).

“The conceptualiser makes mental contact with each distinct element within the relation ... rather than construing the integrated relation as an undifferentiated conceptual unity, but each distinct instance of mental contact is made within the dominions established by the preceding elements rather than within a conceptual vacuum” (van Hoek, 1997:57).
This notion of “successive mental contacts” seems to imply the following left-to-right processing:

The analogical abilities... → Mental contact? → ...of young children

*Figure 5.6*

If the analogical abilities is a nominal anaphor (i.e. the intended referent has been previously specified in some way), it is possible to see how this nominal might function as a primary reference point. However, as van Hoek (1997) notes, “the effects of linear order are somewhat weak” (p.59): “the extent of a reference point’s dominion is determined by the *interaction of conceptual (semantic) connectivity* and linear word order” (p.59, italics mine).

Results of psycholinguistic studies by Garrod and Sanford (1985) and Garrod, Freudenthal and Boyle (1993) with written texts, show a checking of the “meaning” of a word at the level of discourse-based significance at the point where that word appears. Bearing this in mind, as well as Hawkins’ (1991) idea of P-sets “formed on-line”, from information provided within the definite expression itself, I would like to suggest the following: If the first potential reference point consists of a (definite) nominal cueing reference to a 2nd- or 3rd-order entity (i.e. a “shell NP”), whose broad range of reference has *not* already been strictly constrained, no immediate *conceptual connectivity* can be expected to take place. That is, at the point where it appears, such an NP will not yet have any “discourse-based significance”. Rather, the definiteness of the “shell NP” will cue the conceptualiser to search forward, moving along a succession of reference point/dominion configurations until it finds a cue allowing the P-set, in which the uniqueness of the shell NP referent holds, to be established. Or, in the case of plurals, until the P-set containing some unique maximal set of entities is identified. To put this another way, the conceptualiser will search forward until sufficient (relevant) information is provided, within the remaining (macro) NP, to constrain the range of reference of the definite expression, making successful identification (P-set formation) possible:
What I am suggesting, with regard to the ESP relations established in this study, is that the specificity of the noun included in the following expansion is directly implicated in how successfully the referent of the definite micro NP is "constrained". In the above example, no P-set formation is possible until one has read as far as CHILDREN. This noun provides the conceptualiser with a "way into" the phrase - it is, arguably, the cue as to what sort of P-set should be formed. The range of reference of the noun "abilities" is so broad that the pre-modifier "analogical" is not sufficient to constrain it and enable identification of the intended referent. Only when we reach CHILDREN, are we able to answer the question "which / whose abilities?" Once this "conceptual (semantic) connectivity" happens, the referent is close to becoming "mutually manifest" and the remaining information provided within the NP can be used to refine the P-set in which the existence and uniqueness of the referent holds:

Children → sub-group → YOUNG
Abilities → sub-group → ANALOGICAL

The reader is thus required to carry in memory an uninterpreted piece of text, the "discourse-based significance" of which will only become apparent once a cue is provided allowing the conceptualiser a way into the phrase. When this cue is part of the same macro NP, this load on the short-term memory will be unnoticeable. However, if this cue never appears, the reader will continue to carry the uninterpreted piece of text in memory. Arguably, the more uninterpreted "bits" the reader is required to carry, the stronger the sense of "vagueness" will be. As Longacre (1983:3-6) has pointed out, expository writing is characterised by the absence of a temporal
succession of events and by the absence of agent-orientation. Instead, coherence is upheld by the continuity of abstract discourse entities and topics. The integration of abstract information (and the resulting reduction of its complexity and its load on the active buffer) is thus a necessary precondition for the successful processing of abstract expository writing (c.f. Gernsbacher, 1990). Let’s look now at the example from the student writing:

L1: (ESP4) the different responses (ESP4) to (NFS) the tasks.

Initial reading

The different responses to the tasks ... ?
(no contact)

{ P-set ?? }

Which / whose responses? To the tasks.
Which tasks? ??

Figure 5.8

The definite article cues the reader to search for the P-set in which the unique referent of “responses” will be found. For a “general” reader, the only possibility is a P-set that can be formed online, using the information provided within the extended macro NP itself. The pre-modifier “different” is, once again, an inadequate guide. The reader must therefore look forward until sufficient information is provided to constrain the range of reference of the noun “responses”. However, in this case, “responses” is specified by another definite, micro NP which itself contains a noun cueing reference to a 2nd-order entity. “The tasks” is coded (NFS) because it has not been previously mentioned (specified) in the current discourse, nor does it receive any further specification in the context of this utterance. The conceptualiser is thus presented with two cues to search for P-sets in which some unique maximal set of entities can be identified. However, no guidance is provided as to where these P-sets might be found and the result is something of a conceptual cul-de-sac: we are forced to glean what we can from the little information we have already been given. Consequently, conceptual (semantic) connectivity cannot occur because the range of reference of these “shell nouns” is so broad that, alone, they offer the reader no way of “getting into” this phrase.
The reader for whom this text is written, however, will have access to the assignment sheet. This co-text will determine the extent of the context within which they will understand and interpret what they read in the student texts. For these readers the relevant P-sets for both the responses and the tasks will therefore be previous discourse sets, sets that were established in the "world of discourse" or "presupposition pool" created by the assignment sheet content. These readers will therefore be in the position to process definite expressions like the different responses and the tasks as inferrables: "Inferrables generally do not contain enough descriptive content to allow the addressee to construct a new representation or to easily retrieve an interpretation from long term memory on the basis of information encoded in the phrase itself." (Gundel, 1996:148) In order to construct a representation of the referent, the addressee is required to retrieve "a contextual assumption ...that links it to something in current short term memory." (Gundel, 1996:148).

While focusing on "shell nouns" and their "syntactic hosts", we failed to pinpoint any apparent lexical vagueness in the student writing. However, assuming some contribution from the semantically under-specified nouns has remained intuitively plausible, that is, that some interplay between the form of the referring expressions being used and the "under-specified" nouns contributes to the overall sense of vagueness. Switching the focus to the "shell contents", we now have an idea of how the presence of under-specified nouns, within these potentially specifying descriptions, contributes to the overall lack of specificity of the definite referring expression. As argued above, if a definite "shell NP" is further "specified" by an expansion (within the same macro NP), which itself contains nouns cueing reference to 2nd- or 3rd-order entities, any specifying function will be blurred, increasing the potential for vague reference. Let's look at a few more of the ESP relations established in the student opening extracts:

- ... this assignment has tried to link (ESP5) the information (ESP5) contained in (NFS) the theory .... (L1)
- ...This assignment has made use of (ESP8) its own interpretations (ESP8) of (NFS) the research situation ... (L1)
- ... (ESP2) the nature (ESP2) of (ESP3) the responses (ESP3) to (NFS) the experiment. (L2)
- ... we will expose (ESP5) the limitations (ESP5) with regard to (NFS) the theory! (L1)
- ... concerning (ESP3) the limitations (ESP3) in understanding (ESP4) the performance (ESP4) of (NFS) the task and offer solutions to these. (L1)
... despite (ESP6) the fact (ESP6) that they differ with regards to (ESP7) the implications (ESP7) of (ESP8) the terms (ESP8) concerning learning and thinking. (L2)

We can now see quite clearly why each of the above extracts would provide a difficult, and ultimately impossible, processing task for any “general” reader. In every case, the reader is required to search forward for the intended referent of the first definite micro NP s/he encounters. However, no matter how far forward one searches, one never finds a way “into” the phrase/clause. That is, one is never provided with sufficient information to identify the intended referent of the original micro “shell NP”. On every occasion where conceptual (semantic) connectivity cannot take place, the reader will be left with a feeling of vagueness and the load on short-term memory will increase as “un-interpreted pieces of text” are carried along.

Compare the above strings of L1 ESP relations with the following from the PW opening extracts:

- ... (ESP2) the foundations (ESP2) of logic, algebra, and probability....
- ... (ESP1) the analogical abilities (ESP1) of young children ...
- ... (ESP8) the notion (ESP8) that very young children are unable to reason by analogy.
- ... (ESP5) the theoretical work (ESP5) of (PN) Piaget
- ... (ESP4) the variety (ESP4) of human uses for plants and animals ...
- ... (ESP7) the circumstances (ESP7) in which you saw (A4) the film ...
- ... (ESP2) the case (ESP2) of folkbiological categories - naive groupings of plant and animal species.

In each case the head noun of the first underlined NP is also a “shell” noun. The nouns occupying the following italicised expansions, however, while not all representing 1st-order entities, are arguably representing classes of more familiar, and hence identifiable referents than those nouns present in the initial “shell” NPs; certainly none of them would normally be considered "shell nouns" by current writing on these nouns: i.e. logic, algebra, children, Piaget, plants, animals, film, species. Crucially, the expansions also contain adjectival modifiers in many cases; something absent from the student excerpts above. This is particularly noticeable where plurals, with a very broad range of denotation, appear in the expansion: “human uses”, “folkbiological categories”, “naive groupings” and “plant and animal species”.

This is not to say that the PWs never include (unmodified) shell nouns in the specifying expansions of ESP relationships. Nor is this discussion a reversion to the argument in which
abstract nouns are said to be the cause of “vagueness”. As we are examining coherence from both a text-based and reader-based point of view, I am suggesting that the above comparison provides many good example of how textual processing cues can differ qualitatively and thus fail to adequately guide the reader. Furthermore, as we are interested in how the use of shell nouns by student writers differs from that of the PWs, we can now postulate the more frequent presence of nouns representing 2nd- and 3rd-order entities in what are intended to be “specifying expansions” in the opening paragraphs of the student writing. That is, the syntactic strings characterised by Schmid as the “shell contents” are, in the student writing, often themselves inhabited by “shell nouns”. Where this happens, it is most often the case that the expansion consists of several inferrables: based on their awareness of a specific reader, and hence their assumption of shared knowledge, the student writers use definite NPs as inferrables “linked to highly accessible entities” - those contained in the assignment sheet.

Abbot (1999) found that in written texts, definite descriptions were used to introduce new discourse entities far more often than in the spoken texts. The PW opening extracts exhibit many examples of definites used in this way and, by employing Hawkins’s (1991) notion of P-sets formed online, we have seen how this can be achieved without causing “vague reference” through non-uniqueness. The student opening extracts, however, once again exhibit a feature more characteristic of conversation in this regard: Chafe (1991) analysed transcripts of spontaneous conversation and found that sentential subjects in spoken conversation are very rarely new (i.e. not at all in the addressee’s awareness). Even subjects coded as full noun phrases tended to be either given (currently active in the addressee’s awareness) or accessible (not fully active, but semi-active as part of the background context).

5.5.2 The use of PN

The use of proper names without specification is a prominent feature of the student opening extracts: PN appears 51 times in the L1, 86 times in the L2 but only five times in the PW. As noted above, when these counts are compared as proportions/total no. of words, the difference between the PW and the two student samples, as well as between the two student samples, is statistically significant in every case.

In the PW openings, the use of PN is reserved for cases where the writer/theorist concerned is considered as central to the field as its core terminology. Thus, for example, within the specific context of a paper on “The Sapir-Whorf Hypothesis”, the writer can assume that the following proper names will be uniquely referring:
An important question in anthropology since the mid part of this century has been the validity of linguistic relativity as put forward by (PN) Edward Sapir and (PN) Benjamin Lee Whorf. Was the latter, for instance, ...

Nevertheless, even in such a “contextually constrained” case, a bibliographical reference is still usually provided at some point. The writers’/theorists’ ideas are thus presented as exactly that - ideas:

Was the latter, for instance, correct to suggest that “every language is a vast pattern-system, different from others, ... the house of his consciousness” (Whorf, 1956:252).

In the case of the student writers, a central aim of their assignment was apparently to test their knowledge of the various theories that they had been studying: they are asked to interpret the given data within the framework of three specific theories. Like all others writing in their field, these students will naturally assume some shared knowledge when it comes to well-known theorists, central ideas etc. In their case, however, this assumption appears far more pronounced for two reasons:

Firstly, they are able to assume that their reader (teacher) knows at least as much as they do about the theorists concerned; undoubtedly more. The theories form part of the assignment topic which was designed and handed down by the teacher (reader).

L1:

- The nature of their reasoning, will be explained, as well as how (PN) Piaget, (PN) Vygotsky, (PN) Bruner and (PN) the Information-Processing approach might explain their responses.
- Reference will be made to two theorists that is, (PN) Piaget and (PN) Vygotsky, to view each theory’s responses...
- Looking at theorists such as (PN) Piaget and (PN) Bruner, we get a better view of what is happening and are able to explain...
- At this point (PN) Vygotsky’s theory will be applied in ...
- ... outline how (PN) Vygotsky, and (PN) his ‘situated action theory’ would account for the responses.

L2:

- It will use the concepts and theories of (PN) Piaget and (PN) Vygotsky.
- A major similarity between the respondents is what (PN) Piaget and (PN) Vygotsky refer to as “activity”.
- In this essay I intend to discuss (PN) Piaget and (PN) Vygotsky’s argument
concerning the response...

- How would (PN) Piaget and (PN) Vygotsky account for the respondents' responses to the experiment.
- The ideas that will be looked at will be views of (PN) Vygotsky and (PN) Piaget.

The repeated use of these “theorists” names without any specification is a clear indication of the students' assumption of shared knowledge. Furthermore, it gives the undoubtedly accurate impression that for these students, the “theorists” are names associated with the text-book ideas that they are required to learn: Piaget and Vygotsky are not people with potentially fallible ideas - they are “the textbook theorists”.

The second reason the students’ assumption of shared knowledge appears so pronounced follows from the assignment topic itself: the instruction to use certain theories to explain the data allows (and encourages) the students to present Piaget, Vygotsky etc. as authorities with “the answer”. Looking only at the above examples, we see that the theorists “explain” and “account for” the data, or their concepts and theories are “used” or “applied”. Overall, the constant repetition of these PN’s topicals the theorists, while the “real” data is used not to indicate any possible shortcomings in the theory, but to exemplify the tacitly accepted theoretical propositions (however mutually contradictory they may be).

The apparent inability of undergraduates to “write critically” is something university lecturers lament ad nauseam. Yet rather than teaching students to use empirical data to test theories, an assignment such as this seems to encourage the acceptance of, and hence the use of theories to explain data. In cases where the “real data” has been selected to support the chosen theory, students will be in an even weaker position when it comes to using this data to be “critical”.

A completely different use of PN, contributing to the frequency of this feature in the students’ opening extracts, is associated with the way these writers refer to “the respondents”:

- (PN) Respondent B exhibits signs of using formal mental operations to his thinking... (L1)
- The language is a barrier toward (PN) Respondent A as he ... (L1)
- With regard to (PN) Respondent A I will attempt to outline... (L1)
- ... saying that (PN) Respondent A has obviously seen these items ... (L1)
- (PN) Respondent A, for example, argued that the log should not be taken out because it ... (L2)
- ... it is clear that (PN) respondent A used his local knowledge in... (L2)
... the respondent’s nature of reasoning is both informal and formal. (PN) Respondent A is predominantly informal... (L2)

- For instance (PN) respondent A, on (PN) Protocol 1, shows that in his schema he understands... (L2)

Much of the information provided in the assignment sheet is background information on the two men used as respondents in the given study, as well as details of the responses these men gave in tasks they were required to perform. By using “Respondent A” and “Respondent B” as proper names in each of the above cases, the writer clearly intends to refer to a previous discourse set established in the “preceding” assignment-sheet co-text. As discussed in section 5.5.1 above, the student writers are able to rely on this co-text to constrain the reference of expressions like Respondent A. Without access to this text however, a reader will be incapable of accessing the relevant P-set and hence have no way of successfully identifying the intended referent.

5.5.3 **TXT relationships**

There are far more of these meta-discursive markers in the student opening extracts than in the PW (L1 vs. PW, \( z = 2.06 \); L2 vs. PW, \( z = 2.68 \)):

**L1:**
- (TXT) This essay will examine the responses of two...
- The purpose of (TXT) this assignment is to inform the reader...
- (TXT) The following essay presents the two interviews...
- Discussed in (TXT) this essay is how two male...
- It shall be attempted within (TXT) this paper to describe...
- (TXT) This assignment has tried to link the information...

- (TXT) This assignment has made use of its own...
- ... (TXT) this essay will argue that the difference...

**L2:**
- In (TXT) the conclusion there will be a summary of (TXT) the essay.
- (TXT) This assignment is going to describe the nature...
- Secondly (TXT) this essay will try and look at whether ones...
- ... (TXT) this essay is going to show how Piaget and Vygotsky...
- The goal of (TXT) this essay is to understand how...
The few TXT references that do appear in the PW openings often occur in the vicinity of the personal pronoun (PP) “we”:

PW:
- We begin (TXT) this article with some observations involving cross-cultural comparisons…
- In (TXT) this paper we show that such inferred semantic relations …

While such constructions, including PPs, do occur in the student sub-corpora, the overall frequency of the PP “we” in the full PW corpus is significantly higher compared to the use of “I” and “we” combined in the student sub-corpora: PW vs. L1, z = 3.05; PW vs. L2, z = 2.26. Seven of the eight papers making up the PW sub-corpus were multi-authored, unlike the student essays which were obviously written by one author. While we are, once again, not really comparing “like” corpora, the point of the following comparison is to highlight the extent to which the student writers avoid using PPs and hence to suggest a reason for the statistically higher number of TXT relationships coded in the student opening extracts:

PW:
- ... we use observations to motivate our within-culture comparison of different…
- ... Throughout, we test the predictions of social contract…
- We want to add here that notions similar to a…
- We have argued, and experimentally demonstrated, that…
- We believe one major reason to be the answers…
- Rather, we hope that our studies will specify particular…
- To anticipate, our analyses reveal commonalities but…
- ... we situate our work in the context of research on…
- Their argument complements our claim because…

L1:
- Although we might view their responses as limited,…
- ... is that, our explanations are never going to conclusively explain why…
- ... our understanding is limited because we have not taken into account what influence…
- I think that the study should have been redesigned to be more…
- ... I hope to explain the responses of the respondents in the generalisation…
- With this in mind I am in full agreement with Woods (1998:36) who states that…
L2:
- So for me if we apply this approach to these responses...
- If we focus on Vygotskian theory we would agree that formal and informal...
- ...is learned we find Vygotsky mentioning that learning in school...
- I think it would be very important at this point to bring an understanding...
- The evolutionary perspective, which I think is in line with Piaget’s theory.
- In this essay I intend to discuss Piaget and Vygotsky’s...

As the above examples show, the students certainly use PPs in their writing. However, this use is statistically less frequent than in the PW writing. Furthermore, many occurrences of “we” that would have been included in the total count in the student sub-corpora are not examples of PP use - they represent reference to “people in general”:

- Piaget’s argument is that knowledge is not innate and that we don’t just passively...
- The people we live among and the culture we are embedded in...
- We then take over this knowledge and use it as a basis of our own thought...
- ...in order to communicate with others to get the things we need or want...
- ...he believed who we are, is built from others and that we are able to develop...
- We all live in different domains and in each, we behave differently...

The statistically significant differences in the use of TXT references in the opening paragraphs can therefore be explained in terms of the students’ overall tendency to avoid PPs: while they are clearly capable of using them, there are still far fewer PPs (including generic “we”) across the full student sub-corpora than the PWs. Van Hoek (1997:41) notes that “the full NP is better suited for contexts in which one wishes to distance oneself from the referent and place IT onstage as the focus of attention”. I would suggest that the tendency for the student writers in this study to use full TXT NPs, rather than personal pronouns, is an indication of their “distance” from the subject matter of their texts. The PW writers “own” the research they are reporting as well as the ideas they offer based on this research. The student writers, however, are in a far less powerful position; their “data” were provided by their professor, based on his own research, and they are required to frame an explanation within the well-known (revered) theories of others. Furthermore, in an assessment situation, it is no doubt less threatening to establish such distance: it is the essay text that is put forward for assessment, not the writer. This “distancing” strategy, while evidently appealing to the student writers, can nevertheless give rise to cumbersome, unnatural structures such as the following:
L1:
• (TXT) this assignment is aware that his research did involve...
• so (TXT) this assignment is of the opinion that...
• (TXT) This assignment holds the view that...
• (TXT) This assignment believes that their thinking is dominated...

L2:
• it is stated in (TXT) this essay that some limitations regarding...
• according to the writer of (TXT) this assignment, this leaves...
• It is stated on (TXT) the essay that there are some limitations regarding...

An important part of what “apprentice” writers need to learn is how to own the subject matter of their texts, as well as how to let their own voices be heard in their writing. Being encouraged to use statements such as “In this essay I have tried to show”, in exchange for the type illustrated above, would be a very simple, unthreatening nudge in the right direction. More complex tactics for adopting “stance” in their writing are available via the “shell” nouns they choose to use in ESP and A relationships. We will now discuss the A relationships established in the opening extracts and, in so doing, focus more closely on one of these tactics.

5.5.4 A relationships: Text Anaphora.

“Anaphoric reference is generally held to depend crucially on co-text for interpretation” (Brown & Yule, 1983:49). Thus, in the case of A relationships, we are concerned with endophoric reference to “previous discourse sets”: P-sets comprising entities that have been entered into the “world of discourse” by being mentioned during the course of the current linguistic exchange (Hawkins, 1991).

It was found that significantly fewer A relationships than ESP relationships were established in all three samples of opening extracts. Also, there was no significant difference between the three samples with regard to the frequency of A relationships per number of words. However, when we consider the frequency of A’s as proportions of the total number of relationships coded in the opening extracts, we once again see significant differences. Of the total relationships coded in the PW opening extracts, 27% are A’s. This figure is 17% for the L1 and 12% for the L2 respectively. These differences are statistically significant in all cases:

• PW vs. L1 : z = 2.45
• PW vs. L2 : z = 4.06
• L1 vs. L2 : z = 2.03

The differences between the students and PWs is once again due to the overall difference in the variety of relationships coded in the three samples. The total number of relationships coded is highest in the L2 opening extracts and, when compared with the L1 sample, significantly fewer of these are A relationships. We will come to back to the L1/L2 difference at the end of this section.

In the PW opening extracts, 60% of the micro NPs used to refer to previous discourse sets involve “this”; 25% involve “the”. For example,

• …[reasoning by analogy is a developmentally sophisticated skill.](A1) (A1) This notion ...
• …complexity [of plant and animal species](A2) guarantee that (A2) the world is a rich source of folkbiological information.

As Biber et al. (1999:238) find, “academic prose has a relatively higher frequency of noun phrases with demonstrative determiners … as these provide a precise form of reference (used with a noun to refer to the immediate linguistic context).” In the L1 opening extracts, however, only 30% of A relationships involve “this”, while 46% involve “the”. In the L2, these figures are 23% of A’s involving “this”, 43% involving “the”. In a study of nominal demonstratives in an undergraduate “interlanguage” corpus (Korean learners of English), Murphy (2001) found a similar dominance of the definite article. Cohesion in his students’ “low-level” texts mostly took “the form of strings of anaphorically referenced lexical items introduced by the Deictic ‘the’ ”(p.158). The four nominal demonstratives (this, that, these, those) were “conspicuous mostly by their absence” (p.158). Murphy argues that such “dominance of the definite article is a central indication of the linguistic absence of a developed capacity for the type of nominal demonstrative textual pointing” (p.162). We will consider this claim in more detail when we examine the use of “this” as an anaphoric pronoun in the sub-corpora (see section 5.5.5).

Maes (1995) conducted a corpus-based comparison⁴ of nominal anaphors involving “the” (definite nominal anaphors, or DefNA) and those involving “this/that” (demonstrative nominal anaphors, or DemNA). DemNA is regarded as a variant of a DefNA: both types of anaphors
share an important characteristic, i.e. their descriptive content. Furthermore, when dealing strictly with text anaphora, the range of possible sources according to which P-sets can be identified is the same: for both DefNAs and DemNAs, uniqueness is required relative to entities that are textually introduced. (Hawkins, 1991:415). “The key intuition in differentiating between them is the fact that both classes differ in markedness due to the presence or absence of the demonstrative determiner” (Maes, 1995:24). The different anaphoric value of DefNAs and DemNAs “can be based on the deictic nature of DemNAs, yielding different interpretation procedures: unlike DefNAs, DemNAs imply a pointing to the deictic co-ordinates of the discourse, which for anaphoric NPs means a pointing to the antecedent” (Maes, 1995:71).

Having established quite different frequencies of these two NA types in the PW and student opening extracts, we will now look separately at the way each type is used.

5.5.4.1 *Definite Nominal Anaphors (DefNA)*

To partition the field of NAs, Maes selects two micro formal criteria cross-classifying nominal anaphors: the formal relationship between antecedent and anaphor, yielding *literally repeated* and *alternative* nominal anaphors and, as mentioned, the nature of the determiner, yielding *definite* and *demonstrative* nominal anaphors. This classification of NAs is ultimately based on their contribution to the coherence of discourse: “contextual uses or classes of NAs are what ultimately matters. In this view, formal classes of NAs serve as a trigger in recovering the contextual interpretation of NAs” (Maes, 1995:23).

![Nominal Anaphors (NAs)](image)

*Figure 4.9 Maes’s (1995) classification of NAs*

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4 Maes’s proposals are developed using only Dutch corpora. However, they provide helpful insights into the use of NAs in my own study which, in turn, provides support from English for his proposals.
With regard to expository and argumentative (Dutch) texts, Maes found that "Demonstrative NAs" and "not literally repeated NAs" occurred with the highest frequency. We will look first at the operation of alternative then literally repeated DefNAs in the opening extracts of the sub-corpora. Number (1) below is an example of a DefNA literally repeating the antecedent. Number (2) is an example of a DefNA with alternative descriptive content:

(1) ...[The study on which this paper is based](A2) proves otherwise. ...[3 sentences intervening] ... have had a causal effect on the outcome of (A2) the study. (L1)

(2) ...that [we lose detail about the form and source of input information faster than we lose its content](A2) would be (A2) the natural expectation if... (PW)

There are three sentences intervening between the repeated DefNA in (1) above and its intended referent. Hence a literally repeated DefNA, such as the underlined "the study", operates as a "reminding" repeat identifier, helpfully signalling a further reference to a previously specified referent. The underlined alternative DefNA in (2), however, cues reference to an antecedent in close proximity; its function is therefore only barely identificational and it is able to provide additional information about the intended referent without threatening the reader's ability to successfully identify that referent. We will now discuss alternative DefNAs in detail and the function of the natural expectation as a "retrospective label" (Francis, 1994) will become clearer.

* Alternative DefNAs:

Maes (1995:30) defines alternative DefNAs as, firstly, "nominal anaphors with a non-demonstrative determiner, which...[cue] access to highly accessible discourse referents by using a descriptive content which is different from that of their antecedent". Second, and most importantly, alternative descriptions "imply an interpretation which exceeds the simple identificational function of anaphoric expressions" (p.29). They are certainly a means of identification, in that they have to enable the reader to access the intended representation of the referent, or the relevant P-set. However, unlike pronouns or literally repeated NAs, alternative DefNAs have the potential to "qualify the referent by providing additional information" (Maes, 1995:12). The DefNA in (2) above would, in Schmid's (2000) scheme, clearly be functioning as a shell NP: the NP the natural expectation is used to "modify and characterise [the information] in a particular way" (2000:8). This NP is also a good example of what Francis has called a "retrospective label"; one that "serves to encapsulate or package a stretch of discourse"
The defining quality of such a “shell” or “label” is that “it is not a repetition or a ‘synonym’ of any preceding element. Instead, it is presented as equivalent to the [preceding] clause or clauses…while naming them for the first time” (Francis, 1994:85). In this position, the label has the capacity not only to “provide extra information” about a highly accessible discourse referent; it is also the mechanism through which writers frequently present their own attitude towards that referent.

As mentioned, there are very few DefNAs in the PW opening extracts. When they do appear, however, they are primarily alternative or partially repeated DefNAs in close proximity to the antecedent.

- ... to reduce human reasoning to [a calculus](A1), (A1) the Universal Characteristic,…
- ... original version of ['Devil in the Flesh'].(A4) Probably you have to ...the circumstances in which you saw (A4) the film; if so...
- ... construct simple addition or division word problems for [various pairs of object sets we provided](A3). We found that they...evoked by (A3) the given pairs...
- ... Edward Sapir and [Benjamin Lee Whorf.](A1) Was (A1) the latter, for instance,…

While there are many examples of DefNAs in the student opening extracts, very few of them are alternative:

**L1: alternative DefNAs:**
(a) ...[Cognitive development] (A1) is a broad and complex area of study, but as new information and research is made available, we find (A1) the topic looking clearer,
(b) ...One was [an unemployed man who had never been to school](A10), ... [11 sentences intervening] ... (A10) The uneducated man, however, seemed ...

**L2: alternative DefNAs:**
(c)...[The fact that they live in isolated areas](A1) will be (A1) the first to be discussed in ...
(d)...(NFS) [The respondent’s](A2) nature of reasoning differ. As they have their differences ... because (A2) the one is uneducated ... while (A2) the other one is highly educated ...

The above L1 examples appear to perform the function of “providing extra information” about the intended referent. In (a), the labelling of “cognitive development” as “the topic” implies not only that it is a “topic”, but “the topic” under discussion, while in (b), after much intervening
information, the modifier “uneducated” reminds the reader that we are once again discussing the man “who had never been to school”. As we have already said, the definite article cues the reader to search for the P-set in which the unique referent of the expression will be found. It does not, however, provide any clue as to which P-set the reader/hearer should be looking for. In the case of (b) above, where there is a lot of information between the NA and its antecedent, Brown & Yule (1983:174) would describe the underlined NA as cueing reference to a “displaced entity”. They note that “displaced entities are regularly referred to by full lexical definite NPs” (p.176) and that, in view of the amount of intervening information, a displaced entity “may be particularly liable to require specification of its properties in order to distinguish it from other, potentially competing, displaced entities” (p.186).

While (c) and (d) are technically examples of alternative NAs, they do not really provide any further information. Both L2 examples seem to be cases of partial repetition with elision of the noun. Comparing (d) with (b) shows clearly how the L2 writer misses the opportunity to provide “extra” specifying information about “the respondents”. In none of the above examples do the writers really use the alternative DefNA to “qualify” the preceding information: even where the L1s provide specifying information, that information is completely neutral and hence so is the writer’s apparent stance towards it.

* Repeated DefNAs:

Most of the DefNAs appearing in the student opening extracts represent literally or partially repeated nominal anaphors. Biber et al. (1999:237-8) found that, compared to other genres, definite articles with repeated nouns are most common in academic prose: “the dense use of nouns results in a great deal of potential competition among referents”, necessitating the use of more specific anaphoric devices. Maes (1995:8) notes too that NAs taking the form of simple literal or partial repetitions of the antecedent are the best manifestation of their use in this *identificational* function. As mentioned, there are very few DefNAs in the PW openings, and they are primarily alternative, or partially repeated NAs (see above). We will therefore compare the use of repeated DefNAs in only the student opening extracts. The examples presented below are distinguished as *specified* and *underspecified* following Hawkins’s (1991) conception of successful reference to previous discourse sets: “as long as the previous discourse set shared with the current interlocutor contains only one individual satisfying the description ..., there will be no referential ambiguity through non-uniqueness” (Hawkins 1991:408). The following examples,
distinguished as specified, satisfy this requirement for avoiding “referential ambiguity”. Those distinguished as underspecified do not.

**L1: Repeated DefNAs (specified):**
- …The Respondents were presented with [four different objects](A3). The respondents were asked which of (A3) the four were similar…
- … based on research work [done by Professor Andy Gilbert, in Kosi Bay - Kwazulu/ Natal](A1). (A1) The research involved …
- …presents the two interviews [held between a Psychology Professor and rural inhabitants of Kwazulu/Natal](A1). [4 sentences intervening] … Below a copy of (A1) the interview conducted is given: in (A1) the interviews …
- … [people from the surrounding area](A3) to perform a set of structured tasks and (A3) [their answers/responses were subsequently recorded.](A4) What will follow is a discussion … the answers given by (A3) the respondents. What will hopefully…conceptual explanation of (A4) the respondents’ answers.

**L2: Repeated DefNAs (specified):**
- … will use concepts and [theories of Piaget and Vygotsky.](A1) After that it will look at … then discuss critics of their interviewer’s questioning and critics of (A1) the theories.
- … mastering [the external information](A2), that is, observing … depend on how (A2) the information is internalised and interpreted.
- … following tasks which were conducted by [a psychologist](A1) to the people. (A1) The psychologist gave them a hammer, saw,…

If the underlined NP (Ax) is the “shell NP” and the preceding co-indexed expression its “contents”, we are once again more interested in the quality of the contents than in the shell NP. Co-indexed expressions are marked as such because the writer is assumed to be using both to cue reference to the same discourse representation. However, mere co-indexing with a textual antecedent does not ensure successful reference. In each of the ‘specified’ examples above, the definite article in the (Ax) NP cues the reader to search for the P-set in which the unique referent of that NP will be found. In all the examples but one, the co-indexed antecedent is part of the same complex (macro) NP or can be found in the sentence immediately preceding it. Such proximity means the definite NP (Ax) is, in each case, activating a highly accessible discourse referent. Furthermore, in all the examples, the textual antecedent provides sufficient information to create an accessible, and relevant, set in which the uniqueness of the definite referent of (Ax) will hold. In the L2 examples, there is nothing unique about the theories, the information or the
psychologist. However, the previous discourse sets shared with the reader sufficiently constrain the individuals satisfying these descriptions, thus preventing referential ambiguity. Such ‘constraint’ can be as simple as providing an adjectival modifier (external information) or specifically introducing only one psychologist with the indefinite expression a psychologist. Nevertheless, such constraints are sufficient to enable successful reference and thus contribute to textual coherence. Using the following underspecified examples, let’s now examine the features contributing to “referential ambiguity through non-uniqueness” (Hawkins, 1991:408).

L1: Repeated DefNAs (underspecified):
1) ... But [each thought in a different way](A1). The notion is that the processes that underlie thinking are mostly not directly observable and we will explore (A1) the differences.
2) ... the responses [to (NFS) the attached experiment,] (A2) ...[7 sentences intervening] ... I will attempt to outline how Vygotsky, and his ‘situated action theory’ would account for (A2) the responses.
3) ...[The responses to (NFS) the generalisation task](A1) shall be attempted to be explained ... between (A1) the respondent’s responses.

L2: Repeated DefNAs (underspecified):
4) ... given [tasks to solve](A4) ...[3 sentences intervening] ...there are limitations concerning the way (A4) the tasks were...
5) ... both of (NFS) [the two men](A5) is a bit ambiguous. ...[2 sentences intervening] ...(A5) The first man ...
6) ... to [the similar tasks given to them by (NFS) the researcher,] (A2) ...[2 sentences intervening] ...In explaining the respondents’ reasoning to (A2) the task ...
7) ... [the respondents’ responses on (NFS) the task](A1). The essay will also outline ... for an understanding of (A1) the responses.
8) ... that (NFS) [the spectacles](A3) were different in that ..., he referred (A3) the spectacles to the actual use of spectacles using understanding of the past actions of (A3) the spectacles.

In half the examples above (2,4,5,6) we see between two and seven sentences intervening between the underlined minimal NP and its textual antecedent. Since these underlined NPs are repeated DefNAs, the distance between co-indexed expressions should not raise too many problems: definite articles with repeated nouns are “more specific anaphoric devices” (Biber et al., 1999:237-8), regularly used to refer to “displaced entities” (Brown & Yule, 1983:176).
However, the *nature* of the textual antecedent in the above extracts, and thus the availability of a relevant previous discourse set, seriously undermines the function of the full DefNAs as “specific anaphoric devices”. In each case, the textual antecedent involves an expression whose intended referent is, itself, either underspecified (1, 4), or not specified at all (NFS) (2, 3, 5, 6, 7, 8). For example, in (4), the first time *tasks* is mentioned, no information is provided which could be said to constrain the referent of the expression and thus create a P-set to which the writer could later refer. Thus when we later read *the tasks*, we can look back to the co-indexed expression but this expression has in no way been used to create a previous discourse set containing “some unique maximal set” of entities to which the following DefNA can successfully refer (Hawkins, 1991). The result is therefore referential ambiguity through non-uniqueness. In (7) the explanation is much the same: The first time *responses* is mentioned, it is specified by the phrase *on the task*. The NP *the task* contains a “shell” noun and is coded NFS because its broad range of reference has not been constrained in any way. This lack of specificity results in the sort of conceptual cul-de-sac described in the above discussion of ESP relationships. As a result, the expression *the respondents’ responses on the task* does not create a P-set in which the uniqueness of the referent of any further expression “the responses” will hold.

Once again, the DefNAs ((Ax) NPs) in the examples above are more appropriately analysed as *inferrables*: in order to construct a representation of the referent, the addressee is required to retrieve “a contextual assumption ...that links it to something in current short term memory.” (Gundel, 1996:148). The readers for whom these texts were written would know that the most relevant previous discourse sets in each case are those established in the assignment sheet.

5.5.4.2 Demonstrative Nominal Anaphors (DemNA)

DemNAs can be regarded as *identificationally stronger* than DefNAs, in that the deictic element, i.e. the demonstrative determiner, acts as a much stronger anaphoric device (Maes, 1995:65). In other words, while the definite article in DefNAs implies the existence of a previous discourse set, the demonstrative determiner contains, in addition, a presupposition of proximity. Unlike the definite article, it *does* provide a clue as to which P-set will be the most relevant: one established in the immediately preceding co-text. Corpus analysis supports this characteristic distinction: Ariel (1988:70) found that, on average, a DemNA stands closer to its antecedent than a DefNA. Like DefNAs, DemNAs can literally or partially repeat the antecedent
as in (1) below, or they can have an alternative descriptive content, as in (2) (excerpts are from the PW sub-corpus):

1) ... is similar to [the process that mediates analogical reasoning (i.e., structural alignment)](A2). We argue and show that (A2) this process leads to....

2) [The hypothesis of two separate processes for familiar and unfamiliar rules parallels Griggs and Cox's (1983) hypothesis ... such as “matching bias” and “verification bias”](A3). (A3) This conjecture is not without foundation...

As mentioned, in the PW opening extracts, 60% of the micro NPs used to refer to previous discourse sets were demonstrative; i.e. of the form “this + (mod) + N”. In the L1 opening extracts, DemNAs make up 30% of the total NAs, while in the L2 this figure is 23%. The difference between the PW and student writing is statistically significant in both cases (PW vs. L1, z = 2.6; PW vs. L2, z = 3.09). There is no significant difference between the L1 and L2 (z = 0.8). In Ch 4 (section 4.5.8) we examined “this + (mod) + N” as a potential syntactic “host” to shell nouns. We found that in the PW sub-corpus, the noun occupying the N slot in this pattern was a shell noun 70% of the time. In the L1 and L2 sub-corpora, this figure was 61% and 50% respectively. Furthermore we found that there was significantly less variation in the nouns used in this pattern by student writers. In other words, student writers do use “shell” nouns in this pattern, but seemingly fewer different nouns than the PWs. After exploring the way DemNAs function in the texts, we will be able to comment further on this finding.

Unlike DefNAs, retrieving instances of DemNAs is a very simple matter. It is therefore possible to present findings on the use of DemNAs across the full corpora rather than in only the opening extracts. In view of the fact that “this + (mod) + N” was examined as a pattern in Ch 4, as well as the significant differences between the PW and student sub-corpora with regard to its use, broadening the analysis in this way is worthwhile. It will also allow us to move directly into a discussion of the general use of “this” as an anaphoric pronoun across the sub-corpora. Thus, in order to extract DemNAs, in each sub-corpus every occurrence of “this” was examined and the following excluded:

→ “this” used as an anaphoric pronoun
→ Demonstrative NPs with TXT or GEN reference (see 5.3.1.1 for definitions)
What remained were all demonstrative NPs functioning as either alternative or repeated DemNAs. The following table indicates the frequency with which “this” occurs as part of a DemNA in each of the sub-corpora, as well as the distribution of the two DemNA types:

<table>
<thead>
<tr>
<th></th>
<th>PW sub-corpus</th>
<th>L1 sub-corpus</th>
<th>L2 sub-corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total occurrences of this</td>
<td>155</td>
<td>355</td>
<td>148</td>
</tr>
<tr>
<td>% of use in DemNAs</td>
<td>65%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>% of DemNAs which are alternative</td>
<td>79%</td>
<td>54%</td>
<td>52%</td>
</tr>
<tr>
<td>% of DemNAs which are repeated</td>
<td>21%</td>
<td>46%</td>
<td>48%</td>
</tr>
</tbody>
</table>

Figure 5.10 - Frequency with which “this” is used in DemNAs across the 3 sub-corpora.

The frequency with which this appears in DemNAs overall in the PW sub-corpus is significantly higher than in the student sub-corpora:

- PW v L1: \( z = 6.52 \)
- PW v L2: \( z = 5.58 \)
- L1 v L2: \( z = 0.15 \) (no statistically significant difference).

Comparing within the sub-corpora, we find that in the PW, the proportion of alternative DemNAs is significantly larger than the proportion of repeated DemNAs \( (z = 8.2) \). There is no statistically significant difference between these two proportions in either of the student sub-corpora \( (L1 z = 1.2; L2 z = 0.4) \); in other words, both the L1 and L2 writers use repeated DemNAs (46-48%) almost as frequently as they do alternative DemNAs (52-54%).

Comparing across the sub-corpora, we find a significantly higher proportion of alternative DemNAs in the PW’s writing than in the students’ writing:

- PW v L1: \( z = 3.75 \)
- PW v L2: \( z = 4.01 \)

On the other hand, the student writers use repeated DemNAs significantly more often than the PWs:

- L1 v PW: \( z = 3.81 \)
- L2 v PW: \( z = 3.35 \)
Let's now look more closely at the operation of literally repeated and alternative DemNAs. Once again, they are separated into specified and underspecified according to Hawkins' (1991) notion of successful reference.

- **Alternative DemNAs:**

To recap, in the PW sub-corpus, 79% of DemNAs are alternative. This figure is 54% and 52% for the L1 and L2 sub-corpora respectively:

**PW: Alt DemNAs (specified):**

- ... [reasoning by analogy is a developmentally sophisticated skill.] (A1) This notion ...
- ... [analogical reasoning was the hallmark of formal operational thinking, emerging in early adolescence] (A6), and a large body of work has found evidence apparently consistent with (A6) this developmental position ...
- ... [More recently, however, studies of problem solving by analogy ... of the use of analogy in learning tasks ... and even of performance in the difficult "item"... have provided evidence against the notion that very young children are unable to reason by analogy.] (A7) This recent work has ...
- ... [To what extent is the presumed internal code innate, to what extent is it labile?] (A6) It bears on (A6) this question whether a natural language...
- ... that [nature comes in chunks and that some ways of organising it are more likely to take hold than others.] (A3). (A3) This view represents...
- ... [Humans experience physical objects as persisting over time] (A1). (A1) This fact is remarkable, because...

**L1: Alt DemNAs (specified):**

- ... [Respondents were given a set of four words. ... Respondents were then required to identify the one that did not fit in.] (A3) For (A3) this experiment, two respondents...
- ... of (NFS) [Respondent A’s] (A3) reasoning can be explained in some ways in terms of the fact that (A3) this person has no...
- ... [the respondent’s way of thinking comes out of the social world in which he lives] (A4). Piaget would contest (A4) this response saying...
- ... Institutions, tools and symbol systems are therefore products of human beings, developed in different ways by various and diverse cultures over time] (A3). (A3) This explanation according to...
- ... [both social structures and mental structures turn out to have historical roots, and are quite specific products of certain levels of tool development]. (A1) It is from (A1) this perspective that ...
L2: Alt DemNAs (specified):

- "Piaget believes that as children get older,... from about the age of seven, children’s thinking is based on ... formal operations"](A2). So for me if we apply (A2) this approach ...

- [possible for developing child through observations of and interaction with those who are masters of their use] (A4). To clarify (A4) this statement...

- [Whether the area a person lives does or does not play a role in ones intellectual development] (A3). The theorist who supports (A3) this notion...

- [He believes that one’s ability depends on his stage of biological development.] (A4) In (A4) this view he...

- [For example driving a car. Mental action allow them to manipulate object mentally] (Wetsch 1985:25.). (A2) (A2) This scenario is...

I have included so many examples because the following needs to be emphasised in this section: the student writers in this study do use alternative DemNAs and, notwithstanding the few “underspecified” examples listed below, they do so with apparent success. In each case the presupposition of proximity inherent in the demonstrative determiner is fulfilled: a specified antecedent is available in the immediate context, and there is no ambiguity through non-uniqueness or competition between potential referents. Furthermore, the potential for “this” to signal a “shift of entity or focus of attention to a new focus” (McCarthy, 1994:275) appears to be realised in all the above examples. In the case of alternative DemNAs, the issue in this study really seems to be more quantitative than qualitative: when they use these structures, the student writers are usually successful. While the infrequency with which they do so is the issue that really needs to be addressed, the potential function of these expressions still needs to be made explicit. The following “underspecified” DemNAs indicate where and why the use of these expressions can go wrong:

L1: Alt DemNAs (underspecified):

(a) ... Vygotsky’s theory suggests that people can be guided by explanation, demonstration and work and they can attain higher levels of thinking if they are guided by others who are more competent. This concept is... ???

(b) ... according to Piaget Respondent A for this task was functioning on a concrete operational level. ???

(c) ... This is not a very accurate way of deciding whether ... was validated. A cognitive capacity is being revealed here in this theory but at the same time should be approached with caution. ???
In the first example (a) above, the use of the DemNA *this concept* results in ambiguous reference due to non-uniqueness: in no way is a previous discourse set established containing only one individual satisfying the description of the DemNA. To put this a different way, the “interference of competing candidates” (Givón, 1983:11) is too great. Examples (b) and (c) provide further evidence of students’ assumption of shared knowledge: both *this task* and *this theory* are used to refer not to previous discourse sets established in the current linguistic exchange, but to sets established in the assignment sheet.

**L2: Alt DemNAs (underspecified):**

(a) ... [language is socially, culturally and historically bound and therefore how one responds, will be socially and culturally bound or influenced, further more, the individual’s history is especially instructive and the transition from the social to the individual function emerges with particular clarity (Richardson and Sheldon 1993:70)](A3). The first respondent’s response clearly exhibits *(A3) this notion.*

(b) ... Vygotsky refers to the internalisation of social-based actions and Piaget on the internalisation of sensorimotor actions. Each respondent, according to this explanation, was showing...???

The problem in both the above L2 examples is caused by competition between potential referents. In the first example, the sentential antecedent contains so much information, it is impossible to work out which bit of it the writer is labelling *this notion* and therefore what s/he is trying to say about the “first respondent’s response”. In the second example, the writer apparently provides two explanations, that of Vygotsky and Piaget. The use of *this explanation* is consequently ambiguous due to non-uniqueness of the potential referent.

* Repeated DemNAs:

In the PW sub-corpus, 21% of DemNAs are repeated. This figure is 46% and 48% for the L1 and L2 sub-corpora respectively:

**PW: Rep DemNAs (specified):**

* ...[The other event was identical, except that the two objects had the same properties (e.g., two white foam balls)](A4). Adults are more likely to judge *(A4) this second event.*
• Adults have [knowledge about thousands of different object kinds](A2). Some of (A2) this knowledge concerns....

• of [an organism that regarded only external appearances - for example ... regarded having measles as nothing more than wearing red spots.](A2) One traditional and powerful view ... is that young children are remarkably like (A2) this hypothetical organism.

• [the competence that underlies adults' attributions of persistence to objects,](A2) and also to understand the origins of (A2) this competence in childhood.

While the above are all examples of repeated DemNAs, two examples are only partial repetitions in that the NA contains a modifier. This addition helps to further specify the intended antecedent and the DemNA thus functions as a very strong anaphoric device. Having said that, in all three sub-corpora modifiers seldom appear in repeated DemNAs: in the PW sub-corpus, a modifier appears only three times, in the L1, once and in the L2, not at all.

More importantly, in most of the above PW extracts, the repeated DemNAs are good examples of the way Schmid (2000) sees “shell-content complexes” functioning in abstract expository discourse: here, the “integrating function of shell nouns comes into its own” (p.373). Where the preceding discourse antecedent (or “shell contents”) consists of a complex chunk of information, the following DemNA (or “shell NP”) allows for the integration of all that information while also reducing its complexity in a way that allows the writer to continue adding information (p.375). Or, as McCarthy (1994) might put it, “this” is used successfully to signal a “shift of entity or focus of attention to a new focus” (p.275), thus moving the text forward.

In the following examples of repeated DemNAs from the student sub-corpora, the repetition is most often literal. However, while there are occasions when the NA seems to function as a simple “repeat identifier” (Van Hoek, 1997) of the referent, for the most part the “integrating function” described above could be attributed to them:

**L1: Rep DemNAs (specified):**

• ... these words belonged to [a particular class of objects](A2) and one did not fit into (A2) this class.

• ... a person's performance on [Piagetian cognitive tasks](A2) can be influenced by cognitive style. "Reflective" individuals cope well with (A2) this kind of cognitive task.

• ... [Formal operations](A3) ... the last of Piaget's stages ... the above mentioned stages where everyday interactions and self-directed development; (A3) this stage emerges...
... and understand his [knowledge through interactions with people and the area](A2). He has used (A2) this knowledge...

... he has a specific mental set [with regard to his life and the way he makes decisions](A4). (A4) This mental set is his...

... individuals, being active biological organisms, continuously [interact with their environment](A1). Through (A1) this interaction ...

L2: Rep DemNAs (specified):

... The second man coming from the same community, is [a principal from a primary school and has a post-matric diploma](A3). (A3) This man is...

... “children reach [the level of formal operational thinking](A1) during adolescence” (Edwards and Louw, p339). (A1) This level of thinking...

... Wadworth (1989) argues that [formal operations are ... and depth of reasoning](A2). (A2) This argument may...

... [Piaget’s stage theory sees intellectual activity as...](A3) [2 intervening sentences]... four main concepts which are central to (A3) this stage theory ...

... who is in [the formal stage](A4), seems to be in tune with Wardsworth’s description that a child/person in (A4) this stage possesses...

... acquiring a skill [(which is formal education)](A3) but one’s social setting, i.e. culture add a richness to (A3) this skill...

In all the above examples, the DemNA fulfils its identificational function: “in order to be optimally identificational, NAs should describe the referent in a way which best enables the language users to identify the intended referent. Therefore, NAs taking the form of ... repetitions of the antecedent fit in the best with this ... function” (Maes, 1995:8). Furthermore, each DemNA is used to integrate preceding information in such a way that the text is able to move forward.

It should also be noted that there are no underspecified repeated DemNAs in the student writing. It appears that when these student writers use repeated DemNAs, reference is successful. Again, the issue here is more quantitative than qualitative: only 30% of A relationships established in the L1 opening paragraphs are DemNAs, while in the L2, this figure is 23%. Furthermore, looking at the use of “this” in DemNAs across the three sub-corpora we found that, compared with 65% in the PWs, “this” appears only 32-33% of the time in a DemNA in the student writing. What it is that the student writers are doing with “this” the rest of the time will be examined in the following section (5.5.6). First, let’s summarise the findings with regard to DemNAs:
While Biber et al. (1999) find the highest proportion of definite articles with repeated nouns in their academic and news corpora, Maes's (1995) findings, along with the results of the above analysis, suggest that within an academic corpus (PW), the occurrence of alternative DemNAs may well outnumber that of repeated Dem/DefNAs. The differences in the use of DemNAs in the PW and student sub-corpora also allow us to suggest the following:

- There is significantly less variety in the nouns used by the student writers in the pattern “This + (mod) + N” because they are more inclined to use repeated DemNAs than alternative DemNAs. This tendency may well also contribute to the overall difference found in nominalisation across the three sub-corpora (see Ch 4, section 4.3).
- 70% of all occurrences of “This + (mod) + N” in the PW sub-corpus were found to contain shell nouns. In view of the high proportion of alternative DemNAs in the PW, we can say that this sub-corpus exhibits many examples of the full potential Schmid attributes to shell nouns: the ability to characterise, categorise, or in some way qualify the referent of the previous NP. We could also say that the more a writer draws on this “characterising potential” in these nouns, the more likely it is that they are using the nouns to present their (implicit) stance towards the information they are presenting.

In the student sub-corpora, shell nouns appeared in this same pattern 50-60% of the time. However, these writers have a tendency to use both repeated Def and DemNAs. Thus, while the NA (shell NP) could be said to “encapsulate”, or integrate, and therefore carry forward the preceding information, the repetition of the noun means the “shell NP” is in no way being used to “characterise, categorise, or in some way qualify the referent of the previous NP”. This finding is another indication that no noun has the capacity to perform “shell functions” unless the speaker intends it to do so. Nor is it possible to say that, because a noun appears in the pattern “This + (mod) + N”, it is necessarily performing a “shell function”: if the DemNA is repeated and helps, in any way, to specify the intended referents from all those possible in the world of discourse, this would be achieved due to the functioning of the demonstrative this along with a modifier. Any identificational function in this case has very little to do with the noun.

- Finally, the finding that the students use under-specified nouns, without adjecival modification, in both alternative and repeated DemNAs further supports the suggestion that NAs in these sub-corpora function far more as repeat identifiers than as characterising “shell NPs”.

All these characteristics relating to the use of DemNAs have been associated with “low-level interlanguage” texts. In his examination of nominal demonstratives in an interlanguage corpus (Korean learners of English), Murphy (2001) found that simple lexical repetition was the
dominant form of textual cohesion (p.167): “there is very little use of synonyms or near-synonyms to achieve lexical reiteration” (p.168). Furthermore, using Halliday and Hasan’s notion of “general nouns” (a class subsumed within that of “shell nouns”), he found that overall this class of nouns was “under-represented” in the corpus: “although the general nouns occur frequently as lexical items, an entire cohesive level remains almost entirely unrealised...a seeming inability to trade at the level of the general abstract noun [is] observed in this corpus” (p.168). In other words, “shell” nouns appeared frequently as lexical items but writers failed to realise their potential carrier/shell function. As mentioned earlier, Murphy also found an under-developed capacity for nominal demonstrative textual pointing (p.162). This finding is echoed by Mauranen (1993) who, in a comparison of Finnish EFL and English L1 writing, found that the non-native writers made less use of DemNAs than their native English counterparts to add information to or modify the discourse referent. Finally, Murphy (2001) notes that in his corpus, the general “limits on interlanguage flexibility evident in the use of lexical reiteration” were also evident in the tendency for both demonstratives and definite articles to appear “in the company of an unadorned head” (p.163). In other words, he found a similar scarcity of adjectival modifiers in definite NPs.

Considering that the student writers, whose texts make up my corpora, are first and second language speakers of English in their second year at university, it is a bit disconcerting to have identified features also associated with EFL and “low-level interlanguage” texts. However, unlike Murphy’s (2001) finding that nominal demonstratives were “conspicuous mostly by their absence”, the above analysis has indicated very clearly that the student writers in this study know how to use both DemNAs and alternative NAs in general. It would therefore be possible to indicate to students, using only their own texts, good examples of when and why DemNAs work, as well as examples of where they could have been used and why this would have been helpful.

Finally, it is necessary to address the finding that, compared to the L2 opening extracts, a significantly larger proportion of the total relationships coded in the L1 openings were As (17% vs. 12% in the L2; z = 2.03). While the difference between the PW and student writing with regard to the use of A relationships has been shown to be both quantitative and qualitative, it appears that the difference between the L1 and L2 is only quantitative: the two student sub-corpora exhibited very similar tendencies to use more DefNAs than DemNAs and, overall, to use repeated rather than alternative NAs. We were able to compare examples of alternative DefNAs where the L1 writers appeared more capable of realising the potential of these structures (see 5.5.2.1). Nevertheless, they use them as infrequently as the L2 writers. Thus, in view of the fact
that a nominal anaphor will, at least, function as a repeat identifier of a referent, the most we can suggest is that the higher frequency of As in the L1 texts may contribute to improved cohesion, but not necessarily improved coherence.

Before discussing the findings with regard to the final coding category (NFS), we will examine the way the student writers use “this” as an anaphoric pronoun - something which is directly related to the infrequency of DemNAs in their texts.

5.5.5. *Demonstrative Pronouns and anaphoric reference*

Pronouns are traditionally characterised as “standing in for” or “substituting” a noun or NP. As Van Valin (2001) notes however, this is true only of third-person pronouns; it is not true of first- and second-person pronouns which refer to or index the speaker and addressee in a speech event and do not replace a noun (p.6). It is also not a true characterisation of the way demonstratives function when used as pronouns. Demonstrative pronouns are “pointing words” that direct attention to something that has already been said, that is now going to elaborated upon. Thus they identify or point to nominals, rather than stand in for them. Following Quirk *et al.*, “the antecedent of a demonstrative may be either a noun phrase or a larger segment of discourse, *viz.* a clause, sentence or sequence of sentences. We call this larger segment a ‘sentential antecedent’” (1985:375).

It has already been noted that academic prose has a relatively higher frequency of noun phrases with demonstrative *determiners* (compared with conversation) (Biber *et al.*, 1999:238). Demonstrative *pronouns*, however, appear with comparatively low frequency in the written registers; they “are more frequent in conversation, which is heavily situation-dependent and relies on implicit rather than explicit links and references” (Biber *et al.*:238). Thus, like definite NPs, pronouns tend to be used to refer to entities treated as “given” (Brown & Yule, 1983:171)⁵, that is, presumed (by the speaker/writer) to exist in the discourse representation of the hearer/reader. Gundel *et al.* (1988, 1993) propose that pronouns (and determiners) constrain possible interpretations of nominal forms by conventionally signalling the memory or attention status that the intended referent is assumed to have in the mind of the addressee. They identify six cognitive statuses which they call the Givenness Hierarchy, presented below in Figure 5.11.

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⁵ This is not always the case (cf. Brown & Yule, p.218). However our interest is only in demonstratives used as *anaphoric* pronouns, thus cueing reference to ‘given’ entities.
in focus ⇒ activated ⇒ familiar ⇒ uniquely identifiable ⇒ referential ⇒ type identifiable

\[
\begin{array}{cccc}
\text{(it)} & \text{(that)} & \text{(that N)} & \text{(indefinite this N)} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{this} & \text{this N} & \text{the N} & \text{(a N)} \\
\end{array}
\]

**Figure 5.11 The Givenness Hierarchy (Gundel et al., 1993)**

Statues on the hierarchy correspond to assumed memory and attention states, ranging from most restrictive, “in focus”, to least restrictive, “type identifiable”. The forms serve as processing signals which assist the addressee in restricting possible interpretations. The statuses are in a unidirectional entailment relation. If something is in focus (centre of attention), it is necessarily activated (in working memory); if it is activated, it is necessarily familiar (in memory) etc. As can be seen in Figure 5.11, Gundel et al. propose that demonstrative pronouns in English code the assumed status “activated”; i.e. in working memory as well as familiar, uniquely identifiable etc. “Indefinite this N” is classified separately - it captures the use of this in expressions such as “I came round the bend and there was this car broken down in the road”. Such constructions do not occur in the writing making up the corpora in this study. Hence we are concerned only with the “definite” use of demonstrative pronouns and its concurrent assumption of the “activated” memory/attention state.

In the PW sub-corpus, this occurs 25% of the time as a demonstrative pronoun. This figure is 45% for L1 and 41% for L2 - a statistically significant difference in both cases (PW vs. L1, \(z = 4.34\); PW vs. L2, \(z = 2.98\)). These figures suggest immediately that the student texts exhibit another feature more characteristic of conversation than academic writing: more “situation-dependent” than the PW, relying more on implicit than explicit links and references.

Let's begin by looking at the way this functions when it is used as an anaphoric pronoun in the PW:

a)...first whether pre-schoolers [understood that objects could have insides quite different from their obvious outsides][A2]. Three- and 4-year-olds know (A2) this.

b) The participants may [infer from content that the base and target actually differ in their structures][A1]. When (A1) this happens, both access and mapping may fail...

c) [The ability to discriminate colours is affected when storing memories][A3] (Garro 1986; Lucy and Shweder 1979; 1988). However (A3) this is not surprising since memory...
d) That ['word meanings evolve ... as the child develops']\(^{(A4)}\) (124) is perhaps [the central thesis of Vygotsky’s book]\(^{(A4)}\). Specifically, \((A4)\) \textit{this} is understood to mean...

e) These findings stand on their own as [demonstrating a grasp of the presence and importance of internal and intrinsic features by quite young children.\(^{(A5)}\) Beyond \((A5)\) \textit{this}, however, the findings raise the question....

In each of these excerpts from the PW, \textit{this} is used as an anaphoric pronoun without resulting in “vague” reference: in each case the pronoun has an immediate (activated) textual antecedent; the referent of either the entire preceding sentence or some part of it. Any possibility for competition between potential referents is thus sufficiently constrained by the proximity of the antecedent. The writer is able to signal his/her assumption that the intended referent is activated and “uniquely identifiable” because it has literally just been mentioned. If the function of a demonstrative pronoun is to direct attention to something that has already been said, that is now going to elaborated upon, the demonstratives in the above excerpts apparently fulfil their function well and do not need specifying nouns (repeat identifiers) following them.

On the other hand, the way the student writers in this study use demonstrative pronouns results, frequently, in two quite different effects. The first relates to the successful identification of the intended referent and is mostly a matter of distance between the pronoun and its antecedent. The second effect is directly related to the potential function of DemNAs (as discussed above). As such, we will look first at examples of the “proximity” problem and then examine what happens in the student writing when demonstratives are used as anaphoric pronouns rather than as specifiers in DemNAs.

5.5.5.1 \textit{The Proximity problem:}

We have noted already that there is a presupposition of proximity inherent in the demonstrative \textit{this}. In order to consider examples of its use as a pronoun in the student writing, I will employ a method of indexing developed by Brown and Yule (1983). They draw a useful working distinction between expressions identifying \textit{new} entities, \textit{current} given entities and those identifying \textit{displaced} given entities (p.173): an expression referring to the most recently introduced entity before the new entity refers to a \textit{current} given entity. An expression referring to an entity introduced prior to that (i.e. that is “older” than the \textit{current} given entity) is said to refer to a \textit{displaced} given entity. To use an example from their diagram-drawing data (1983:173):
Draw a black triangle, underneath the triangle draw a red line about two inches, and at the right hand side of this line write ON in black.

In the unit underneath the triangle draw a red line about two inches, the expression the triangle mentions a current given entity, current with respect to the 'new' entity introduced by the expression a red line about two inches. In the next unit, the expression this line mentions the current given entity, current with respect to the 'new' entity introduced by the expression ON in black. The indexing method can therefore be summarised as follows:

\[
\begin{align*}
\text{new} &= \text{most recently introduced entity} = N \\
\text{current given} &= \text{"one which was introduced as 'new' immediately before the current new entity was introduced"} (p.183) = N-1 \\
\text{displaced given} &= \text{items introduced as 'new' at a point previous to the current given one.} < N-1
\end{align*}
\]

Using this method to analyse diagram-drawing data, Brown & Yule found (p.174) that simple definite NPs (the + N) were used predominantly in identifying displaced entities, but could also be used to identify current entities. Pronouns, however, never occurred "as expressions identifying displaced entities, only as expressions identifying current entities". We will now consider examples from the student sub-corpora. In each case, what I have presumed to be the sensible antecedent of the anaphoric pronoun is co-indexed (Ax).

a) Another limitation to consider is [the concept of familiarity](A1). Respondent A2 may have no concept of tests and tasks which can be done verbally except for perhaps storytelling. Respondent B5 on the other hand is fully familiar with testing, having studied up to two years after matric. (A1) This could be overcome by using testing concepts which are known and familiar to both respondents (L1).

The demonstrative pronoun (typically) cues reference to a highly accessible (activated), proximate antecedent. However, neither the "new" (6) nor the current given (5) entities in the above excerpt make sensible antecedents. Through our need to make sense of what we read, we will search for some sentential antecedent that sensibly cues reference to something that can be "overcome" - i.e. a limitation. Using Brown & Yule's (1983) method of indexing it is, however,
easy to see how many "new" entities are introduced between the pronoun and what is its most sensible antecedent. Thus while it is possible to identify an antecedent, it is a very difficult task because that antecedent is a "displaced entity". While their finding that pronouns "never occur as expressions identifying displaced entities" (Brown & Yule, 1983:174) was based on one, limited genre, it is quite clear why this may be so, especially in the case of a demonstrative being used as an anaphoric pronoun: the more entities introduced between the pronoun and its antecedent, the more competition there will be between potential referents. "Pointing words" clearly do not work well if the reader cannot uniquely identify what they are pointing to. Finally, it has been claimed (Sidorov & Gelbukh, 1999) that the use of a demonstrative pronoun is impossible when the antecedent denotes a thing (object). In the above excerpt, the antecedent is both "a limitation" and "a concept"; both of which could be described as "abstract" things. It is doubtful, however, that any native reader would find the following difficult to process:

Another limitation to consider is the concept of familiarity. This could be overcome...

What makes this processing possible is the proximity of the most sensible (relevant) antecedent: in the example above we would not, in fact, be processing "this" as a pronoun. We would be processing it as an NP where the noun has been (acceptably) elided due its status as an "activated", current given entity (This + Ø). Proximity, and hence "level of activation", are certainly more salient aspects of the successful processing of demonstrative anaphoric pronouns than the nature of what the antecedent apparently denotes.

b) We then take over this knowledge, and use it as a basis of our own thought and developing new ways of understanding, (A1). The most significant illustration of (A1) this is that, of the uneducated woman, in the task above, (Wetsch, 1985). This, can be illustrated by the process of language development, (L2).

In (b) I have used x indices because all the expressions in this excerpt refer to (unknown) displaced entities. First, let's look at the first appearance of the pronoun "this" (A1). While its antecedent is complex, the pronoun still cues successful reference because its sentential antecedent immediately precedes it and is therefore activated. The writer seems to be using "that" to stand in for a full NP such as "the performance" or "the behaviour". However,
demonstratives “point to” NPs and hence cannot be used to stand in for them. Furthermore, while “that” implies more distance than “this”, in its above role as a pronoun it still cannot be used to refer successfully to a displaced entity, which is what this student writer is attempting to do. The third “this” fails for several reasons: first, the cue to search for a “proximate” antecedent results in nonsense - neither “that of the uneducated woman” nor “the task above” make sensible sentential antecedents. Both these phrases are themselves used to refer to displaced entities (things), one of which would possibly make a sensible antecedent of the pronoun “this”. In any event, the processing task presented to the reader of this passage is enormous.

c) *Language* is a key factor in *this theory* and offers a comprehensive explanation to the reasons for the different responses. *This* can be discussed once again in a social context and interactional perspective.

In (c) the problem is possibly a simple agreement issue - an anaphoric pronoun must agree in number with its antecedent. If the writer had used “these”, the demonstrative could be processed as a specifier in an NP where the plural noun (reasons) had been elided (These + Ø). Such elision would be acceptable because reference would be to the most recently introduced entity (6). The use of “this”, however, cues reference to a current given entity with which the pronoun agrees. “a comprehensive explanation” is the natural candidate, but it “feels” wrong for the following reason: the expressions “Language”, “a key factor” and “a comprehensive explanation” have been co-indexed because they all cue reference to the same entity, i.e. “language”. “Language” is the current entity and focus of attention and is, I believe, what the writer intends to continue discussing “*in a social context...”*. By using “this”, however, the writer signals a shift of entity or focus when, in fact, s/he is not shifting the focus at all. As McCarthy (1994) notes, “it” is the unmarked reference item which “simply carries on a current focus; “this” and “that” highlight their antecedents in some way, for purposes of signalling discourse shifts” (p.273). In the above extract, the use of equally vague “it”, rather than “this”, would in fact increase the chance that the pronoun would refer successfully.

Academic writing is highly nominalised which means, as Biber *et al.* (1999) point out, that there is higher competition between potential referents. On the whole the student writers are capable of constraining the intended referent of anaphoric *this*; in the majority of cases the sentential antecedent is clear. However, the excerpts above are presented as an example of the
way processing (and referential coherence) can be disrupted by the use of an anaphoric pronoun in these contexts.

5.5.5.2 Avoiding DemNAs:

More frequent, and more telling, than the “proximity” problem is the students’ tendency to use this as an anaphoric pronoun in precisely those places one might expect to find an alternative DemNA:

a) According to this study the Respondent A could be seen to fail or do badly in this task and be perhaps labelled stupid while respondent B seems to come out on top and be very clever and bright. This is all simply because of the language, the task, clarity of instructions.... (L1)

b) Vygotsky infers that language and speech serve as a regulative, communicative function. He goes further to say language is an “...an instrument or tool .... and concepts formation themselves” (Woods. 1998, p. 3 1). This is different to Piaget’s views! (L1)

c) Vygotsky and Piaget both agree that perception, memory, knowledge and understanding are all inter-linked and adapt with learning and development. This is so true of respondent B’s answers. (L1)

d) It is stated that Piaget places action at the foundation of thought, and he believes that physical contacts become internalised (Woods, 1998). This explains that the response of both respondents show that they associated the task to their existing knowledge (L2).

e) Both theorists shared a similar conception of the relations between action and thought. Piaget believes that the foundation of mental processes lie in action in the world (Woods, 1998. p21). This lead us to a conclusion that both respondents were equally intelligent.... (L2).

f) For instance, when the infant sees an object, what he perceives, recognises and knows about it depends upon his past actions. An object is, so to speak, defined by the past actions that have been done to it. To put this in above example of responses of the respondents in task, it is clear that respondent A used....

In (a) and (b) one feels the writer may have an opinion regarding the proposition immediately preceding this, but in both cases the opportunity to make this opinion explicit is avoided. Such avoidance occurs in a way that might appear deliberate in a different context. In these cases,
however, the use of *this* suggests the writer’s assumption of a shared “world of discourse”: an assumed awareness of what the reader believes (with regard to the differences between Respondent A and B and the theories of Piaget and Vygotsky) to the extent that even a shared stance may be left implicit.

Excerpts (c) to (f) are all examples of the writer apparently accepting the proposition in the preceding text. Considering how frequently *this* occurs in DemNAs in the PW, one could argue that every time it appears alone as a pronoun, the writer is missing the opportunity to, first, “encapsulate” or specify the preceding discourse and, secondly, to potentially characterise (adopt a stance towards) the preceding discourse. There is nothing inherently “bad” in using *this* as it is in the above excerpts. However, in view of the frequency with which their writing is criticised for being both “vague” and “uncritical”, drawing students’ attention to the way demonstrative pronouns, and DemNAs, function, particularly in their own texts, may be very helpful.

5.5.6. **NFS - Writers’ assumptions and the impact of the task design**

Any definite, micro NP appearing with no further specification in the immediate environment was coded NFS. In other words, none of the other categories (ESP, A, GEN, or TXT) could account for its use. There were 58 of these expressions in the L1 opening excerpts, 59 in the L2 and none in the PW. Looking at these frequencies as percentages of the total number of relationships formed in the opening extracts, NPs coded NFS account for 16% of all relationships coded in the L1 and 15% of those in the L2. When setting up the coding system, it was said that PN was a sub-category of NFS. We can therefore say that, together, these wholly-unspecified definite NPs account for 29% of the relationships established in the L1 opening extracts, 37% of those established in the L2 and .06% of those in the PW. The difference between the PW and student samples is obviously significant as NFS never features in the PW. The difference between the L1 and L2 is also statistically significant due to the higher frequency of PN in the L2 opening extracts: L1 vs. L2 - \(z = 2.1\)

We have already noted how these unspecified definite expressions (NFS) contribute to the "vagueness" of ESP and A relationships in the opening extracts. In both cases, the way the expressions are structured raises certain expectations in the reader: their definiteness cues the reader to search for a P-set in which the uniqueness of the intended referent holds. Or, to use Schmid’s (2000) terms, the reader is cued to search for the "contents" of the shell noun. What we have seen, however, is how these cues fail to guide a naïve reader due to the inclusion of NFS expressions in the "shell contents". When these "contents" (the specifying expansion in the
ESPs or the textual antecedent in the case of As) contain a first-mentioned definite that is, in fact, relying on a previous, invisible co-text to constrain its reference, then for the naïve reader successful identification of a relevant referent cannot occur. Let’s look now at a few more examples that do not involve ESP or A relationships:

- The respondents make sense of (NFS) the task in different ways. (PN) Respondent A makes sense of (NFS) the task by relating (NFS) the objects mentioned to... (L1)
- If one considers (NFS) Respondent A’s responses; (NFS) the answers surround (GEN) his daily living experiences, situations and preoccupations. (L1)
- Then I will look at how (NFS) the respondents process (NFS) their information and lastly try and... (L2)
- In (TXT) this essay I would like to discuss first what it is all about. It is concerned with cognitive developments of people living in isolated areas. One is literate and (NFS) the other one is illiterate. (L2)

As Trenkic (2000) notes, while it is generally agreed that the speaker/writer’s assumptions about the hearer/reader’s mind affect the form of the noun phrase in which a referent is going to be encoded, it is more debatable what aspect of the reader’s mind these assumptions are about: what the reader knows, what s/he believes, what is familiar to the reader, or about the reader’s ability to identify the referent. In this case, however, thanks to the type of assignment these student writers were given, we have a very good idea of what assumptions they might be making about their readers. Every definite expression above coded NFS is really a nominal anaphor: each one does in fact have a textual antecedent and reference is therefore to a previous discourse set. However, any reader without access to the assignment sheet will process these expressions as ESPs: they are first-mentioned definites and the only possible P-set for a general reader is one that can be formed online using information provided in the extended (macro) NP itself. However, the “way into” the phrase will never be found because these writers are relying so heavily on mutual access to the “presupposition pool” created by the assignment sheet. Without access to this co-text, conceptual (semantic) connectivity cannot occur. These definite expressions will therefore persist as un-interpreted pieces of text that have to be carried in short-term memory; the result over time is an almost impossible processing task. Sanford & Garrod have noted that not every intelligible discourse is automatically “considerate” discourse:
“It must be recognised that writers of messages typically attempt to match the format of these messages to the processing constraints of the readers, and that although ‘inconsiderate’ discourse may be intelligible, it nonetheless makes abnormally heavy processing demands upon readers.” (1981:198)

Expressions coded NFS are the most obvious signs of how the student texts were influenced by the design of the assignment. As noted already, the amount of detail given in their assignment sheet allows, or perhaps obliges, them to dialogue with this text (see Appendix II) rather than present a self-contained, “considerate” piece of expository prose. There are other quantifiable effects of the task design evident in the writing and we should take these into account.

First, the considerable detail in the assignment sheet gives rise to much lexical repetition - many lexical patterns appearing in the assignment sheet are, unsurprisingly, repeated verbatim in the student texts. The following table gives an idea of the type of patterning copied in their writing:

<table>
<thead>
<tr>
<th>Lexical “pattern” appearing in the assignment sheet</th>
<th>No. of times the pattern appears in 15 L1 essays:</th>
<th>No. of times the pattern appears in 15 L2 essays:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“the task/s”</td>
<td>116</td>
<td>50</td>
</tr>
<tr>
<td>“the nature of … “</td>
<td>37</td>
<td>35</td>
</tr>
<tr>
<td>“the nature of the respondents’ reasoning”</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>“the differences between…”</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>“the responses to the generalisation task”</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>“the limits to…”</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

Lillis (2001:161) would argue that such repetition is an example of what happens as “student-writers struggle to construct what they think may count as knowledge within academia”. This struggle “involves drawing on wordings which they feel are (or are not) privileged within [higher education]”, taking their cue from “specific wordings from actual speakers who…occupy more privileged social positions than they do” (p.162). I would agree that much of the “borrowing” evident in undergraduate writing stems from this “struggle”. In this case, however, there is also a much simpler explanation. All the above “patterns” are extracted from the question section of the assignment sheet, hence it would make sense to find a partial repetition of the question within the answers. The specific details with regard to “the task/s”, “the respondents”, “the responses” and “the generalisation task” are all provided on the assignment sheet and would therefore be the entities student writers might feel do not need repeated specification; by simply repeating the key
phrases, they could assume the reader would be able to identify the intended referent. Except for “the task/s”, there is little difference between the L1 and L2 texts if the above figures are averaged across 15 essays; e.g. “the nature of...” is used, on average, twice per text in both the L1 and L2 sub-corpora.

The following are extracted from the final section of the assignment sheet where the questions are presented as “ideas you might want to think about when preparing your essay”:

<table>
<thead>
<tr>
<th>Lexical “pattern” appearing in the assignment sheet:</th>
<th>No. of times the pattern appears in 15 L1 essays:</th>
<th>No. of times the pattern appears in 15 L2 essays:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“domain specific/independent”</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>“competence”</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>“performance”</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>“make sense of...”</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>“a (mod) reflection of...”</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

In this case there is a far more apparent difference between the L1 and L2 writers. It appears that many more L1 writers make direct mention of these suggested “ideas” than L2s. While the phrasing in the assignment “question” suggests that consideration of these ideas is optional, such a difference between the L1s and L2s is cause for concern. Several of the above lexical “patterns” include specialised terms; concepts which the students are apparently expected to understand, as they are asked to consider them in view of the data they are given. For example, the final question on the assignment sheet asks “Is domain specific knowledge or domain independent knowledge being assessed in this study?”. Most of the L2 writers mention that one respondent is able to “move from domain to domain” while the other operates in only “one domain”, but very few attempt an answer to this question. The only student who does, seems either to have little understanding of the concepts or to lack the ability to express his/her knowledge:

“The domain specific knowledge and domain independent knowledge had been assessed in this study because the interviewer had assessed the specific knowledge from respondent A as he has never been to school.”

Again, only two of the 15 L2 texts provide some answer to the question “to what extent are the responses an accurate reflection of the respondents’ competence?”. It is possible that many

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6 In order to draw simple comparisons, only 15 of the 16 L1 texts were used for this section.
students avoided these “optional extras” in view of the amount of information they were already *obliged* to consider. However, in many of the cases highlighted by this simple search for lexical repetition, one cannot ignore the possibility that students are avoiding dealing with certain concepts because they do not understand them. While this phenomenon is not overtly related to lexical vagueness, it is quite easy to see how it might contribute to the overall vagueness of the text: the excerpt quoted above would certainly be described as “vague”, due simply to the student’s repetition of “empty” terms s/he does not appear to understand. It will always be very difficult for any writer to specify, or make appropriate use of, concepts she has not successfully understood herself. As Schmid (2000:375) puts it, “people can speak in more or less empty shells...if they do not know the specifics that would be needed to fill them or do not want to disclose them to their hearers. Shell nouns can be used to avoid committing oneself to specific information.”

One final point must be made with regard to the L2 students’ avoidance of the content of the “optional” questions. All students first entering the academic discourse community must, somehow, learn to operate by its unspoken rules and norms. In South African universities, the rules of “the game” are most similar to those of “Model C” high-schools; i.e. former “whites-only” institutions. A previous analysis of students’ lecture notes, along with follow-up interviews, (Caldwell, 1997) showed that many L2 students at RU missed out on lecturers’ “cues and clues”. For example, many did not appreciate that if a lecturer went to the trouble of printing a hand-out or providing points via an overhead projection, it was likely s/he considered this information to be important. Furthermore, during lectures L1 students took notes of the meta-language: if a lecturer made a point and then emphasised that this was something students should focus on, L1 students would make a note to themselves or highlight the point in some way. L2 students did not do this. If, on an assignment sheet, a lecturer suggests “things to think about” when preparing an essay, it is likely that more L1 students would view this as a the same type of “hint” because they are, perhaps, more familiar with the rules of the game. L2 students seem, once again, to be missing out on such clues and this can only have a negative impact on their grades.

At the beginning of this chapter we discussed the fact that the PW and student texts we are comparing were prepared in completely different contexts and with quite different aims. These “contexts” and “aims” have been taken into account throughout the above discussion and it is now evident that the students and PWs in this study are doing such different things that these corpora are not strictly comparable. Nevertheless, such a comparison has been valuable for at
least two broad reasons: first, it has allowed us to highlight very particular ways in which assumptions of shared knowledge can affect the specificity of a text. And second, it has raised important questions about the types of writing assignments that are set for students, as well as how they are taught to approach them. In Chapter 6 we will address these questions, and the implications for teaching English for “academic” purposes, from a functional point of view.
Chapter 6

6.1 Summary of Findings
This study has addressed the issue of *underspecificity* in undergraduate writing. That is, "vagueness" in the sense of being less than adequately informative for the purposes in hand. The approach to the analysis was inspired by two contradictory views on the use of "abstract" nouns in academic writing. On the one hand, writing guides frequently claim that such nouns lead to vague or "empty" writing and warn student writers not to use them. On the other hand, the same nouns have been found to appear frequently in corpora of academic texts, to the extent that they make up a large proportion of the most recently published Academic Word List (Coxhead, 1998). We will now review the broad findings of the study in terms of the questions raised by these two extreme views: should student writers be encouraged to avoid using these nouns because they lead to vague writing, or should they be taught them as "cohesive words" and essential academic vocabulary and, if so, what approach could one take?

6.2 The use of "abstract" nouns leads to vague writing
The first aspect of this claim that needed tackling was the notion of "abstract" nouns. In Chapter 2 we examined the difficulties apparent in categorising count and non-count nouns, noting that the traditional distinction involving the concreteness or abstractness of the denotata of nouns seems to falter in the face of use. That is, a speaker of English has access to productive processes (the Universal Packager and Grinder for instance) and should s/he choose to use a noun in an abstract way, s/he will almost certainly find a way to do it. Finally, by drawing on the classic Fregean distinction between sense and reference, we were able to clarify the crucial difference between nouns with vague denotation, and noun phrases (NPs) with vague reference; following Lyons (1977), we adopted a view of nouns as being *used* to refer to 1st-, 2nd- and 3rd-order entities, noting that such *use* entails a referring expression (NP). As certain NPs have been used by other writers as criteria for identifying shell/carrier nouns, we were able to examine them as syntactic patterns, or "shell noun hosts", as well as utterance-dependent referring expressions.

6.2.1. Quantitative Analysis - Ch 4
In order to test the claim that "shell nouns" *cause* vague writing, an initial comparison was conducted of the *frequency* of such nouns across the sub-corpora. First, we found that there were significantly more nouns overall in the PW sub-corpus. Further, we found that 86% of the
100 most frequent nouns in the PW sub-corpus would be classifiable as “abstract” nouns; i.e. they are used to refer to Lyons’s 2nd and 3rd-order entities. Finally, we found that Ivanič’s (1991) carrier nouns, in particular, made up a significantly larger proportion of the total nouns appearing in the PW sub-corpus than of those in either the L1 (z = 2.05) or L2 (z = 2.29) sub-corpora. Thus, in view of the high frequency with which “abstract” nouns appeared in the published writing, compared to the student writing, we concluded early on that the nouns themselves could not be said to cause vague writing. The question raised was, therefore, “what is different about the way the PWs and student writers are using these nouns?” We began by examining “use” in terms of the syntactic patterns previously identified as “hosts” for shell/carrier nouns; primarily those patterns used by Schmid (2000) as search strings in his corpus-based study. The presence of a shell noun in combination with one of these syntactic patterns should, according to Schmid’s findings, result in a “shell-content complex” and thus fulfil one or more of the many functions attributable to nouns in these positions. Any difference in the presence of these structures across the sub-corpora would thus indicate a difference in the use of the nouns. The findings were as follows:

- The structures most consistently associated with “shell” nouns (Schmid, 2000) or “specialised heads” (Biber et al., 1999) (that- and to-complement clauses) were found to be used with similar frequency across all three sub-corpora.

- A search for N-which (excluded by Schmid) indicated a significantly higher frequency of this relative clause in the student writing than in the PW. In the student writing, shell nouns were used as the head noun in this pattern up to 68% of the time and there was significantly less variety in the nouns used in this pattern in their writing than in the PW.

- An unrestricted search for This-N resulted in the finding that 50-70% of the time, the “N” in this pattern was a shell noun. While there was no significant difference in the frequency of this pattern across the three sub-corpora, there was significantly more variation in the PW’s choice of nouns than in the students’. This difference was explored further in Ch 5 and attributed to the student writers’ tendency to use repeated rather than alternative DemNAs.

- The finding that the L2 student writers did not use the construction th-copula-det-N (e.g. this is the crucial issue...) contributed to the suggestion that Th-N (and all its variations) may be the best construction to use when introducing student writers to the notion of “encapsulating” or “shelling” chunks of discourse.
The student writing exhibited a significantly higher frequency of the “zero-relativiser” pattern. Furthermore, in the L1 student data, the pattern was populated primarily by shell nouns (92%).

The search for “of-phrases” indicated that this pattern was by far the most prolific of all the patterns extracted as potential shell noun “hosts”.

N-in-which was another pattern Schmid did not use. We found that not only did it appear far more frequently than many of the other strings previously associated with shell nouns, but in the L1 and PW it was occupied 83% and 77% of the time, respectively, by shell nouns. The level of difference between L1 and L2 with regard to this pattern suggested that this was another construction with which L2 writers were not very familiar: the pattern appeared significantly less often in the L2 writing and was occupied by shell nouns 44% of the time.

The overall conclusions drawn from the quantitative analysis conducted in Ch 4 are as follows:

The 670 nouns identified as “shell” nouns in the largest study conducted to date (Schmid, 2000) appear, in some cases, more frequently in patterns other than those identified as shell noun hosts. On the other hand, many nouns (such as process) which do not appear in Schmid’s index appear in so-called “shell NP” constructions and also present the semantic characteristics (representation of 2nd- and 3rd-order entities) required for inclusion in the “group”. The conclusion must therefore be that there is no reason to believe that it will be useful to delimit the number of “shell nouns”. This does not mean, however, that we cannot describe a noun as being used to perform a shell or carrier function.

Student writers utilise almost all of the syntactic patterns said to host “shell/carrier” nouns along with other patterns, such as N + in + which, not necessarily associated with such nouns. This suggests that these writers are familiar with the syntactic means available for creating “shell-content complexes” and “triggering co-interpretation”. Thus, despite some differences in writer-specific preferences, an analysis at this broad level did not reveal any differences in use that would explain why student writing is often judged to be “vague”. This conclusion provided the impetus for a shift in focus from NPs as “syntactic patterns” to the use of NPs as referring expressions.

6.2.2 Qualitative Analysis - Ch 5

In Ch 5 a more qualitative approach was taken to analysing the specifying expansions of definite micro NPs, characterised by Schmid (2000) as “shell contents”. Shifting the focus to
NPs as referring expressions, and taking context into account, the opening 200 words of all the texts making up the sub-corpora were used to look more closely at the way the PWs and student writers in this study use NPs associated with “shell nouns”.

The major finding was related to those “relationships” coded ESP (expansion and specification). Such “relationships” frequently involved first-mention definite NPs (i.e. NPs without explicit textual antecedents); hence our interest was primarily in how the writer used the following co-text (or specifying expansion) to restrict the referent of the definite micro NP. Overall, we found a far greater presence of “shell” nouns in specifying expansions in the student writing than in that of the PWs. While the PWs used the noun (and modifiers) within the expansion to help specify and delimit the possible interpretation of the initial “shell noun”, those syntactic strings characterised by Schmid as the “shell contents” were, in the student writing, frequently inhabited by further underspecified nouns.

Such use of these nouns resulted, in the texts we looked at, in what we described as an accumulation of un-interpreted segments of information. Blakemore (1998:49; cf. Blass 1990:78) states that “discourse is coherent...because there is continuity of context in the sense that assumptions made accessible by the interpretation of one segment are used in establishing the relevance of the next”. While we looked at several different types of “relationships” (e.g. ESP, A (anaphoric), NFS (no further specification) etc.), what we were able to identify across all of them, in the student writing, was a lack of sufficient information to allow “interpretation of one segment” which could then be “used in establishing the relevance of the next”. We concluded that such accumulation of un-interpreted segments would lead to an impression, on the part of the naïve reader, that the text was “vague”. Hence while it is wrong to say that “abstract” nouns lead to vague writing, we identified particular ways of using “abstract nouns” which could certainly be said to contribute to the overall vagueness, or underspecificity, of a text. Finally, taking context into account enabled us to show how much an assumption of shared knowledge enabled the students to include “inferrables” in their writing, that is, depend on their readers to contribute their own very specific background knowledge in order to understand.

6.3 Student writers should use carrier/shell nouns

While we concluded that it is not possible to attempt to delimit a “group” of carrier/shell nouns, there is clearly a type of noun which is frequently used in (published) academic writing to perform a shell/carrier function. We found in Ch 4 that the student writers in this study do in fact use such nouns, which indicates clearly that they “know” them. They also know and use the
syntactic structures most frequently associated with these nouns, especially in academic writing. However, in spite of this knowledge, these writers do not seem to be using these nouns as “more informative signposts than pronouns” nor do they use them to “carry commentary on the portion of discourse they refer to” (Ivanič, 1991:95). While the most recent Academic Word List (1998) supports Ivanič’s (1991) intuition that “these words seem to be good candidates for any list of core vocabulary in the language of secondary education” (p.96), the findings of this study show that knowing these “words”, and the structures that they can appear in, and knowing how to utilise their potential functions are two different things.

6.3.1 The importance of the shell/carrier function for all student writers

What the closer analysis conducted in Ch 5 indicated is that for student writers to use “shell” nouns in a way that does not contribute to the vagueness of a text, they do need to be taught how to use them. Vendler (1967, 1968), Hoey (1979, 1994, 1996), Ivanič (1991), Francis (1986, 1994), Biber et al. (1999) and Schmid (2002) have all highlighted different aspects of the potential functions associated with these nouns. These functions are something that could, and should, be taught. It would not be helpful in any way to present “the nouns” as a vocabulary list. Nevertheless, those appearing in the Academic Word List (1998) would be sensible ones to choose when first deciding which nouns to use in the teaching of shell/carrier/container functions. With the number of metaphors available, it could easily be left to the teacher to decide which image s/he thought would be most meaningful to his/her students. More detailed suggestions regarding application and/or teaching will be presented in section 6.5 and 6.6.

One final aspect of the statement “student writers should use these nouns” needs to be addressed, particularly in light of the South African situation. One of the most important outcomes of this study, overall, is what was not found. That is, we did not find many significant differences between the L1 and L2 students’ writing. It would have made sense in certain respects to simply compare a corpus of student writing with that of the PW. However, the distinction between L1 and L2 was retained to make a point: the characteristics of “good” academic writing, and clear communication on the whole, are not inherent in English or any other language. While I was not given the grades awarded to the essays included in this study, I would argue that there is only one reason the L1s might have scored higher: as indicated in section 5.5.6, they are more aware of the rules of the “game”, took the lecturer’s “suggestions” on the assignment sheet into account and hence produced longer, “weightier” answers. However, the
fact that students are mother-tongue speakers of the language they are writing in does not mean they will have immediate access to the tools needed to produce a coherent, clear piece of writing:

Underestimating the need for explicitness is common among the most talented beginners, to whom many things may seem childishly obvious, especially since they have been immersed in whatever they are writing about and are liable to forget that others have not. (McIntyre, 1997b)

Inspired by his experience as a Ph.D. supervisor (Physics) and editor, Professor McIntyre’s thoughts on “lucid writing” begin from the idea that lucid writing exploits the “remarkable properties” of human perceptual processing (McIntyre, 1997a:199).

Lucid, informative writing minimises the computational load on the reader’s pattern-perception machinery. It tries to save the reader’s time, not the writer’s. It is like good road sign-posting, boringly explicit and unvaried from the writer’s viewpoint. (McIntyre, 1997b)

I mention McIntyre’s ideas now because several of the “problems” he highlights bear a striking resemblance to those identified in the current study. For example, McIntyre states in his notes for students (1997b) that “I find that EX, ‘explicitness needed’, is the ringed marginal mark most often needed”. He also notes that “the most dangerous pronouns are the demonstrative pronouns ‘this’ and ‘these’... A word processor that made pronouns like ‘this’ and ‘these’ flash a warning when typed, or made them turn bright red, would be a significant aid to lucidity” (1997b). The problems that he refers to were not, however, isolated in L2 undergraduate writing; they are rather “common problems” found in the writing of Ph.D. candidates at the University of Cambridge. In other words, the type of “vagueness” addressed in my own study is by no means a feature limited to the writing of South African undergraduates, let alone to second language speakers of English. In order to strengthen this claim, I presented the same assignment examined in this study to five research students at the University of Cambridge.

6.3.1.1 The Research-student mini-study

As far more experienced “student” writers, one might expect Ph.D. students to know the first rule of the game: write as if the “presupposition pools” did not exist. That is, do not rely on the fact that you and your reader (may) share certain knowledge. In order to test this
expectation, I did not discuss the intended “recipient” of the text with the students. Rather, I set them up to write in the same void as the undergraduates who contributed to this study. I will discuss this idea of writing in a “void” in more detail in section 6.4.

Five native-English (British), final-year Ph.D. students were asked to read the assignment text and write only the opening paragraph of the response (±200 words). The amount of background information provided by the assignment sheet ensured that such a request was feasible and none of the students seemed to find it difficult to “pretend”. Two were History students, one Classics, one Philosophy and one Psychology. Emphasis was placed on the fact that the task should not be viewed as an “exam” question with any time limits; they were asked to view it as something they would have 2-3 weeks to respond to. In reality, each student knew s/he had to write the paragraph in an hour or less, but in discussions afterwards it seemed this had not been a stumbling block. In introducing them to the task, I explained the undergraduate context in which it was assigned and focused on the content in order to ensure the writers understood what they had to do. As mentioned, we did not discuss the potential reader or how they might structure their responses.

I stayed in the room while they wrote and encouraged them to “speak aloud” as they worked - this enabled me to make notes on the process; in particular on what they found difficult or frustrating about the task. Not surprisingly, the amount of information provided by the assignment sheet provoked the most comments. As one student put it, “I don’t know where to start! There is too much here to summarise easily, and do I really even need to do that? I mean, who is my reader? I can’t just start talking about “the respondents” because you won’t know what I’m on about! But then again, you probably will and you’ll wonder why I’m telling you again.”

Two of the students began in much the same way as the undergraduates involved in this study; note the number of definite NPs coded (NFS) as well as the embedding of unspecified referents within extended ESP relationships:

A. (NFS) The researcher’s study carried out in (NFS) the Kosi Bay area elicited some interesting responses. Most notable were (ESP1) the marked differences (ESP1) in (ESP2) the criteria (ESP2) [respondents](A1) used to remove one word from (NFS) the list. (A1) The first respondent appeared to use very practical criteria - what was useful?

(HISTORY)
B. In analysing (ESP1) the reasoning (ESP1) of (NFS) the two respondents in (ESP2) the tasks (ESP2) described, I shall begin by outlining (ESP2) [the initial apparent differences (ESP2) between (NFS) the two men.](A1) I shall then offer a theoretical framework to explain (A1) these initial appearances.

For each group of items/words [presented in a “protocol”](A2), one can understand each respondent as conceptualising (A2) the items/words in a particular way. (NFS) [The respondents](A3) differ in that (i.) (A3) the first respondent appears to conceptualise each group of items/words in (ESP3) the same way - (ESP3) in terms of (ESP4) the use of (ESP4) (NFS) the items, whereas (ii.) (A3) the second respondent approaches each group differently, picking out a conceptual framework for each protocol.

(PHILOSOPHY)

Two other students began with broad discussions on the “nature of reasoning”, the validity of cognitive tests in assessing reasoning processes etc. The key theorists (Piaget, Vygotsky etc.) were also mentioned early on, but despite this broader, and more sophisticated, situating of the text, “the respondents”, their “responses” etc. were then introduced as familiar subjects:

C. [How do we think? What processes do we go through in ordering our world?](A1) One way of answering (A1) these questions is through associative tests. How do individuals group objects, and upon what criteria do they base (GEN) their decisions? Drawing on (ESP1) the theories of (PN) Piaget and (PN) Vygotsky I will use (TXT) this paper to explore (ESP2) the nature (ESP2) of (NFS) the respondents’ reasoning in (TXT) this study. I will examine (ESP3) the apparent differences (ESP3) between (NFS) the respondents as well as some of (ESP4) the obvious weaknesses (ESP4) in (NFS) the task.

(CLASSICS)

D. A person’s functioning in society is entirely dependent on (ESP1) [their ability (ESP1) to undertake sound reasoning and evaluate (ESP2) the information (ESP2) presented in (GEN) their environment.](A1) Studying (A1) this phenomenon over (GEN) the years has shown a number of key findings (references!). Of particular interest is (ESP3) the generalisation task [(ESP3) explain in detail](A2). (A2/ESP4) The generalisation task (ESP4) used in (TXT) this study yields (ESP5) the very interesting finding (ESP5) that people from different socio-economic and intellectual groups evaluate (GEN) their environment differently. I will now discuss (ESP5) the nature (ESP5) of (NFS) the respondents’ reasoning drawing on (NFS) the theories to explain (ESP6) the differences
(ESP6) between (ESP7) their ability (ESP7) to logically substantiate choice etc. I will then rationalise (NFS) the apparent limitations and suggest improvements for (NFS) the task.

(PSYCHOLOGY)

Only one of the five students stated explicitly that he was “trying to ignore how much was given” and write for a “naïve” reader:

E. (ESP1) The purpose (ESP1) of (TXT) this assignment is to test (ESP2) the theories (ESP2) of (PN) Piaget, (PN) Bruner, (PN) Vygotsky et al using data collected from a study of [two respondents](A1) in (ESP3) the Kosi Bay area (ESP3) of Kwazulu/ Natal. (A1) Each respondent came from and was situated in (GEN) the same culture and spoke (GEN) the same language. However, they were wholly different in terms of education and literacy; [one was uneducated and illiterate](A2), (A1) the other [a literate teacher with a formal education](A3). Each gave strikingly different responses when faced with basic associative tests. (A2) Respondent A (uneducated) tended to categorise and differentiate objects according to a criterion of basic “usefulness” - often in terms of every-day activities such as cooking or carrying. In contrast, (A3) Respondent B (educated) was able to categorise according to abstract concepts of form, function, material etc, quite apart from (ESP4) his actual individual experience (ESP4) of the objects .... A final purpose of (TXT) this assignment will be to examine (ESP5) the limitations (ESP5) of tests conducted and (ESP6) the data (ESP6) collected.

(HISTORY)

When each student finished writing, I asked them who they had been writing for. In each case the answer was “the examiner”; although, as mentioned, the writer of E. above mentioned his attempt to write as if for a naïve reader. Each student was then asked to describe what they would change if they were presenting their “answer” as a conference paper. All five said they would then include a summary of the information on “the respondents” and “the experiment” early on in the discussion because in that situation you could not assume so easily that your reader/listener knew all the background. “Space constraints” and “boring the reader” were the two main reasons given for the way shared knowledge was exploited.

Despite their experience and obviously more sophisticated approach, these graduate students drew on the “presupposition pool” because it was there. This very simple “test” therefore supports the claim that neither inexperience nor an English language “deficit” of some
sort can be viewed as the underlying cause of the “vagueness-as-underspecificity” described in this study. The writer of E. above was able to produce a more self-contained introduction by creating for himself an image of a naïve reader. What this study thus makes clear is the crucial importance of specifying, in detail, the intended recipient. For example, as part of the background information provided on the assignment sheet we have been looking at, it could have been specified that the response should take the form of a report for final year high-school students; i.e. “write a report for a 12th grade student to show how an experiment in cognitive psychology is carried out. This student will not have access to the details on your hand-out. However, rather than repeating the details given to you, begin your report as if you undertook the experiment yourself. Briefly explain what you did and how.”

Setting assignments such as the one we have been looking at takes time and imagination, and it would have to be presented in detail to the students to ensure that they understood the task. However, what is seldom, if ever, discussed with students is their intended reader. Perhaps it is “obvious” - another unspoken rule of the academic discourse community. However, there will also be times when a lecturer really is only interested in the “right answers” and not the manner in which they are presented. By always specifying a recipient, student writers will learn far more quickly how much the nature of the intended reader drives the shape and specificity of the texts they must produce.

6.4. Re-framing the nature of underspecificity in Student writing

“Lucid, informative writing...tries to save the reader’s time, not the writer’s.”

(McIntyre, 1997b)

I highlight McIntyre’s ideas again because they remind us of the importance of viewing coherence as a reader-based phenomenon. “Vagueness” is, so to speak, in the eye of the beholder. The analyses presented in chapters 4 and 5 have yielded many specific ways in which the student writers in this study produce “inconsiderate” discourse due to their assumptions of shared knowledge. Furthermore, we have seen many features in their writing that are more often associated with conversation rather than expository discourse; features which indicate an over-awareness of a known or familiar reader. So how can we formalise, in some way, this apparent cause of vagueness in the student writing in this study?
Turning to Grice (1981) will allow us to view the underspecification examined in this study within the framework of pragmatic implicatures and "conversational cooperativeness". In so doing we will be in a position to provide an overall concluding suggestion as to the root of the underspecificity encountered in the students' writing. In Horn's (1984) reformulation of the Gricean maxims, the occurrence of underspecification falls under the workings of the R-principle, which dictates that a speaker must not say more than necessary. The R-principle is named after the maxim of Relation ("Be relevant") and generalises over that maxim, as well as the maxims of Manner ("Be brief and orderly, avoid ambiguity and obscurity") and the second Quantity maxim ("Do not make your contribution more informative than is required"). It is similar to what Levinson (1983) calls the Principle of Informativeness and generates what Horn has called "lower bounding implicata", in that it sets a lower bound on the amount of information expressed. "The R-principle is a principle of speaker economy: the speaker's task is relieved if s/he can use a small number of forms to express many meanings" (Horn, 1984, cited in Spooren, 1997:152).

Complementary to the R-principle is the Q-principle, named after Grice's first Quantity maxim, which states that a speaker make his/her contribution "as informative as is required for the current purposes of the exchange" (Grice, 1975). This principle generates "upper bounding implicata". Horn (1984) notes that the Q-principle can be seen as a principle of hearer economy: the hearer's task is alleviated if all the information is explicitly present in the discourse (cited in Spooren, 1997:152; italics mine). A correlate of this principle of hearer/reader economy in processing terms is found in the work of Noordman, Vonk and Kempff (1992). Noordman et al. argue that, as a rule, readers of texts distribute their cognitive energy strategically, in that they are reluctant to make inferences and read extra information into text, unless they are more or less forced to do so because of the experimental task or unless they have a large amount of domain knowledge.

Unsurprisingly, in production studies of both children and second-language learners of Dutch, Spooren (1997) found a gradual predominance of the Q-principle: "An increase of language proficiency is accompanied by a tendency to become more specific" (p.165). Like the younger children and beginning learners in Spooren's study, the student writers in my own study could be described as relying too heavily on R-strategies thanks, on this particular occasion, to the "presupposition pool" created by their assignment sheet. In other words, the type of underspecification encountered in their writing could be viewed, overall, as an outcome of the workings of the R-principle. If, as McIntyre (1997) puts it, students are to produce writing that
"tries to save the reader's time, not the writer’s", student writers should be made much more aware of the value of Q-strategies. While I am unable to comment on how the students who contributed to this study were encouraged to think about their “reader”, at no point in my own undergraduate career was I told explicitly to “think of the reader”, let alone to “to think of the reader as a bit...forgetful, or just plain stupid...” (McIntyre, 1997b). The point is that student writers will seldom, if ever, write for a real “naïve” reader; hence the adoption of Q-strategies should be highlighted for what they really are: rules for succeeding in the academic writing game.

We have seen that the L1 and L2 writers in this study exhibit very similar tendencies overall. In fact, the only difference between them that seems significant is, predictably, the L1s’ apparent ability to “play the game” slightly better than the L2s. It is important to emphasise the similarity between the L1 and L2 writers in this study because it serves as a stark reminder that the issue is really one of academic discourse norms, and not “English language”. Unlike the “freshmen composition classes” compulsory in the USA, South African universities, like those in the UK, have tended to view writing as a “skill” students should have acquired at high-school. Faced with an influx of L2 (or “non-traditional”1) students, courses in English for academic purposes have been the common response in South Africa, yet L1 students continue to be treated as not needing any help with their writing. This seems absurd on the face of it: every student entering the “academic discourse community” for the first time could surely benefit from an introduction to its discourse? Furthermore, in a society like South Africa, still divided along countless invisible lines, would it not be constructive to treat all new students similarly? Regardless of their academic background and “mother tongue”, the production of academic discourse is something that will be new to every one of them. And judging by the findings of this study, L1 students could benefit as much as L2s from exploring the “mysteries” of academic writing.

6.5 Implications for teaching: student writing as social practice
In her study of language, literacy and access to higher education (in the UK), Lillis (2001) notes the variety of different institutional responses to complaints about student writing around the world. In the US, additional support takes the form of ‘composition’ classes aimed at teaching the “general writing skills” demanded by the academy (see Crowley, 1998), and ‘basic writing’ courses aimed specifically at students identified as having problems with Standard (American)

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1 This is the term Lillis (2001) uses to describe students from social groups historically excluded from higher education in the UK.
English in grammar, syntax and spelling (see Horner & Lu, 1999). Such classes often exist alongside writing centres, which are also a main form of support in other parts of the world, such as Australia and South Africa. In the UK, Lillis (2001:22) notes, “where an elite system of higher education is still in the early stages of opening its doors to greater numbers of diverse student populations, there is only fragmented and limited additional provision”. Where there have been initiatives, they have been “predominantly characterised by the teaching of particular features of academic writing as part of a more general concern with ‘study skills’” (p.22). Goodwin (1998; cited in Lillis, 2001) notes that such an approach is more often to be found in the “new universities” where there are greater numbers of “non-traditional” students.

The important point Lillis makes is that regardless of the nature of the response, they all share the following characteristic: “both the ‘problem’ and the ‘solution’ are constructed/perceived as being overwhelmingly textual. That is, they are constructed as being locatable and identifiable in the written texts that students produce, rather than in any broader frame of reference which includes, for example, questions about contexts, participants and practices” (2001:22). “Language”, she notes, “is classified as a ‘transferable skill’ presupposing it is “something that individuals possess” (p.23). As a result, the context in which such skills are used is given minimal importance, “implicitly signalling a split between language, user and context” (p.24).

Our focus in this study has been on a small sample of student texts. However, while we began by examining them as a context-free corpus, our ultimate analysis was of what writers do in their texts, in context. This sort of focus, Lillis (2001) argues, challenges “the idea that writers’ problems are predominantly to do with language as surface features” (p.27). Instead, it brings to centre stage the complicated issue of “writers’ intentions” and signals the limitations of “viewing writing...as a tool for encoding meanings, towards a central interest in writing as meaning making” (p.28). Following Scollon & Scollon (1981) and Gee (1990, 1996), Lillis (2001) discusses the dominant literacy practice within Higher Education as “essayist literacy”: such writing is linear, values a particular type of explicitness, aims to inform and the important relationships “are those between sentence and sentence, not between speakers, nor between sentence and speaker” (p.38). The primary characteristic is thus “the centrality of decontextualised display in essayist literacy: that is, the writer is expected to show knowledge, regardless of who the writer is writing for/to” (p.38). This type of “meaning making” is achieved

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2 See 1.2.1 and 3.2.1 for more details on the South African “response”.

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by working towards “a teacher-sanctioned focal point, with limited assumed shared knowledge between the speaker and listeners” (p.39).

Lillis, like many others before her, argues that such practices privilege the discursive routines of particular social groups whilst dismissing those of people who have access to and engage in a range of other practices (p.39). What I would argue, however, based on the findings of this study, is that such practices in fact perpetuate one of the most elusive “problems” in the writing of all students. I mentioned earlier that when I presented this task to five Ph.D. students, I set them up to write in the same “void” as the undergraduates who first responded to this assignment. This means, very simply, that they were not encouraged to “regard” who they were writing for in any particular way. As advanced users of the “privileged” discursive routines of “essayist literacy”, one would expect them to be more aware of the need to “show knowledge” regardless of who they are writing for. However, they made many of the same assumptions as the undergraduate writers: most did not produce an autonomous, “decontextualised” display.

I therefore wholly support Lillis (2001) in arguing that “addressivity” be given central importance in the teaching of student writing. At its most straightforward, it “signals that utterances, spoken and written, are addressed to someone” (p.43, emphasis mine). As Bakhtin (1986:95) puts it,

Both the composition and, particularly, the style of the utterance depend on those to whom the utterance is addressed, how the speaker (or writer) senses and imagines his addressee, and the force of their effect on the utterance.”

Bakhtin’s notion of “the living utterance” is one in which meaning comes into being between participants rather than being transmitted from one to another. In this framework, the real or potential addressee contributes to what can be meant as much as does the addressee. Thus, rather than hoping students will learn to imagine “naïve” readers for themselves, we should make this imagined reader, on every new occasion, an explicit presence within the process. Addressivity, Lillis (2001) argues, “problematises the way in which the addressee is often conceptualised as an additional factor, giving instead the addressee a central role in and for meaning making” (p.43, italics mine). Furthermore, this is not merely an “exercise” for EAP teachers to present to their classes - specifying the addressee is something every lecturer could do with his/her class at the time every new writing task is assigned.
In South African Higher Education there is great concern over the “relevance” of what students learn: how much of what they are being taught at university will “transfer” to the “real world”? How well are the institutions of Higher Education meeting the human resources needs of the country? “Essayist literacy” may be the “privileged literacy practice within Western societies...conferring prestige on its users” (Lillis, 2001:53). However, in South Africa, being able to produce “good” academic writing is often viewed as a skill that is needed only to “pass”; it is not something one will “use” again in one’s post-university life. Thus the teaching of writing is viewed, frequently, as valuable only insofar as it contributes to general academic success.

Unlike in North America, where there is widespread institutional consensus within higher education that all undergraduate students need to be taught how to write academic texts, in South Africa (and in the UK), help with writing continues to be provided in an ad hoc manner; it is an academic “survival” skill, not a life skill. In view of the very low post-graduate enrolments in South African institutions, it does indeed make little sense to spend years helping students access a “privileged literacy” that most will never need again. What does make sense, however, is helping them master the skill of communicating clearly with a specific recipient. Therefore, teaching writing in a way that centralises “the addressee” would not only go some way towards raising awareness of the many “presupposition pools” that all student writers must contend with, but it would also teach them a type of “literacy” that would be infinitely more valuable to them outside of academia than an ability to excel at the “decontextualised display” of knowledge. Lillis (2001:161) argues that higher education “continues in its elitist and exclusionary practices”, failing to teach the “conventions of the literacy practice it demands”. In view of the South African situation, in particular, it seems more sensible to suggest an adaptation of the “literacy practices” than to demand accessibility to, and transparency of, current “elitist” practices.

### 6.6 Identifying “underspecification”: making writers aware of the problem

The findings of this study have indicated a number of concrete ways in which writers’ presuppositions surface in the texts they produce. While clearly specifying an intended “recipient” would certainly help student writers learn to rely less on their teacher’s/assessor’s shared (superior) knowledge, it would nevertheless be very useful to show students how to spot “underspecification” in their own texts. As McIntyre (1997b) notes, even the “most talented

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beginners” underestimate the need for explicitness. Obviously, even the best writers benefit from (and depend on) a fresh, objective eye. In this section we will consider two approaches to how student writers could get such a perspective on their own work.

6.6.1 *in an EAP Class*

As mentioned already, there appears to be one obvious set of structures that could be used to get the ball rolling on “structures specific to academic English”: *This/at* + N was, in this study, the single site of a number of different problems. Starting with demonstratives also provides a good platform for introducing the notion of “shell/carrier functions”. Discussion of *alternative* vs. *repeating* DemNAs would flow quite naturally from this and, finally, lead into the “language of stance”. Considering the apparent difficulty student writers have in adopting a position within their texts, I would suggest specifically introducing Biber et al.’s (1999) “stance nouns”. This is a small, well-defined group of nouns presented within the context of the, by now, familiar noun-complement clauses. In the presentation of these nouns, one could also highlight the important specifying function of adjectives, and build towards a final, more complex, discussion of definiteness and how assumptions of shared knowledge surface in (English) written text.

Broad instructions to write for a naïve reader are unlikely to help. Being presented with the results of *failing* to follow this instruction might, however, make some impact. Most EAP classes in South African universities are attended by students from many different faculties. It would therefore be very productive to use an example text, such as one of those examined in this study, that would in fact be familiar to only a few people in the class. The rest of the students would then be in the position of “outsider” and would soon point out where they have difficulties. The texts could change every week so that students from all disciplines could get a chance to see their “familiar” texts through objective eyes. In this way, the concepts and unfamiliar terms that would be involved in teaching these issues could be introduced slowly as students became familiar with the “feel” of the “specificity problems” they could look for.

The issues that have been addressed in this study are, themselves, vague. Unlike spelling and grammar, “vagueness” or the “inability to be critical” are not simple matters to correct or even pinpoint, in spite of what the increasing number of web-based “guidelines” may imply. What this study has attempted to do, however, is highlight some of the apparent danger zones. If a student’s writing is labelled vague, it would be possible to use the “clues” identified in this
study to help him/her begin to understand why: what is it, specifically, about the way you presented this information that resulted in your reader not understanding what you meant?

6.6.2 ...using an automated tool

Ideally, the findings of this study would be used to help students improve the clarity and specificity of a text before it is submitted for assessment. At the simplest level, this would entail equipping student writers with an awareness of the “danger zones”, then hoping that they use this awareness to check their own writing. More useful, however, would be getting them to read, and “code”, each other’s work using a mini coding-system based on the one developed for this study. Previous research has indicated that

“after writers take their readers’ perspective...they ‘de-center’ and build more accurate representations of how readers interpret their texts. Writers who take their readers’ perspective make better choices when they revise their texts, because they have a better idea of how particular choices will affect their readers’ interpretations.” (Traxler & Gernsbacher, 1995:234).

The fact that adult writers communicate more effectively when they receive feedback from readers is well known (Hayes, 1988; Schrifer 1987, 1992; Traxler and Gernsbacher 1992, 1993, 1995). Other research also demonstrates that writers who receive feedback from readers over a series of texts detect more problems themselves in subsequent texts (Schrifer 1987, 1992). Unfortunately, peer-review is not always well received. Students often feel threatened by the prospect of a fellow student “pre-judging” their work. Furthermore, the mere prospect of having to learn a “coding-system” would make this an unattractive option to many writers. It is still an option that should be considered however, depending on the teacher and attitude of the students themselves.

A second option, that has been available in many South African universities since the mid 90s, is that of the “writing respondent”. The staff of Academic Development departments or Writing Centres are available to act as “writing respondents”. They encourage a “process approach” to writing and accept drafts from students to which they “respond” as neutral readers. Lecturers are asked to support this process by setting two deadlines for assignments: the first for the submission of first-drafts, the second for the final paper. The extra time entailed in the submission of drafts is thus built in to the overall preparation time. As a past writing respondent I know, however, that this extra time still does little to resolve the inherent pitfall in this
approach: even those students who do see the value in submitting a draft, resent the amount of work involved in “doing the same assignment twice”, especially when they are working on several papers at one time. I would argue that this is one of the reasons students at Rhodes University (RU) seem to be utilising this option less and less. Submission figures published by the Writing Centre at RU (the source of my student texts) show that submissions of drafts have dropped from 670 drafts in 1996 to 109 in 2002.

Based on the problems inherent in both of the above-mentioned “human feedback” approaches, I propose providing automated feedback of the sort given by MS Word’s Spell Check. After writing a text, then reading it several times, it is notoriously difficult to spot spelling mistakes. The same could be said for the type of “errors” highlighted in this study. While there is no replacement for a careful reading by an objective eye, even the most “minimal feedback improves coherence in written communication” (Traxler & Gernsbacher, 1995:221). See Appendix III for a detailed description of this envisaged tool.

6.7 Concluding remarks
Following Lillis (2001) I must conclude by noting that any decisions about student writing pedagogy involve questions about the project of higher education itself: What is it for? Who is it for? “The kinds of writing that are demanded, and the ways in which these are taught, cannot be thought of as an adjunct to the ‘mainstream’ curriculum or pedagogy but rather are integral to our aims in, and for, higher education.” (p.167). The higher education system in South Africa has been in a state of flux since 1994 and will, over the next few years, be undergoing further sweeping changes with regards to policy, infrastructure, budget etc. These changes are coming about because the National Council on Higher Education asks, unceasingly, “what is higher education and who is for?” At a time when change is acceptable, even expected, there is a lot of scope for institutions to review their own practices and the rationales behind them. When it comes to new perspectives on writing, I would like to look again at de Klerk’s (1999) insight, but with a slightly different emphasis:

“In South Africa, democracy and equality are the order of the day, especially where language matters are concerned, and old-fashioned judgmental prescriptive concern for correctness has been replaced by greater tolerance and more emphasis on getting the message across.”

(de Klerk, 1999:317; italics mine)

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4 to date; see http://adc.cf.ru.ac.za/wc/Subtbl.htm

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The aim of my study has not been to point out yet another set of things that student writers do “wrong”, nor has it been to find ways to help them make their writing more “academic”. Rather, it has attempted to pinpoint specific pitfalls facing these writers as they try to “get the message across”. There is some implication in de Klerk’s statement that it is perhaps easier to “get the message across” than it is to present “correct language” in whatever form. This is obviously not the case. It would, however, seem infinitely worthwhile not only to emphasise “getting the message across”, but also to teach student writers how to succeed at this task. In a climate where higher education enrolments are dropping, large numbers of students are “dropping out” before completing their degrees, and interest in post-graduate study is negligible, “non-transferrable” skills are no longer perceived to be budget-worthy. The clear communication of one’s ideas is not an “academic discourse skill”, nor is it something “privileged” or “historically exclusive”. It is, rather, a skill that could, and should, most definitely be viewed as “transferrable”. As such, I would like to conclude by suggesting that “writing” in South African universities no longer be relegated to ad hoc “study skills” courses. Nor should it be viewed as a skill needed only by “historically disadvantaged” students with “language problems”. By obliging every first-year student to attend something resembling the “freshman composition” courses offered in the USA, we could achieve the following: first, every student would, arguably, acquire at least one “transferrable” skill within their first (and perhaps only) year at university. And second, rather than perpetuating a situation in which some students feel “at home” while others feel like outsiders, every new student would be encouraged to view themselves as entering a “foreign” culture; a culture which is dedicated to providing them with the keys to their success.

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# Appendix I - Ivanič's (1991) Carrier Nouns

## Frequency Carrier Nouns in each sub-corpus:

<table>
<thead>
<tr>
<th>Carrier Nouns</th>
<th>PW (Sg)</th>
<th>PW (Pl)</th>
<th>Tot</th>
<th>L1 (Sg)</th>
<th>L1 (Pl)</th>
<th>Tot</th>
<th>L2 (S)</th>
<th>L2 (Pl)</th>
<th>Tot</th>
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Appendix II - Copy of the Assignment Sheet
Your assignment should be approximately 4 - 6 pages long. You must hand in the assignment on or before 16h30 on 27 August. Please place the assignment in the Psychology box in the passage near my office.

You need to read through the following background information and then complete the task that follows.

********

Background information.

Consider the following data provided by a two respondents in a study I conducted in a rural and relatively isolated community in the Kosi Bay area in Kwazulu/Natal.

They were both interviewed independently. An interpreter was present and translated from English to Zulu and vice versa when the respondent was not familiar with English. The respondents were given the following instructions:

I am going to give you a task. There are no right or wrong answers to what I am going to ask you. I would like to know how you solve these problems. I am going to mention four things and I want you to tell me which three are similar, could be placed in one group or described by one word, as well as which one does not belong to the group or cannot be described by one word.

The respondent was then given an example of COW - GOAT - A SHEEP - MOTOR CAR. He/she was given a chance to reply and then the interpreter explained that one way of answering was to put the first three together as they are all animals and the fourth separate because it was not an animal but a machine. Following some understanding of the nature of the task a number of different protocols were used.

The following responses were given by the respondents. (R = respondent; I = interviewer).
RESPONDENT A

A man aged approximately 30 (he was not able to give his age). He had never been to school and was unemployed. He had worked on the mines in Gauteng for three short periods each of less than a year.

Protocol 1: HAMMER - SAW - LOG - AXE

R: Nothing should be taken out as they all have there uses.
I: Another person said the axe, saw and hammer cab be put together as all are metal but the log is not.
R: That person was right but the log is alos useful as one can use it to cook something.

Protocol 2: GLASS - POT - SPECTACLES - BOTTLE

R: Spectacles are different. One doesn’t need them to carry a bottle to fetch water, or drink beer from a glass, or if one wants to cook food in a pot.
I: Another person saw the pot as different. Why do you think they said that?
R: I don’t know because what would a person use to cook food
I: Another person said the same as you that the spectacles were different but the reason they gave was that all other objects were things you could put something in. What do you think about that?
R: That person was wrong. The spectacles must come out because as long as you can see you do not need spectacles.

Protocol 3: TREE - BIRD - SEED - FLOWER

S: Bird does not belong. It will eat the seed and the flower and it is the seed that is important.

RESPONDENT B

A man aged 38 who was the Principal of a small primary school. Has a two-year post-matriculation teacher’s diploma.

Protocol 1: HAMMER - SAW - LOG - AXE

R: The hammer axe and saw go together. They are tools.

Protocol 2: GLASS - POT - SPECTACLES - BOTTLE.

R: The glass, spectacles and bottle. They are all glass and therefore go together. A pot is not made of glass.

Protocol 3: TREE - BIRD - SEED - FLOWER

R: Tree flower and seed go together. Out of the tree you get a flower, and out of the
flower you get a seed.

I: Another person has said that the four must stay together because the bird also sits in the tree and eats the seed and then drops the seed for a new tree to grow. What do you think of that explanation?

R: No that is wrong. What happens if the bird is in a cage?

*********

For this assignment I want you to

(a) Describe the nature of the respondents' reasoning on the task.
(b) Using the concepts and theories that have been outlined in the first part of the course, how do you explain the responses to the generalisation task? How do you explain the differences between the respondents?
(c) What are some of the limits to arriving at an understanding of these respondents' thinking? How might you redesign the study to overcome such limitations?

The following are some ideas you might want to think about when preparing your essay:
- How would Piaget, Bruner, Vygotsky and/or the Information Processing approach explain the responses? Note: you do not have to use all the approaches. You could for example take two approaches and outline the strengths and limitations of each approach for an understanding of the responses.

- To what extent are the responses an accurate reflection of the respondents' competence? Can one make assumptions about competence from performance on these tasks, if not why not?

- How do the respondents make sense of the task? Do their responses reflect something about the testing situation and/or the respondents' expectations? Is the use of language of particular significance or is some essential cognitive capacity or process being revealed?

- Is domain specific knowledge or domain independent knowledge being assessed in this study?

PROF A.GILBERT
12 AUGUST 1999
Appendix III - Description of the “S.P.E.C.S. check”

The following description is no more than a rough idea and would require, for its development, that the findings of this study be tested on far larger corpora of English learner writing. Future research might also explore editing habits more generally: comparing corpora of initial manuscripts with their final published versions (such as those held by publishing houses) would undoubtedly highlight many other ways in which specification and clarity are improved by objective human editors. Furthermore, it must be emphasised that the value of such a tool, as it is described here, would really be realised only if it was used in conjunction with an academic writing class in which all the above issues had been introduced and thoroughly discussed. Finally, while I am not a programmer, I am aware of what is realistic. What I am proposing is very simple and I have no doubt it could be developed.

It would, ideally, be a small application that could be downloaded to anyone’s desktop. However, it would work equally well as a web-based application where writers could “upload” their texts online, run the procedure, then download the result. As with MS Word, the text would be opened within the application and then, instead of running the “spell check”, one would run the “S.P.E.C.S. check” (Specificity, Presupposition, Explicitness, Coherence, and Stance). This would launch the following operations:

1) A mini-tagger would first be needed for the text mark-up. I say “mini” because very simple part-of-speech tagging would be desirable. For example, the type of mark-up which resulted from my own simplification of Prospero’s tags (see 4.2) Ideally, rather than building something new, an existing tagger would be modified to make it appropriate. This would mean not only stripping the tagset to bare essentials, but also a reduction of its existing lexicon. For example, there would be no need to include verbs in the base lexicon. The point of suggesting such simplification is not related to speed; automated tagging is extremely fast. However, the more complex the tagset, and hence the types of “patterns” being identified, the more room there is for error. This is especially true if the text involved is not “perfect”; i.e. learner texts. An application, such as the one I’m suggesting, would be effective if, and only if, the original tagging was as accurate as possible. The following parts of speech would need to be tagged:

- definitisers (Def: the, all, some)
- demonstratives (Dem: this, that, these, those)
- nouns (N)
→ pre-nominal modifiers (Adj)
→ a restricted set of specifiers (Spec: *both, each, his, her, their*)

2) Once the text is tagged (as an “invisible”, background procedure) the following visible mark-up would run:

→ For every case of a demonstrative followed by anything *other* than a noun or an adjective (Dem + #N; Dem + #adj) the demonstrative changes to red uppercase, followed by a question mark: THIS?
→ For every case of Dem + N, the phrase turns purple and is underlined: *this idea*
→ For every case of Def/Spec + (adj) + N, the phrase turns green and is underlined: *the recent study* - the noun also becomes bold.

A text following mark-up would then look like this and could be printed or saved by the writer:

*The purpose* of this assignment is to inform the reader about the nature of the responses to the attached experiment. We shall take a look at how theory accounts for the different responses to the tasks and so too, we will expose the limitations with regard to the theory! Before we go further let us define Cognition as "... ..." (Mwamwenda, 1995, p. 89). It is clear that both respondents were thinking while performing the task. But each thought in a different way. The notion is that the processes that underlie thinking are mostly not directly observable and we will explore the differences. How can we understand THESE? ?

The marked up text would need to be accompanied by a key to help writers remember the issues attached to each “colour”. What follows are descriptions of the types of things that could be included in a “key” to the colour coding. It needs to be emphasised, again, that such a tool would either have to be used in conjunction with classes in which all these issues were presented, or it would have to include detailed “tutorials” to explain each of the particular areas identified as “specification hotspots”:

 unresticted “Presupposing” Definite noun phrases

The writer would be reminded that there are two things to look out for in the case of green underlined phrases:
1) First, that “The” often indicates that the writer is assuming his/her reader is familiar with the person/thing/concept being referred to. If there is a lot of green, the writer should be instructed to look carefully at each phrases and ask: “Have I already introduced and specified this concept in the text? Or is this something mentioned before in a book or lecture, but not in my text?” The sort of instructions that may be included in a class or “tutorial” could be repeated here too. For example “Don’t assume that your reader will know what you’re talking about, even if s/he did write the book or lecture!”

2) Secondly, the writer should be reminded to look at the bold nouns s/he is using in these green phrases. For example “If you see chunks of green connected by words like of, to, or that then make very sure you are not linking one “empty” concept to another. Things like “of-phrases” are very useful for making an abstract concept specific and clear. However, this is only true if the phrase is short and deals with one concept at a time.”

“Encapsulating” Demonstrative noun phrases

The writer would be reminded that there are two things to look out for in the case of purple underlined phrases:

1) Firstly, the writer should be asked to check for phrases like “this essay/assignment/paper”? In these cases, they should be reminded of the value of using personal pronouns: For example, “see if it would not sound more natural to say “In this essay/assignment/paper, I/WE will examine...”.

2) Secondly, s/he should be reminded of the value of alternative demonstrative anaphors, both as helpful repeat identifiers and as opportunities to express an attitude or stance. These are both complex functions and pre-teaching would be crucial before a student could be asked to start identifying them in his/her own texts. However, the reminder in the key could then take the following form: “Look at the noun (and the adjective?) you are using in these phrases. Are you repeating the noun from the sentence before? Have you used an adjective? Does it say something about what you think?” The writer could then be reminded of the notion of “stance”: “Remember that these phrases often provide the opportunity to express your attitude towards what you are talking about, as well as to encapsulate an idea and carry it along. Choose your nouns and adjectives carefully. Don’t miss out on these great chances to let your voice be heard!”
Finally, the key would remind the writer of the danger of using demonstratives alone as anaphoric pronouns. For example:

"Beware! Using a demonstrative on its own to point backwards in your text is dangerous because it may apply to more than one point!" A further short repetition of the "tutorial" could also be included as a reminder of how to replace the pronoun with something more helpful to the reader:

"If you say 'this is interesting', your reader might be left wondering 'what, exactly, is interesting?' Try very hard to find a helpful noun to use after this/that/these/those. Better yet, an adjective and a noun! Be a considerate writer: If you are going to point backwards in your text, provide a clear signpost so your reader will be able to quickly pick out what you are pointing to".

There are several other things that could be built into the search, such as highlighting "zero relativisers". However, tools such as the one I am suggesting often fail when they try to do too much. A lot of testing with student writers would be required to gauge the level of success of such a tool in terms of both its functioning and perceived usefulness.
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