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A conversation analytic/empirical pragmatic account of lecture discourse

A thesis submitted
for the degree of PhD

A Conversation Analytic / Empirical Pragmatic Account of Lecture Discourse

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PhD Thesis
University of Durham
2003

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Abstract

This thesis is motivated by the desire to know more about academic lecture discourse and how information is packaged in the talk in this particular institutional setting. Much of the previous research has taken a top-down, discourse analytic or ethnographic approach to the study of lecture discourse, often focusing on a single feature or attempting to understand the process of student lecture comprehension under controlled conditions using inauthentic, scripted lectures.

This study reveals how a conversation analytic approach to the study of authentic, naturally-occurring lecture discourse is able to create a more principled account of this type of talk. In considering the data at the macro, micro and meta levels and by examining the sequential and pragmatic phenomena included in the participants' invocation of and orientation to the institutional nature of the encounter, the study examines how this act of instruction is accomplished.

The results of the research suggest a systematic and recursive pattern to the units of information in the talk and propose a model derived from X-bar theory to represent this structure. The ultimate aim of this exploratory study is to develop a model of lecture discourse that benefits the development of academic listening materials for non-native speaker students studying on English for Academic Purposes courses, and contributes to programmes for lecturer training purposes.

For my family

Mum, Dad,
David and Susan

Acknowledgements

The journey of a thousand miles starts with a single step. This particular journey has been arduous but exhilarating and this journey's end owes much to the encouragement and support of my family, friends and colleagues.

I have been very fortunate to have Peter Grundy as my supervisor, and I have truly appreciated his constant support, guidance, enthusiasm and humour over the years.

My friends and colleagues at the University of Durham Language Centre and the Department of Linguistics and English Language were very supportive throughout. Particular thanks go to Joe Emonds for setting the whole thing in motion, to Randal Holme for supporting my studies during my employment and for many an interesting conversation on the topic of metaphor, and to Martha Young-Scholten for her encouragement, interest, and motivating presence.

The data used in this study were obtained with the kind permission of the Geography Department at Durham University, and I would particularly like to thank the lecturers and students who participated in this study for their help and co-operation. Thank you for your time and allowing me to record the lectures – I hope that my presence did not interfere too much with the lecture comprehension process.

Many friends have helped me along the way and to them I owe a great deal. Very special thanks go to Emma Uprichard for all her help in the final stages and for staying up all night until the final page was printed out. Duncan Barker also deserves a special mention for supporting me from start to finish and always having faith in me.

Other friends who need to be mentioned are Clare Bianchina, Sharon Toovey, Claire Jones, Glenda Young, Teti Dragas, Monica Flores, Gosia Bryndal, Xiaoling Hu, Andrew Caink, Alister Robson, Nick Habgood, Wendy Harle, Chris Millward, Melinda Whong-Barr, Lieve Van-Espen, Anna Edgar, Steve Kirk, Karima Soutsane, Marcela Goeta, Claudine Wayland, Ola Wolkowska, Tracey Gilpin, Nikki Brown, Mohamed Al-Masri and Tom Najem. You have all helped in many, many different ways. Thanks for everything.

Finally, I want to thank Mum, Dad, David and Susan for always being there when I need you and for quietly and patiently supporting this endeavour. I look forward to visits home and to Colorado without the usual piles of books and papers in tow – and I'm sure you do too!

I confirm that no part of the material offered has previously been submitted by me for a degree in this or in any other University.

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Introduction

Motivation for the study

The motivation for this study grew from my experiences as an EAP teacher to overseas students who were preparing to enter a variety of university disciplines at both undergraduate and postgraduate level. Whilst my students needed help in writing academic texts, reading research articles and learning how to do presentations, their main concerns were with the difficulties they had in understanding lectures in English and the fact that they needed more help preparing and training for listening to lectures than was currently available to them. In order to help them with the process of academic listening, I felt that my starting point needed to be a clearer understanding of lecture discourse itself.

The impetus for this study therefore developed from my desire to know more about the practices of spoken academic discourse, how knowledge is packaged at the tertiary level, and how the resulting discourse is constructed. By developing a principled account of authentic lecture discourse, this study aims to contribute to the research in the field of academic listening in a second language and ultimately to content lecturer training programmes and academic listening materials for non-native speaker students studying on English for Academic Purposes (EAP) courses. The study combines the principles of conversation analysis (CA) with a pragmatic account of talk in order to develop a more precise, holistic description of lecture discourse. By referring to familiar methods of



conversational organisation and identifying pragmatic features, the study shows how the talk is procedurally consequential for the participants and demonstrates the participants' construction of the talk and their orientation to context.

The need for research into lecture discourse

English is now well established as the core language for the dissemination of academic knowledge and academic communication around the globe and, as a result, English language proficiency is a key contributor to the success of overseas students. Whilst it is true that an increasing number of non-native speaker students are studying at universities overseas in English speaking countries, it is also evident that many are studying through the medium of English at home in their own country's universities, where English is being used as a means of internationalising academic study. In both cases, a major part of a student's university studies comprises regular attendance at lectures.

What is important to note is that this attendance is still requisite in spite of many other new and different instructional media available to academics that could be used in place of lectures. Thus, despite educational tools such as online learning, multimedia, seminars, tutorials, project work, field work, self access learning and so on, the lecture remains the primary instructional activity in universities with these other media often employed in a supplementary role. This may be because lectures are a relatively cheap and therefore attractive form of university teaching when resources are scarce, but nevertheless they

continue to survive as the central ritual of this particular culture of learning (Benson, 1994: 181), even now at the beginning of the twenty first century.

With this continued role of lectures in the academic agenda, it is clear that research into lecture discourse and lecture comprehension is necessary. A greater understanding of the structure and features of lecture discourse and greater insights into the lecture comprehension process will not only help both EAP course planners and providers develop a more appropriate teaching and learning methodology to improve learner strategies in the lecture theatre, but also provide relevant information for developing and improving lecturer training programmes. Since these different processes are connected, the starting point seems to be with lecture discourse itself. If we know more about *what* it is that students have to listen to, then we can help them more with *how* to listen to it effectively. Moreover, raising lecturers' awareness of what they are doing and what they need to be doing through lecturer training programmes based on lecture discourse research could help lecturers cope better with the specific demands of teaching international classes.

Despite the central role of lectures in tertiary education, lecture discourse and second language lecture comprehension have received relatively little attention compared to the areas of academic writing and reading. There is quite a large body of materials available for EAP teachers to help their students with their academic reading and writing skills, but very few materials dedicated to academic listening. Similarly, the areas of second language listening comprehension and lecture discourse are still relatively under-researched despite the problems students continue to have in the lecture theatre. It was not until 1994 that the

first collection of papers on research into second language academic listening comprehension and lecture discourse was put together by John Flowerdew. This collection served to highlight the importance of lectures within the context of academic study, and was a significant step forward in redressing the balance between research published on academic reading and writing and that on academic listening. Moreover, Flowerdew had argued two years earlier that there was a clear need for more research to be undertaken into lecture discourse to help improve and develop the design of EAP materials and EAP instruction in general (1992:19).

Of the studies carried out, Flowerdew (1994:294) points to a wide variety of research questions addressed. For example, researchers have investigated areas ranging from the effect of accent on second language lecture comprehension (Richards, 1983; Bilbow, 1989) to lecturing styles (Dudley-Evans and Johns, 1981; Goffman, 1981) to the skill of note-taking (Rost, 1990, Flowerdew and Miller, 1992). With academic listening comprehension covering such a broad field, there has been an equally wide range of research methodologies applied to the research questions. Of these, the main research methodologies are psychometric for the listening comprehension process, discourse analysis for insights into the structure and features of academic discourse, and ethnography to view and understand lectures and the lecture comprehension process as part of a wider culture of learning (Flowerdew, 1994: 294).

Whilst much of the research into lecture discourse has broadened our understanding of this phenomenon, several criticisms have been levelled at the focus of some of the research and

at the methods employed. Rost (1990:7) claims that 'any model of how people come to understand instances of spoken language will have to take into account the definable features of the events and the participants where language is used'. Lynch (1994: 271) also states that much of the research has focused solely on the language of lecture discourse and hence at the expense of the input both background knowledge and context have into the construction of lecture discourse and its comprehension. In terms of methodology, research taking a discourse analytic approach has come under attack for its prescriptive perspective and assumptions that the discourse will fit into a preconceived theoretical mould. Strødt-Lopez (1991:136) argues that individual lectures need to be viewed on their own merits so that patterns within the data can be discovered and used to develop a model of the discourse structure. Other criticisms are that much of the experimental research has been based on simulated rather than authentic lectures, with different features of the talk being manipulated and tightly controlled by the researchers via written scripts provided to the lecturer for the purpose of the experiment (Lynch, 1994:275).

Methodology

Whilst the present study draws on the extensive work in discourse analysis carried out into lecture discourse, it is principally motivated by the findings of conversation analysis which have revealed the complex structuring of everyday conversation. The present study holds the belief that lectures are organised in a complex manner comparable to everyday conversation and that CA is therefore the most appropriate methodological tool for the examination of lecture discourse.

CA is different to other linguistically oriented analyses in that utterances produced by participants in talk to exchange information, convey messages and so on, as well as the coherence achieved, are not viewed by the analyst solely in terms of the structure of language but as a practical social accomplishment. Comparing discourse analysis to conversation analysis, Montgomery states that the former tends to be concerned with 'verbal interaction as a manifestation of the linguistic order', whereas 'conversation analysis is more concerned with verbal interaction as instances of the situated social order' (1986:51). Moreover, by avoiding any *a priori* assumptions, CA seeks to determine how talk is organised and how sequences of action are generated by examining how participants understand and respond to each other and collaborate with each other in order to achieve orderly and meaningful communication. CA thus works from the perspective of how participants display for one another their understanding of what is going on and, at the same time, how order and coherence are achieved in talk in interaction. The aim of CA is to:

reveal the tacit, organised reasoning procedures which inform the production of naturally occurring talk. The way in which utterances are designed is informed by organised procedures, methods and resources which are tied to the context in which they are produced, and which are available to participants by virtue of their membership in a natural language community. (Hutchby and Wooffitt, 1998:1)

CA methodology is thus also distinctive from other linguistically oriented analyses in that the research is data driven and based on transcribed tape recordings of naturally occurring

interactions from which analyses about sequences of actions are then generated (Hutchby and Wooffitt, 1998:14). Consequently, CA rejects some of the most popular social science data sources such as idealised or invented examples based on a researcher's intuition, experimental methodologies, observational studies using fieldnotes or coding procedures, and interview data not witnessed by the researcher (Atkinson and Heritage, 1984:2-3). Such procedures do not use naturally occurring data but rely on a researcher's manipulation of data based on preconceived notions of what is probable or important.

In contrast, in the preliminary stages of CA, analysts work to find characteristics within the data which seem to have some interesting interactional features, such as series of turns. These turns at talk then become the unit of analysis. By focusing on the underlying organisation of the talk and how current turns connect to previous turns and constrain subsequent turns in talk in interaction, the researcher can construct a formal description of the sequence of actions. Returning to the data after initial observations, the researcher tries to find other sequences with similar properties, thereby compiling a collection of possible instances of a specific phenomenon in talk.

From this, it might be argued that CA is inappropriate for the study of lecture discourse since this constitutes neither conversation nor everyday talk in interaction. However, the present study shows how CA is appropriate for a variety of reasons. Briefly, these are as follows. Firstly, CA has been used to analyse talk in institutional settings since its inception (Drew and Heritage, 1992), and starts with the same assumptions as those applied to everyday conversation, namely a rejection of 'a 'bucket' theory of context (Heritage,

1987) in which pre-existing institutional circumstances are seen as enclosing interaction' (Heritage, 1997:163) in favour of the idea that context is constructed, oriented to and managed by the participants in the interaction and through the interaction. Secondly, conversation analysis has become a misnomer precisely because CA practitioners analyse a variety of talk and not just everyday conversation. Hence, most researchers now refer to the subject under study as 'talk in interaction', a term coined by Schegloff, rather than conversation. Finally, Hutchby and Wooffitt (1998:185) discuss how CA can be applied to talk that is perceived as monologic or one-way. In ordinary two-way talk in interaction, they state that a claim about an utterance can be supported by reference to the ways in which co-participants respond to it. However, where lengthy one-speaker turns are concerned, it is not only difficult to isolate a unit of analysis but corresponding 'proof procedures' such as turns at talk are not available (Hutchby and Wooffitt, 1998:186). In the absence of features such as other participants' responses, they show that lengthy accounts can still be argued to have interactional organisation. For example, they state that strategies such as self repair are essentially a discursive action and hence one basis for analytic claims about a speaker's interactional or inferential concerns regarding their ongoing production of talk and its reception by their audience. Thus, the emphasis is still on the identification and description of recurrent patterns in talk, but patterns that can be shown to work to inform and organise longer sections in a single speaker's turn rather than turns between two or more participants.

One criticism of CA is that the theoretical claims which result from observing orientations displayed by participants in any interaction can rely to some extent on intuition and

common sense reasoning and so can sometimes be quite general in nature (Clayman & Maynard, 1991). However, it is CA's use of authentic, recorded data that serves to dispel such criticism to some extent. Access to recorded data allows researchers to examine specific phenomena in the interaction repeatedly and in detail, and so enables them to make more precise observations about particular events. Moreover, when such research reaches publication, readers can directly access the data about which analytic claims are being made and so the influences of individual preconception and intuition are more likely to be minimised. However, in the case of the present study, in order to ensure a systematic and precise description of lecture discourse, this study will combine a pragmatic account of language with a CA approach. Thus, while CA shows how participants construct talk by referring to familiar methods of conversational organisation, the identification of pragmatic features shows more clearly how participants orient to context and the placement of these features within the sequence of talk can show how the talk is procedurally consequential for those participants.

It is for these reasons that the present study analyses authentic lecture talk and takes a data driven, bottom-up approach to this analysis in order not only to discover any systematic patterns in the discourse and develop a model of lecture discourse based on these features, but also to take into account the contributions of context and background knowledge to the construction of the discourse and the packaging and presentation of information.

The following sections will now briefly discuss the benefits such research could bring to lecturer training, the development and design of EAP materials, and student preparation and training for listening to lectures.

Lecturer training

In general, the majority of university lecturers in the UK receive little or no training for the job and lack practical knowledge about how lecturing should be approached and organised. Moreover, the idea that someone who has successfully completed a PhD thesis might still require some guidance and training in order to become a competent university lecturer is rather delicately alluded to as 'the common experience that scholarly ability (or scholarly achievement) and ability to teach are imperfectly related' (Startup, 1979:22). Moreover, if lecturers receive little or no training they may well feel that they are not very good at it. As a result, a conspiracy of silence tends to spread, with lecturers shying away from discussing their approaches to lecturing with their colleagues and from voluntary attendance at lecturer training workshops or courses.

The lack of discussion has perhaps led to a number of books being published offering advice and tips to lecturers on how to approach lecturing (e.g. McKeachie, 1986; Newble and Cannon, 1989; Edwards, Smith and Webb, 2001). However, whilst such publications offer very helpful advice in areas such as planning courses, dealing with large classes, working in laboratories, and encouraging student-centred learning and student involvement in the lecture, they do not deal with the issue of the construction and organisation of the

actual lecture talk itself. What these publications leave lecturers to work out for themselves is that what a skilled lecturer is able to do is:

monitor what it is that he has just said, and determine whether it matches his intentions, while he is uttering his current phrase and monitoring that, and simultaneously planning his next utterance and fitting that into the overall pattern of what he wants to say and monitoring, moreover, not only his own performance but its reception by the hearer. (Brown and Yule, 1983:4-5)

The general assumption seems to be that lecturers will ultimately attain this level of competence as they do more teaching. However, the fact remains that there is relatively little guidance available for novice lecturers. Moreover, in the UK, there seem to be no real training programmes or work published that instruct lecturers as to how to deal with a majority or even a minority of non-native speaker students in their classes. This seems particularly surprising when, on the one hand, universities are opening their doors to increasing numbers of overseas students, but on the other hand, are not preparing lecturers to deal with the specific needs of such students¹.

Rather, the onus is very much on EAP teachers to train and prepare overseas students for the lecture theatre, and on the students to attend an EAP programme in order to learn how

¹ For example, according to figures published by UCAS (the Universities and Colleges Admissions Service) in the UK, the number of students from outside the European Union taking up places at UK universities and colleges in 2001 increased by 19.9% on the previous year. This number is continuing to rise with China now amongst the top three suppliers of overseas students to the UK. (Source: <http://www.hothousemedia.com>)

to listen to lectures effectively. The task of preparing students for listening to lectures is indeed challenging when materials are limited and often inappropriate or inadequate, when the focus of most courses is on academic writing and reading, and when the actual nature of lecture discourse appears specific to each individual lecturer. Thus, EAP teachers may consequently find themselves in a position where the goals of lessons devoted to academic listening are vague, and where the teachers do not know if what they are doing is adequate preparation for their students or not. As far as the students themselves are concerned, attendance on EAP preessional courses is often not compulsory if their English language has been tested and graded at the level required for university entry. For those students who are exempt, not only do they miss out on any language work that might prove beneficial for their studies, but also on other non-linguistic information sources that EAP courses provide, such as an introduction into this particular academic culture, and time to adapt to living in a foreign country before their academic course begins. Whilst these students may initially struggle to cope with such adjustments, the responsibility for the induction of students to the different aspects of studying abroad lies mostly with EAP teachers and conversely, to a much lesser extent, with university lecturers who deal with overseas students for a longer period of time.

As EAP teachers have both training and experience in teaching overseas students, they are generally more aware of how to make themselves understood using both linguistic and non-linguistic information sources. For example, they avoid using examples that are culturally specific, they encourage student-teacher interaction via questioning and comprehension checks and they allow for clarification requests from students in their classrooms.

However, such awareness of the needs of overseas students does not necessarily carry over into the lecture theatre. Students may be shocked to find that if lecturers do make any modifications to their lecturing style in acknowledgement of any non-native speaker students in their class, these seem to be very much dependent on the individual lecturer and their sensitivity to, or even interest in, how much these students are able to understand (Wesche and Ready, 1985:108).

Of the modifications made to lecturer talk, most are language oriented. In their qualitative study of two lecturers teaching non-native speaker students, Wesche and Ready (1985) found that the most significant adjustment was content redundancy in the form of near or exact repetition of main ideas and reformulation of key elements. They also comment on the greater use of non-verbal support such as gestures and notes written on the board to assist non-native speaker comprehension. However, not only are such visual features of lectures often missing from EAP course materials that are recorded onto audio cassette, but also in terms of lecturer training, lecturers need to be made more aware of how clear, legible and organised board-work can enhance their presentation, student note-taking practice and the extent to which students grasp new ideas. Griffiths and Beretta (1991) show that other significant features of linguistic modification are a slower speech rate and fewer filled pauses with student of lower language proficiency. Their study and other research by Griffiths (1990) also show that any such modifications made by speakers are subject to wide variability; in other words, any changes made are very much dependent on individual lecturers. Despite this discovery, the recommendations made by Griffiths and Beretta surprisingly, and somewhat disappointingly, focus on the language classroom,

materials design and the training of English language teachers, and not on training lecturers to lecture more effectively to non-native speakers or on awareness-raising exercises for lecturers that one might feel led to expect.

Lecturers also seem less aware of the need to address cultural as well as language difficulties in the lecture theatre. In the English language classroom, teachers are usually more aware that some students from certain cultures are often initially uncomfortable with talking to the teacher in front of the class and so generate a lot of student-student interaction as well as teacher-student interaction in their classroom to make the latter appear less threatening and daunting and a normal part of classroom procedure. Moreover, research has shown that changes English language teachers make to teacher-student interaction such as comprehension checks, confirmation checks and clarification exchanges are more beneficial to non-native speaker students than linguistic changes of the type discussed above (Pica, Young and Doughty, 1987). In a lecture however, these forms of interaction often do not take place for a number of reasons. Firstly, some lecturers, and students, may misconstrue the role of a lecturer as simply giving information and subsequently view the process of listening as equal to the process of understanding. Secondly, with increasingly large numbers of students attending lectures, some lecturers may actively avoid any form of interaction, perceiving it as inappropriate, time-wasting or potentially causing a breakdown in control. Thirdly, in British academic culture, native speaker students tend not to ask lecturers questions for fear of being regarded by their peers as 'stupid attention seekers or creeps' (Gibbs, Habeshaw and Habeshaw, 1987: 155). Consequently, lecturers rarely ask the audience direct questions during the lecture, but finish with a rhetorical 'Any questions?'

as a means of rounding off and signifying the end of the lecture. Finally, as far as non-native speaker students are concerned, lack of questioning can be related to two factors. Either students do not ask questions because of language difficulties they might be experiencing, or because, in some cultures, asking questions is seen as questioning the authority of the lecturer and hence a sign of disrespect². It therefore seems that raising awareness of cultural differences and training lecturers to encourage questions from the audience in an open, non-threatening manner would be a positive step towards improving student comprehension and student-lecturer relations.

Another cultural factor affecting lecture comprehension is the use of explanation, example and analogy. Whilst the intention is to clarify main ideas, often non-native speaker students are left more confused and uncertain when lecturers make reference to culturally specific information that naturally excludes those who might have limited exposure to, and thus a superficial understanding of, the host culture. Lecturers who are not used to dealing with international students need to develop a better understanding of what constitutes an appropriate example or analogy for non-native speakers as well as a greater awareness of what can and cannot be assumed to be shared knowledge. Again, this implies that lecturers require more training in the preparation of their lectures to an audience containing non-native speakers and in choosing appropriate examples that are more likely to be understood by a wide range of people regardless of their linguistic or cultural background.

² From my own teaching experience abroad, in Japanese culture for example, teachers represent figures of authority and hence whatever a teacher says should go unquestioned. Japanese teachers and students avoid classroom questions and discussions as these are seen to bring *tairitsu* or confrontation that can lead to conflict. The Japanese view avoidance of conflict as a positive course of action.

Currently, the burden is on the students to adjust their expectations to the new academic culture, to acquire an understanding of the norms and behaviours of this culture, to behave in an appropriate manner, and to develop effective strategies to understand the discourse of lecturers that will vary from individual to individual in areas such as presentation, structure and clarity, to name a few. Further research into lecture discourse will go some way to shifting some of the burden onto the lecturers themselves by defining what does and does not constitute good practice, by identifying the features of lecture discourse that enhance comprehension and allow for the successful transfer of information, and the exploitation of this knowledge in the development of lecturer training programmes.

EAP resources and materials

More studies into lecture discourse would also benefit the development and design of EAP materials and courses. The quality and quantity of EAP materials dedicated to academic listening comprehension that are used with students on EAP courses are a significant factor in successful lecture comprehension and the extent to which they train students to process lecture discourse effectively. The preessional EAP course I was teaching on, like many others, focused primarily on developing the skills of academic writing, closely followed by academic reading. There seemed to be a number of reasons for the lesser focus on academic listening. Firstly, the setting up of a series of live lectures with lecturers from different departments for EAP students to attend was quite difficult to organise in terms of both locating and booking an empty and available lecture theatre as well as finding a

willing and available lecturer during the summer vacation. Secondly, it is difficult to arrange a series of lectures or even a single lecture on topics that would be of both interest and use to students entering a wide variety of academic disciplines. It is also much easier to ask students to go to the university library and find a research article to read in their particular field, or to get students to write an essay or give a presentation on their chosen research topic than encourage them to attend a lecture on a topic that they may feel is of little relevance to them. Even if the aim of the exercise is to develop their listening strategies, students will still feel the need to have at least some degree of interest in the topic being discussed. Thirdly, on the Preessional course, there were very few published materials available that were specifically dedicated to second language academic listening that could be used to good effect in EAP instruction, either in class or in a self access centre, since they mostly relied on inauthentic, idealised recordings of talk. Of the few materials to hand, they relied then, as other materials do now, on audio cassettes (e.g. *Study Listening*, *Academic Listening Encounters*³). Such materials plainly lose the face to face aspect of live lectures and any potential for student-lecturer interaction. Moreover, they subsequently forfeit any paralinguistic features that might aid comprehension such as gestures and facial expressions. Other visual aspects that are absent from audio materials and that would assist clarification and comprehension include notes written on the blackboard, overhead transparencies, slides, handouts etc.

³ Lynch, T. (1983) *Study Listening* Cambridge: Cambridge University Press.

Espeseth, M. (1999) *Academic Listening Encounters* Cambridge: Cambridge University Press.

Recently, however, some materials have been developed as a means of addressing this issue. The University of Warwick developed a Listening to Lectures CD-ROM as part of their EASE series (Essential Academic Skills in English, 2000) which consists of digital video recordings of authentic lectures for students to use in class for self study. These recordings are broken down into units that focus on different aspects of lectures in order to allow students to practise a variety of listening skills such as listening for gist or for specific information. EASE is a useful resource, particularly for self study, as it provides students with the opportunity to analyse the language in selected lectures, to practise a variety of listening skills and to see a variety of lectures from different disciplines. However, the material is presented as video clips of a few seconds or a few minutes. This material can therefore only go partway to preparing students for their own academic study, since in a live, full length lecture, students are required to use a variety of listening skills in combination for an extended period of time rather than a single skill in isolation for a few seconds or minutes. It is only when students are exposed to authentic lectures that they will discover whether they can put all the necessary listening skills into practice or not.

A further problem for students on EAP courses is that they are not given the autonomy to choose listening tasks for themselves. Rather, the tasks or questions set are either designed or selected by the class teacher or form part of a listening materials package and thus intended for a fictional group of academic language students. Students are then left, for example, listening to answer questions to find specific information in the talk or underlining words or phrases such as discourse markers that signify contrasting information in a pre-selected extract. This means that the lesson can shift to a focus on testing what the

teacher or the materials want the students to understand and less on what the students are able to understand, or areas where they might need more concentrated training in the development of their academic listening skills in English. This reliance on the teacher or the materials to decide what is to be listened to and how, can, to some extent, undermine the goal of encouraging students to develop the autonomy needed for successful independent study once their degree course commences.

Thus, findings from research into lecture discourse can also be of use in the development of academic listening materials. If a principled account of authentic lecture discourse results from the research, then such an account can inform the design of EAP listening materials by providing a clearer, more accurate picture of what students need to be listening to and for in a lecture.

Student listening comprehension

As stated earlier, with the principal role of lectures in university education, a student's ability to process information presented in this way is a major determinant in their overall academic success at the tertiary level. From the research undertaken into listening comprehension processes, it would seem that my students' worries about lectures were not unwarranted. Research carried out over the last twenty years or so has shown that the extent to which a listener understands a speaker's meaning is reliant on elements that exist outside as well as within the spoken text. Researchers such as Rost (1990) now reject linear top-down/bottom-up representations of the listening process and the step-by-step

comprehension models proposed by Clark and Clark (1977) for example, and state that a multi-level approach is more appropriate as a means of illustrating the interconnectedness of different information sources utilised during listening comprehension. Anderson and Lynch present a three level model of these information sources which portrays the interaction between systemic or linguistic knowledge, and non-linguistic knowledge of context and co-text together with schematic knowledge (1988:13). In other words, whilst listeners draw on their knowledge of the language system in order to process what they hear, they simultaneously draw on their knowledge of the situation, such as knowledge of the physical setting and of the participants in the talk, the co-text of the talk in terms of what has been and will be said, and on their schematic knowledge, i.e. their individual background knowledge, memories and experiences of the world, and procedural knowledge of how language is used in discourse. The interconnection between these different sources of information allow for the reprocessing of incoming data. For non-native speakers, the comprehension process is further complicated by the fact that they may not have sufficient knowledge of the language nor possess the required contextual and schematic knowledge to process talk in a second language effectively.

As far as listening to lectures is concerned, the inherently complex and cognitively demanding nature of academic discourse makes successful comprehension particularly difficult for non-native speakers. Lebauer (1984:81) states that good lecture comprehension comprises 'the ability to synthesise discourse in order to extract relevant information, the ability to predict future information and the ability to relate background knowledge to new information'. Clearly, for non-native speakers, the added burden is to fulfil these tasks in

real time and in a second language. Moreover, non-native speakers may also be more likely than native speakers to mishear, misunderstand or simply miss the information in the lecture that they need to understand and note down.

Another reason for poor lecture comprehension might be the differences between participants' perceptions of lectures and differing beliefs amongst students and lecturers about the functions of a lecture. Whilst some might perceive the primary purpose of lectures as providing factual information only, others see lectures as a means of going beyond what a textbook alone can provide and an opportunity to gain direct access to a lecturer's personal expertise, opinions and attitudes. The confusion and differing opinions about what an audience should take away from a lecture is highlighted by a study conducted by Hartley and Cameron (1967) who found as much as 80% disagreement between lecturers' and students' identification of the main points in a lecture. Such a high percentage is clearly disturbing, particularly when this need not, and should not, be the case.

The analysis of lecture discourse will also therefore contribute to our understanding of why student intake can be so radically different from lecturer input. By identifying features in authentic lecture talk that might cause confusion or a breakdown in comprehension, lecturers can be trained to avoid such pitfalls and students can be taught how to develop appropriate and effective listening strategies. At the same time, lecturers need to be more explicit about the functions of their lectures and express these directly to their students. They also need to ensure that students not only take away the correct information but that they understand it, with more comprehension checks and classroom interaction.

Summary

The impetus for the present study sparked from my personal experiences as an English for Academic Purposes teacher dealing with overseas students who had particular difficulties understanding lectures in English. The fact that an increasing number of overseas students are studying in the UK suggested that the problems my own students were experiencing must be more widespread across universities. Moreover, since lectures continue to have a central role in tertiary education, the need for more research into this particular pedagogical tool is apparent. Despite this need, however, relatively little research has been carried out into the area of lecture discourse, particularly when compared with the extensive research carried out into written academic information sources such as the research article.

With lecture discourse covering such a broad field, much of the research that has been carried out has tended to focus on single items within the discourse, such as discourse markers. This in turn has led researchers to generate artificial, simulated lecture discourse as a means of controlling and manipulating specific linguistic variables for analytic consideration. However, such experimental investigation of lecture discourse and the study of data containing variables controlled by the researcher have met with considerable criticism. Critics argue that too little attention is paid to the relevance of these variables to the actual participants in the interaction. Moreover, the construction of artificial situations in which the researcher can observe the phenomena that they, rather than the participants, consider to be important, may generate invalid findings. In this way, phenomena can be

categorised or described in a way that is not recognised or understood by the participants themselves.

A further criticism of some of the research has been its attempt to fit lecture discourse into a preconceived theoretical mould rather than identifying and describing patterns and sequences of actions in the talk in order to generate a model of the discourse structure. Other criticisms have highlighted that research into lecture discourse needs to recognise it as more than just language, but as a practical social accomplishment with contributions from background knowledge and context to the construction of talk.

In order to avoid the problems of other methodologies concerned with social behaviour such as ethnography and discourse analysis, the present study adopts the practices of Conversation Analysis for the study of lecture discourse. CA does not establish research questions *a priori* and so 'rejects the use of investigator-stipulated theoretical and conceptual definitions of research questions' (Pomerantz and Fehr, 1997:66). In this way, the present study aims to analyse recordings of authentic lecture discourse in order to describe the procedures by which the participants produce their own behaviour and understand and respond to the behaviour of others and how sequences of actions are generated in this specific context.

Following CA principles, the present study is also concerned with establishing 'how conversational devices and sequence types exhibit general features and function in essentially similar ways across varying contexts' (Hutchby and Wooffitt, 1998:21).

As the participants engage in doing lecture discourse, so the analysis aims to determine patterns and sequences that function in the exchange of information between lecturer and audience. It also determines to what extent these patterns and sequences can be generalised and so contributes to a principled account of lecture discourse, the practical implications of which are threefold. Firstly, since many lecturers receive little or no training, it could be used in any existing lecturer training programmes or help kickstart new training programmes to raise awareness and help lecturers improve their skills with native and non-native speaker audiences alike. Secondly, it could be incorporated into the development and design of newer and improved EAP materials dedicated to academic listening. Thirdly, it could also be used to help students develop better and more appropriate listening and note-taking skills for the lecture theatre. The next section briefly outlines the content of each chapter of this thesis.

Outline of contents

Before providing a brief description of the contents of each chapter, it should be stated that the structure and organisation of this thesis reflect the exploratory nature of the research as a journey of discovery in terms of both the subject under study and the methodology applied to the data. Thus, the progress from each chapter to the next mirrors the order of the different stages of the study and how each consecutive stage of the research informed the next. This concept of ‘research is a journey’ is concluded in the final chapter which shows how the various paths of this journey are linked together and how the findings could lead

towards improvements in EAP teaching materials for lecture comprehension and lecturer training programmes.

Chapter 1 – Literature Review

Chapter 1 sets the present study in the context of previous research on lecture discourse and shows how the focus of this study and the methodology applied to the data contribute to the advancement of research in this area. The chapter evaluates the available research carried out into the various macro, micro and meta-level features of lecture discourse and demonstrates how this has influenced the present study's decision to analyse authentic, naturally occurring lecture discourse from a bottom-up, conversation analytic rather than a top-down, discourse analytic perspective. The chapter also discusses how cognitive factors affect student comprehension of the varying macro, micro and meta-level properties of lecture discourse as well as student note-taking ability, and suggests ways in which the present study should enable further investigation of this nature.

Chapter 2 - Methodology

This chapter considers both conversational analytic and pragmatic explanations as a means of determining how lecture discourse is consequential and discusses why this research methodology is more appropriate to the study of this type of talk in interaction than previous discourse analytic investigations. The chapter examines how the present study's approach reveals how the talk achieves its aim of transferring knowledge to an apprentice audience and how members' methods are the means through which the institutional context

of academic discourse is invoked and oriented to by the participants. In this way, the analysis is not limited to the organisation of talk but extends to the organisation of meaningful conduct of people in society as it attempts to understand and explain how they produce their activities and make sense of the world around them.

Chapter 3 – Pilot Study

This chapter describes the data studied, how it was obtained and conversation analytic practices used for analysis. It also discusses how the data for the main study were collected and analysed following a procedure recommended by ten Have (1990). The chapter presents the main findings of the pilot study at the macro, micro and meta levels, and, in particular, discusses findings of systematic patterns and sequences of actions that appeared to constitute individual information units in the lecture discourse at the micro level. It also discusses Young's (1994) phasal model of lecture discourse and Coulthard and Montgomery's (1981) model and shows to what extent the data from the pilot study can be accommodated in these models.

Chapter 4 – Analysis of the data at the macro level

This chapter discusses the data at the macro level, focussing specifically on the function of discourse markers and metaphor in the information units. It shows how macro level discourse markers function as directional signals across the data indicating how the material in the information units is organised and to be evaluated. The chapter reveals how these discourse markers are actively involved in assisting the audience in the construction and

selection of a context within which a lecturer's utterance is to be understood. Metaphor is presented as having a dual function at the macro level. Thus, not only is abstract knowledge understood and presented by means of conceptual metaphor in the lecture, but also the agenda or lecture structure within which this abstract knowledge is framed and given coherence.

Chapter 5 – Analysis of the data at the micro level

This analysis builds on the findings of the pilot study and confirms that the information units in the talk consist of a three-part recursive structure. The chapter develops and refines both Young's (1994) phasal analysis of lecture discourse and Coulthard and Montgomery's (1981) model, and suggests that a model derived from X-bar theory of phrase structure is a more useful and appropriate means of capturing the structure of the information units in the talk.

Chapter 6 – Analysis of the data at the meta level

This chapter discusses the data at the meta level and incorporates and consolidates the analysis in the previous two chapters by examining the role of metadiscourse in the organisation of the lecture at the macro level and the organisation of the information units at the micro level. The chapter will examine how acts of instruction are accomplished and the role of metadiscourse in these acts.

Chapter 7 – Conclusion, discussion and implications

This chapter pulls together the different strands of the analysis chapters and discusses how the findings from the analysis of the data at the macro, micro and meta levels achieve the ultimate aim of this study which is the development of a principled account of lecture discourse for use in lecturer training programmes, the design and development of EAP listening materials, and helping non native speaker students with their academic listening skills in the lecture theatre. The chapter makes suggestions for further research following on from this study's findings. The strengths and limitations of the methodology used in this study are also examined and discussed.

Chapter 1

Literature Review

1.1 Introduction

In a typical Conversation Analysis report, there is generally no *a priori* discussion of the literature in order to develop hypotheses, as CA normally consists of an empirically based discussion of analytic issues. The purpose of this literature review, therefore, is not to formulate hypotheses about lecture discourse, but rather to show how the present study came to favour a conversation analytic approach to this particular type of talk in interaction as opposed to a discourse analytic or ethnographic investigation.

This chapter therefore starts by defining the notion of a lecture and discusses the roles and goals of the participants in a lecture. It then discusses the main research that has been carried out into the discourse factors that affect student comprehension of lectures, and shows how the present study works to advance that knowledge in terms of its focus and chosen methodology. The chapter also considers the research conducted into how cognitive factors affect comprehension of lectures and note-taking ability and suggests how the present study should enable further investigation of this nature.

1.2 Definition of lectures

Whilst lectures are integral to academic life, it is difficult to come up with a working definition that takes into account the different formats lectures may take, their goals,

functions, organisation and the anticipated roles of participants. Characteristically, a university lecture is '50-55 minutes of largely uninterrupted discourse from a lecturer with no discussion between students and no student activity other than listening and note-taking' (Gibbs, Habeshaw and Habeshaw, 1992:2). This rather formal structure is reinforced by the traditional physical surroundings a typical lecture theatre provides. This often consists of a fixed dais at the front of the lecture theatre which is tiered in order to seat large numbers of students. Frequently, these theatres have little or no natural light. A lecture can also be carried out in anything from a large lecture theatre that can hold several hundred students to a small classroom where the attendance may be only a small group of students.

In order to overcome this problem of definition, different writers have come up with varying sets of parameters within which to frame the concept of lecture. Edwards, Smith and Webb (2001:3) for example, provide a simple set of parameters:

1. The session is time-tabled as a lecture (as opposed to a seminar or tutorial)
2. The expectation is that one lecturer is responsible for delivery to the whole group¹
3. The session is face to face or replicates this
4. There are desired learning outcomes

In the present study, the lectures that were analysed fitted these parameters (but see footnote below) and were carried out face to face.

Benson (1994:182) looks at lectures from an ethnographic perspective and provides a list of socio-linguistic features that students face as they become acculturated or socialised into the learning culture of an English speaking university. His list adds to the above parameters the concept that the lecture is a performance that is conducted at a specific time and place and where attendance is compulsory; that the lecture is planned not only to complement other learning channels, but also to fit with the rest of the course and to meet university, departmental and lecturer goals; that there are certain values and principles that dictate the norms regarding the behavioural and interactional roles of participants; that the desired learning outcomes place linguistic and cognitive demands on the listeners; and that the lecture allows for certain events to occur.

The lectures in the present study met all of the above parameters. However, whilst some of these parameters are already familiar to overseas students or are at least relatively easy for them to adapt to, others are possibly less so and therefore may affect the process of second language lecture comprehension, particularly regarding the roles and goals of participants, and the cognitive factors involved in listening to lectures in a second language and the actual language of those lectures.

1.3 Roles and goals of lecture participants

As far as students are concerned, their main responsibility is to extract the salient points from the lecturer's talk and make relevant notes for future reference. As Lebauer (1984:41) states, the goal of good lecture comprehension is the ability to listen and

¹ In the present study, the teaching for the entire module was shared by three different lecturers. The lecturers were each responsible for teaching a certain number of lectures individually as part of the whole module.

perceive what is important and relevant, predict future information and draw connections between background knowledge and new information. If students have or can develop this level of competence and combine it with skilful and appropriate note-taking, then they will normally be able to cope with course assignments that bear heavily on lecture comprehension. However, whilst comprehension of lectures is linguistically and cognitively demanding for native speaker students because of the complexity and density of information being presented, the challenges are much greater for students listening to a lecture in a foreign language. They may also have to deal with relatively unfamiliar, and hence quite confusing and disconcerting, academic practice such as lecturers initiating small group discussion of topics or using jokes and cultural references to liven up a lecture.

Another potential problem in lectures is that both lecturers and students alike may perceive the main aim of lectures to be the simple transfer of items of information. A lecture is much more than this and if simple information transfer were the case, then other media and technology would have replaced it as the primary means of transmission of knowledge in tertiary education long ago (Goffman, 1981:186). Instead, the fact that the lecture provides the audience not only with key information but also with the lecturer's evaluation of the subject he or she is presenting seems to be the main reason for the continued existence of the lecture as a valid pedagogical tool. Dudley-Evans and Johns state that the lecturer:

is concerned on a moment-by-moment basis to evaluate the information, methods and procedures he is describing in terms of their validity, appropriacy, relevance and so on. (Dudley-Evans and Johns, 1981:32)

Benson (1994:184) suggests that compulsory attendance at lectures means that students are given access to something beyond the realms of a textbook. They have the opportunity to be face to face with someone who has 'been there', and who is living evidence that the intellectual problems they face are solvable and that complex ideas can be broken down and understood.

The lecturer thus has the role of 'creating a structured sequence of utterances which must help the listener to create a coherent mental representation of what he is trying to say' (Brown and Yule, 1983:17), whilst the audience has to take on the role of actively constructing a coherent representation of this complex and cognitively demanding talk (Thompson, 1994a:58). Non-native speakers may find this particularly difficult as they may mishear and misconstrue the details in the lecture that would allow them to build this mental model.

If students do not catch the main points of a lecture, this may be due to difficulties individuals have in trying to process the talk they hear. Equally, students may not understand the talk because the structure or the features of the talk do not aid the listener in deconstructing and reconstructing the message being conveyed. It is therefore clear that both discourse and cognitive factors can affect student comprehension of lecture discourse.

1.4 Discourse factors affecting lecture comprehension

If students are to process lecture discourse effectively, it is important to consider what it is in the lecture itself that aids or does not aid this text recreation process. Research into lecture discourse can reveal the linguistic and discoursal features of the talk that learners need to be familiar with and this information can be incorporated into the design of EAP teaching materials and indicate to teachers specific areas that require attention when helping their students with their academic listening skills. Moreover, such research holds potential value for individual lecturers and programmes dedicated to training content lecturers, since an awareness of specific patterns and features which aid comprehension could assist lecturers in structuring their talk to maximise student intake of the information presented.

1.4.1 Lecturing styles

In the research into lecture discourse, various lecturing styles have been identified. Morrison (1974, reported in Jordan, 1989:153) discusses science lectures and separates them into formal or informal style. The former is formal in the sense that it is nearer to spoken prose, and the latter is regarded as having a more informal register, although still maintaining a high level of informational content. Later, Dudley-Evans and Johns (1981) isolate three styles of lecturing: 'reading style' where the lecturer reads aloud from notes; 'conversational style' where the speaker talks more informally with or without reference to notes; and 'rhetorical style' where the speaker is a 'performer' and uses a wide intonational range and makes frequent digressions from the main topic. Goffman (1981) distinguishes three lecture modes that slightly overlap with those of Dudley-Evans and Johns, namely 'memorisation', 'aloud reading' and 'fresh talk'. Chafe

(1986) looks at academic speaking in a more general sense and in a variety of contexts. He concludes more usefully that there are different academic speaking styles that are neither completely like ordinary conversational speaking nor fully approximate the style of academic writing but rather fall at some point on a continuum between the two. He argues that academic discourse could never be like the former because the interaction between lecturer and audience is asymmetric, with the lecturer holding the floor far in excess of normal conversation. Since the role of the lecturer is to impart information and knowledge to the audience, their talk is therefore likely to be less spontaneous than casual conversation. However, academic discourse cannot replicate academic writing exactly either, because the two are quite different productive language skills and so cannot result in exactly the same language. Moreover, since academic speaking is to some extent produced on-line, the academic speaker does not have the same opportunity to deliberate, redraft and revise as the academic writer.

Flowerdew (1994:15) notes that whilst no study has been published on the frequency of different types of lecturing styles, general opinion has it that the more informal, conversational style of lecturing is becoming increasingly prevalent to both native and non-native speaker audiences alike. Certainly in the United States, over the last twenty years, more oral participation from students has become a key feature of university lectures. Mason (1994:203) states that a more 'give and take' style of lecture has emerged with lecturers presenting material to encourage questions and discussion between themselves and their students, as well as a more recent 'report and discuss' style where the lecturer assigns topics for small groups to study and present for discussion. In the UK, the more traditional 'talk and chalk' style of lecturing is still quite common, with lecturers clarifying material using a blackboard or whiteboard. Moreover, despite

the modernisation of lecture theatres, the introduction of so-called interactive technology has, to some extent, only served to separate the lecturer further from the audience. The use of electronic data projection and other devices often means that the lecturer needs to stay at the front of the lecture theatre in order to operate this equipment, and consequently any movement and interaction with the audience become fairly restricted. However, Coulthard and Montgomery (1981: 33) state that despite the apparent monologic nature of lecture discourse, the fresh talk that a lecturer constructs in order to transfer information is done so with interactive purposes in mind. In other words, the lecturer's speech is relatively spontaneous and also responsive to any non-verbal signals from the audience as to their level of understanding and state of knowledge at any given point in the lecture. Murphy and Candlin (1979 in Lebauer, 1984: 45) also state that lecture discourse flows as if it were a two-way interaction, with the speaker providing dummy responses and feedback to their own talk.

Overall, the research supports a move towards greater informality in lectures in the US and the UK. This change may be part of the problem for some non-native speakers as they may come from backgrounds where lecturing is carried out on more formal, traditional lines; that is, their particular cultural norms may lead them to different expectations of lecture discourse and of the roles of participants. It is also clear that the lecture is commonly less monologic in nature than was presupposed and that it is much more interactive and dialogic today than in the past. Young (1994:167), in her research into the macro structure of lectures, describes a specific interaction phase in lecture discourse. This phase is one in which the lecturer maintains contact with their audience, tries to reduce the distance between themselves and their listeners, and checks listener comprehension. This is achieved by entering into a dialogue with the audience and by

posing and responding to questions. Thus, regardless of whether the interaction between lecturers and their audience is direct or implicit, a shift away from the lengthy monologue of traditional lectures is currently evident.

1.4.2 Models of lecture discourse

Much of the research into lecture discourse was carried out in the 1970s. This mainly took a discourse analytic approach to lecture discourse, largely because at that time lectures were still seen as text rather than dialogue and because conversation analysis was still in its infancy. Many of the discourse analytic studies attempted to come up with a model of lecture discourse in order to distinguish and label the different moves in the talk. Whilst this idea of establishing a model of lecture talk and using it as a basis for lecture comprehension training on EAP courses is a valid end in itself, discourse analysis as a means to this end is not the most appropriate. The main problem with this approach is that it imposes an already existing model on the talk which may not fit exactly, rather than discovering patterns within the talk and generating a model of lecture discourse therefrom.

One of the earliest analyses of lecture discourse was by Cook (1974), who identified some of the cues used by lecturers to signal their intention in the organisation of the talk. Cook's analysis is based on the supposition that lecturing is a process of maintaining and directing relevance in speech, or, in other words, showing continuity and relations between topics and subtopics. She puts forward three general rules for the process of making smooth transitions. These are the use of connectives for topic continuation, the use of examples, analogies and contrasts to elaborate on or recycle a

previous topic, and the closing down or limiting of a previous topic through topic change. Whilst this type of analysis is useful in terms of showing the development of the main topic and specifying the relationship of added information to that topic, its main drawback is that it fails to take into account the functions of all of the individual propositions in directing the development of that talk. It does not take into account inferential cues which can be used to interpret lecture discourse.

Much of the discourse analytic research into lecture discourse in the late 1970s developed from Sinclair and Coulthard's 1975 model of primary classroom discourse. Cook (1975) adapted and remodelled their rank scale of 'Lesson, Transaction, Exchange, Move, and Act' for this type of talk into a new hierarchy of 'Lecture, Exposition, Episode, Move and Act'. In this model, a lecture is made up of different classes of exposition, an exposition is made up of different classes of episode and so on. These episodes consist of an optional episode of expectation, an obligatory focal episode, an obligatory developmental episode with a number of optional developmental episodes, and an obligatory closing episode followed by optional closing episodes. Lower down this hierarchy, episodes are composed of different moves which Cook categorises as describing, asserting, relating, summarising, recommending, justifying, qualifying, contrasting and explaining. Whilst this analysis suggests a focus on the functions of individual propositions within the context of an overall lecture discourse structure, it is criticised by Flowerdew (1994:16) as being limited to describing only the boundaries of these units and not being able to provide real insights into their internal structure.

Murphy and Candlin (1979) apply Sinclair and Coulthard's model to their corpus of engineering lecture discourse and provide a more thorough description of many of the features of this type of lecture discourse. They analyse the overall coherence of the discourse, do a textual analysis of the cohesion of the sentences in the lecture and analyse the role of kinesics. From this, they identify different rhetorical devices such as marker, starter, elicitation, accept, informative, comment, aside, metastatement, and conclusion. They also argue that whilst the Sinclair and Coulthard model was not originally designed for analysing monologue, it is appropriate for lectures because of their increasingly interactive nature. The usefulness of Murphy and Candlin's analysis is that it is more specific than Cook's analysis in terms of the function of propositions and in relating propositions to one another. Their analysis gives greater insight into the purpose of different items in the discourse and insight into the interconnectedness of all parts of the text. In other words, it gives a more holistic view of lecture discourse. However, their analysis still does not clarify how all their catalogue of devices and strategies fits into a larger picture of lecture discourse structure.

In 1981, Coulthard and Montgomery (1981:33) proposed three units of 'Transaction, Sequence and Member' to analyse the structure of lectures. In this model, Transaction is characterised by its focussing boundaries, Sequence by phonological means and Member syntactically. Member is then subdivided into two types, the type which operates on a 'main discourse' or informative level, and the type which functions on a 'subsidiary discourse' or metapragmatic level. This is a useful distinction for lecture discourse and helps separate out basic content from evaluation, opinion and so on. The other benefit of this study, as stated above, is its acknowledgement of the fact that lecture talk is 'interactively designed'.

In her study, Young (1994) is critical of analyses that characterise lectures as having a beginning, middle and conclusion. She claims that their structure is far more complex than this, with lectures having many beginnings, middles and ends throughout. In her analysis of seven two-hour lectures, by native and non-native speakers of English to undergraduate students in different disciplines, Young attempts to describe the macro structure of university lectures and identify some of the more prominent micro features contributing to this structure. Her 'phasal analysis' identifies a cross disciplinary three-part micro level structure of a 'Discourse Structuring phase', a 'Content phase' and a 'Conclusion phase'. In the Discourse Structuring phase, the lecturer indicates the direction they will take in the lecture; the Content phase reflects the lecturer's purpose which is to transmit theoretical information; and in the Conclusion phase, the lecturer summarises the points made throughout the discourse. Taken together, these phases structure the lecture. However, they recur discontinuously and are interspersed with other phases such as an 'Evaluation phase', where the lecturer evaluates previous information or information that is about to be presented; an 'Interaction phase' where the lecturer maintains direct contact with the students; and an 'Examples phase' where the lecturer illustrates theoretical concepts with concrete examples familiar to the audience.

Young's model of analysis aims at identifying both macro structure and micro features of university lectures. She uses a Hallidayan model of Systemic Functional Grammar which 'explicitly indicates the connection between situational factors, or contextual constructs' and 'allows a researcher not only to identify the macro structure of a language variety, but also, to greater or lesser degrees of detail, to identify the micro features of different varieties of language' (1994:161). She develops this concept of

phases in order to reflect the metafunctional choices in language. In any sequence of talk, there are different activities going on and in lectures there are explanations, exemplifications, and 'metadiscoursal strands' such as summaries and evaluations which can be identified in terms of the language choices made by the speaker. A phase is designed to 'reveal similarities in different strands of a particular discourse in terms of what is being selected ideationally, interpersonally and textually' (1994:164). This approach is intended as a more accurate configuration of lecture discourse, and as something that goes beyond a simple introduction-body-conclusion model in order to show how different phases interweave to make up the overall structure of lecture discourse.

The aim of discourse analysis is to show how coherence and cohesion are produced and understood in discourse and thus it takes a top-down or rule/grammar driven approach. This, as we have seen from the studies discussed above, leads to the isolation of certain elements of talk as representative examples, and then theories and models are built around them. This can mean a focus on the sentence rather than the discourse level and so can ignore the fact that utterances can only be understood by reference to their placement and participation within sequences of actions.

1.4.3 Lecture Discourse Structuring

Exploratory research into lecture discourse structuring and its effect on second language comprehension was carried out in 1990 by Olsen and Huckin who focused on student understanding of engineering lectures which built up an argument around a problem and then presented a solution. After the lectures, students were asked to provide an oral summary of the most important points. The results of Olsen and Huckin's research

suggest that some students understood 'all the words of the lecture' (1990:33) which included items such as lexical connectives and other discourse markers, yet they did not grasp the main points of the lecture or logical argument. They relate this failure to second language learners' own cultural conditioning in that they may be accustomed to gaining only information from engineering lectures and not the speaker's evaluations, opinions and comments on the facts presented. They conclude that this 'information-driven' strategy of trying to absorb the facts rather than a more considered 'point-driven' strategy may prevent students from understanding a lecture that works towards the resolution of a series of connected problems.

Self reports, like the ones used in the Olsen and Huckin study, are aimed at determining what students have understood and can give valuable insight into what aspects of lecture discourse second language learners perceive to be difficult. However, self reports can be problematic as students may simply overestimate what they have understood, for example, 'all the words of the lecture' (ibid), or make mistakes and distort their actual level of comprehension when reporting back. Tauroza and Allison (1994) also express concerns with the Olsen and Huckin study and suggest other flaws in the methodology where students were asked to give these oral summaries of the lecture in English. They state that since the skills of speaking English and understanding English are to some degree independent of each other, it then becomes unclear to what degree the problems in the subjects' summaries were due to encoding or decoding abilities. Tauroza and Allison admit, however, that a summary in the students' first language may equally raise concerns regarding the process of translation. They also describe further weaknesses with the Olsen and Huckin study and draw attention to its exploratory nature, highlight

the fact that only fourteen subjects took part and emphasise their ambiguous use of the term 'main point'.

Tauroza and Allison' own study aimed to extend and improve on Olsen and Huckin's study by using a larger sample, maintaining consistent use of the concept 'main point' and by allowing students to construct their summaries in either English or their first language. Their results generally supported those of Olsen and Huckin in the sense that the expectation of a 'situation-what to do' discourse structure caused students to find a 'situation-problem-solution-evaluation' (Hoey, 1983:31ff) lecture structure more problematic. In particular, student misunderstanding of the evaluation section led to a distortion of the solution section. However, their conclusion does not concur with Olsen and Huckin's of students using information driven rather than point driven strategies. Rather, they suggest that students have difficulty following argumentation that is developed into more complex discourse structures than they are used to in first language lectures they have encountered. This is also supported by Tudor and Tuffs' 1991 study which shows that expectations regarding the macro organisation of lecture discourse will influence non-native speaker comprehension and cause students to have difficulty understanding ideas presented differently. This in turn supports the idea that cultural conditioning may play a part in cognitive processes.

The Tauroza and Allison study and the Tudor and Tuffs study therefore imply that as far as EAP courses are concerned, simply working to improve the language proficiency of students is insufficient to help them overcome difficulties with more complex and unfamiliar discourse elaboration. Rather, there seems to be a need to create a balance on EAP courses between a focus on language development and intellectual problem

solving. However, it is also important to speculate on how much the results of these two studies were affected by the fact that the students in each study were watching a video-recorded lecture in a language laboratory rather than a live lecture. With no opportunity for the students to ask questions during the lecture and no opportunity for the lecturer to ascertain levels of comprehension of this particular audience, comprehension difficulties with the evaluation section may have been different to those experienced under normal lecture circumstances.

Flowerdew (1992) carried out an empirical study of definitions in sixteen biology and science lectures which suggested a more complex and spontaneous discourse organisation than the situation-problem-solution-evaluation structure outlined above. He found that in the lectures analysed, a term was defined on average nearly every two minutes, being spread more or less evenly throughout the discourse. Definitions also seemed to perform one of two main functions in the discourse. They either served to signal to the audience the discourse structure of the lecture or helped to maintain comprehension throughout the discourse. Thus, high focus definitions at the macro level constituted the main focus of the discourse and were ordered according to the logical structure of the subject matter, while low focus or embedded definitions at the micro level ensured that the audience understood terms as they were introduced during the lecture (1992:209). Flowerdew did not find any systematic patterning in terms of the occurrence of definitions, but rather found that they tended to occur when needed in order to facilitate audience comprehension. Unfortunately, Flowerdew's study does not extend to a discussion of student comprehension of these lectures, but his findings do suggest that the characteristics and occurrence of definitions in lectures are likely to vary depending on the subject matter and on the audience. Thus, any study attempting

to measure student lecture comprehension which uses a pre-recorded or scripted lecture is likely to produce problematic or even dubious results since it lacks the interactive and dialogic nature of naturally occurring lectures. Flowerdew's study also compares the way lecturers define in lectures and how definitions are presented in EAP coursebooks and discovers a great discrepancy between the two. Whilst the former are more varied in structure, coursebooks tend to provide very prescriptive, formulaic patterns for students. Flowerdew's study is important in that it stresses the need for more analysis of authentic lectures as well as the value of descriptive work on language functions as input to EAP course design.

Niemloy (1988) examined the language of teachers in technical classrooms at the graduate level as a preliminary step towards a descriptive account of technical teacher talk. She took an ethnographic approach to data collection and analysis, and described how the lectures consisted of metalecture and core lecture sequences, and highlighted how discourse markers served as boundary markers between these two types of sequences. Her research also highlights four discourse features related to 'teaching to do', a problem solving discourse structure, the use of first and second person pronouns, the interplay of verbal and graphics instruction, and the use of anecdotes and analogies to give voice to the teacher's own experience. Whilst this study is extremely useful in presenting particular features that make up this type of discourse, ideally, the next step needed for this research would be to show how these features are relevant to the participants and how the institutional context of academic discourse is invoked and oriented to by those participants.

A study by Strodt-Lopez (1991) also takes a descriptive approach to discover the way in which American university lecturers use asides. As with the present study, Strodt-Lopez was motivated by conversation analytic findings regarding the structuring of everyday conversation. Her hypothesis was that lectures would be similarly complex in their organisation, and would perhaps borrow some structures from everyday conversation, although these might not necessarily function in the same way when present in lecture discourse. She found that lecturers used asides as a means of reducing the cognitive demands placed on the audience and to make the lecture more easily comprehensible. She argued that asides function at a semantic level by allowing for the suspension of the local topic in order to develop the global topic, and, at a pragmatic level, by stepping out of the ongoing interpretive frame and evoking everyday frames, thereby gaining a new or greater perspective and confirming relevance.

In addition, Strodt-Lopez found in her research that asides were clearly marked with disjunction markers being used at initial boundaries to signal a break with the preceding discourse. Terminal boundaries were not as clearly marked but were signalled by a pat ending expression, a promise to return to the issue, or a short summary. The return to the base lecture was generally marked by 'anyway', 'in any event', 'but' and 'so'.

Strodt-Lopez's work is important because she highlights many of the limitations in the work done on helping non-native speakers understand lectures. As with the research done by Chaudron and Richards (1986) and Dunkel and Davis (1994) for example (see next section), she underlines the point that there is a tendency to focus on single items such as discourse markers, viewed in minimal contexts. She adds that there is also an assumption that lectures contain one, essentially uniform, hierarchical topic structure

which does not allow for additional global structures such as asides. In terms of EAP pedagogy, she argues that it is misleading to present items such as discourse markers to students as if they had a small, specific number of given meanings. As discussed in the next section, markers such as 'ok' and 'so' not only function as macro and micro markers, but their meaning may also vary by context within a particular discourse as well as potentially differ by discourse genre.

Strodt-Lopez states that the way forward in terms of making EAP teacher training and listening comprehension materials correspond to the actual effect of lectures on native speakers is to analyse lectures linguistically and pedagogically without *a priori* assumptions. In other words, there is a need for detailed analysis of authentic lecture talk in an extensive context.

1.4.4 Macro and micro markers in lecture discourse

Much of the research in this area has focused on the type of discourse markers found in lectures at the macro and micro level and their effect on second language lecture comprehension. The main studies carried out have collected data in controlled conditions, with subjects experiencing lecture-like conditions rather than normal, authentic lectures (Chaudron and Richards, 1986; Dunkel and Davis, 1994; Flowerdew and Tauroza, 1995; Olsen and Huckin, 1990; Tauroza and Allison, 1994). This lack of authenticity throws some doubt on the validity of the findings of such studies.

In their study, Chaudron and Richards (1986) provide a definition of macro markers that relates them to global text structuring, e.g. 'Today I am going to be talking about...' or

'Let us move on now to...'. Micro markers such as 'so', 'right', 'well', 'ok', and 'now' are viewed as connecting text at a more micro or clause level or acting as filled pauses. Both the Chaudron and Richards study and later research by Dunkel and Davis (1994) suggest that discourse markers do not assist second language comprehension in English medium lectures. The former study found that although macro markers had a positive effect on recall when they were added to a text, there was no significant effect for micro markers. The latter study found no positive effect for either macro or micro markers on comprehension.

These results are surprising since it would seem likely that macro and micro markers would have some significant function in the talk, otherwise their frequent appearance would be at best illogical or at worst a distraction and hence a potential impediment to successful second language lecture comprehension. Flowerdew and Tauroza (1995) question these findings and the research design of both studies. In the Dunkel and Davis study, two versions of a lecture were used. One was a baseline scripted version which contained neither macro nor micro markers, and the other had both macro and micro markers added. The main criticisms of the Dunkel and Davis study are that the focus was on the effect of markers overall, such that macro and micro markers were not measured separately. Moreover, the text with markers added to it had a relatively small number of micro markers, and this would probably have reduced any likely effect they might have had on comprehension. In the Chaudron and Richards study, four versions of a lecture were used. The first was a baseline scripted version without markers, the second was a version with only macro markers added, the third was version with only micro markers added and the fourth had both macro and micro markers added. Flowerdew and Tauroza argue that since the most common style of lecturing is a more

informal, conversational style, the scripted and hence less authentic lectures used in the Chaudron and Richards study were both unusual and inappropriate as a more relevant research methodology would use unscripted, conversational style texts. They conclude that inserting discourse markers into a text that otherwise has the features of a written text creates a hybrid text which alone could adversely affect comprehension. Moreover, the paradox of the Chaudron and Richards study is that the markers they inserted into the texts were chosen in such a way so as not to add any semantic or pragmatic meaning to the original coherent and cohesive scripted text. Hence, any roles markers might have played in signalling relationships between different parts of the lecture were ultimately made redundant by the methodology employed. The results of the research therefore unsurprisingly showed that under such circumstances markers did not facilitate comprehension of an apparently already largely comprehensible lecture.

In their study, Flowerdew and Tauroza focus on the effect of micro markers on lecture comprehension. They used an authentic lecture with a control group and exposed an experimental group to the same lecture from which the naturally occurring markers had been deleted. Three measures were used for assessment: self-assessment on the amount of lecture comprehended; written partial recall summaries of the main points of the lecture; and short answers and true/false questions. Their results suggest that comprehension improves when discourse markers are included in lecture discourse compared to when they are deleted. They conclude that subjects who did not have the discourse markers may have had to focus more closely on each segment of the talk, and so would have had less spare processing capacity. These results are consistent with the 'mental model deictic shift' interpretation of the role of discourse markers between stretches of discourse (1995:438). In this view, a listener understands a stretch of talk

by applying or suspending a specific frame of reference or mental model to what they hear. The role of discourse markers in this process is to signal deictic continuity or deictic shift to the listener and hence whether the listener needs to continue to apply or to suspend their current mental model in order to deal with successive ideas. Hence, in this view, discourse markers are seen as playing a vital role in the listening process as they function specifically to prepare listeners for any changes in the direction of a speaker's ideas and to smooth the transition from one topic to another for the hearer.

Flowerdew and Tauroza add that the problem with most EAP programmes is that they teach students discourse markers associated with written rather than spoken text, which in turn implies that they are likely to be different. It is clear that non-native speaker students need to have their awareness raised as to the importance of macro and micro markers in authentic lecture talk and ways need to be found to help these students process them automatically as they listen.

Flowerdew and Tauroza also discuss their concerns about the application of the results of Chaudron and Richards' research to EAP pedagogy. For example, research by DeCarrico and Nattinger (1988) following on from the Chaudron and Richards study, argues that lecture comprehension training should include a specific focus on macro markers, at the same time implying that training in micro marker identification is not necessary. DeCarrico and Nattinger look specifically at lexical phrases for the comprehension of academic lectures. They define lexical phrases as 'conventionalised structures that occur more frequently and have more idiomatically determined meaning than language that is put together each time' (1988:92). They state that if students have some knowledge of these recurring phrases they do not have to attend to each individual

word and so can focus on the larger structure of discourse. They add that lexical phrases are 'patterned sequences of words usually consisting of a syntactic frame that contains slots for various fillers' (ibid). These may be completely fixed, unvarying phrases: 'as it were' etc, phrases with slight variation: 'let me suggest' etc, or highly variable phrases: 'anytime X, there's Y' etc. They state that lectures are full of such formulaic phrases which function as important directional signals and indicate how the information is organised and how it is to be evaluated. DeCarrico and Nattinger do not comment further on exactly where in lecture discourse such phrases occur and so do not reveal any significant patterns in the use of lexical phrases in instruct sequences.

In the DeCarrico and Nattinger study, the functions of lexical phrases in authentic lectures from a range of disciplines are examined. They state that these are commonly used as macro markers in lectures and signal the direction of the discourse and the relations within it and are distinct from micro markers. They signal higher level information such as exemplification, summary and restatement. The authors categorise them further into global macro organisers which indicate the overall organisation of the lecture, and local macro organisers which highlight sequencing or the importance of information at specific points within the overall framework set by the global organisers. Examples of the former are topic markers: 'the first thing is', 'what I'd like to do is'; topic shifters: 'so let's turn to', 'I'd like to talk about' and summarisers: 'you can see', and 'so the theory goes'. Examples of the latter are relators: 'this ties in with' and 'same way here', exemplifiers: 'take something like', and 'one way is', and aside markers: 'where was I?' and 'I guess I got off the track here'.

Whilst this categorisation seems quite complex, it does at least indicate one of the weaknesses in the Chaudron and Richards study in that it seemed to categorise

discourse markers according to length of phrase where longer phrases were categorised as macro markers and shorter phrases were categorised as micro markers. This clearly is not a reliable way to categorise markers since 'ok' or 'now' can equally be used by speakers as macro or micro organisers in discourse. DeCarrico and Nattinger also discuss the implications of teaching lexical phrases, and suggest that basic lexical phrase frames and their variations could be taught together with their discourse function. Whilst this approach could work for a number of fixed lexical phrases, it would not help to clarify the various macro and micro functions of markers such as 'ok', 'now' and 'so' and so the only course of action would be to raise awareness amongst students of these different level functions.

1.4.5 Lexical, grammatical and phonological features of lecture discourse

In terms of research undertaken into native speaker talk to non-native speakers, the fact of modifications or 'foreigner talk' is well established (Chaudron, 1983). These modifications can be grammatical, with speakers using syntactically less complex speech, or lexical, with speakers restricting their range of vocabulary and using more repetition. However, where lecture discourse is concerned, it is not always clear in the literature if the talk is directed at native speakers or non-native speakers or both, and so it becomes difficult to ascertain whether the talk has been modified in order to take into account such factors or not.

Chafe (1986) identifies a list of features specific to academic speaking which are closer to conversational speaking and which suggest an awareness of the difficulties the audience can experience in attempting to process such informationally dense talk. For

example, he states that in this type of lecture discourse there are more comprehension checks and rhetorical questions, and a greater use of phrases such as 'you know' and 'you remember' which confirm a more interactive style and indicate that the speaker is guiding the thoughts or cognitive processes of the audience along specific avenues. There is more repetition of content vocabulary, particularly when new concepts and terminology are being presented, although this may also be due to lecturers having to make lexical choices online as they speak. This online processing can lead to a greater use of colloquial hedges such as 'sort of' and 'kind of' since lecturers cannot normally punctuate their talk with long silences in order to search for the best lexical choice to match their thoughts and ideas. Consequently, lecturers can be led to express approximations of specific things they have in mind.

Whilst these features are all significant in the overall structure of lecture discourse and in lecture comprehension, non-native speaker problems with lecture comprehension cannot solely be attributed to linguistic weaknesses at the sentence level related to vocabulary, pronunciation and grammar (Olsen and Huckin, 1990). Research by Lebauer (1981) suggests that the problems these students experience stem less from lexical and syntactic sources and more from discourse or processing difficulties. Later research by Flowerdew and Tauroza (1995) also confirms that while certain linguistic shortcomings may affect the comprehension process, many non-native speaker problems lie at the discourse rather than the sentence level. They also highlight the importance of discourse level cues in the process of lecture comprehension. A multi-level approach to lecture discourse therefore seems more appropriate and recalls Anderson and Lynch's (1988:13) three level model of information sources in listening

comprehension, comprising knowledge of the language system, knowledge of context and co-text, and schematic knowledge.

Ethnographic studies of lecture comprehension use techniques that do not interfere with the event under investigation and usually rely on student self reports in order to determine what students have understood. The advantage of such studies is that they are a clear move away from approaches which analyse comprehension under controlled conditions and so lead to results which may have dubious validity. The problem, however, is that often what students report back as being difficult about lecture discourse may not actually be the case. For example, Flowerdew and Miller (1992) have shown that L2 learners consider fast speech to be a major cause of comprehension problems they encounter in lectures. A growing body of research indicates that this is probably a misperception on the part of the listeners. A study by Cheung (1994), for example, shows that learners perceive speech as relatively fast when other factors unconnected with speed make the message difficult to comprehend. Therefore, although studies that use subjective reports are useful in that they give us information about listeners' beliefs, there remains the need for further investigations to assess the relationship between perception and reality. As far as determining the effects of specific linguistic features on lecture comprehension is concerned, it is extremely difficult to investigate these using an ethnographic approach. This stems from the fact that it would be quite time consuming and hence impractical for the researcher to sit in on lectures until the relevant linguistic features occurred often enough to allow generalisations to be made.

The present study therefore takes a conversation analytic, bottom-up approach to lecture discourse in order to consider the linguistic features of the talk and to discover how

they, together with discourse level features, serve a unitary purpose in the construction of information units that comprise lecture discourse. As Flowerdew and Miller (1996) state, there is a need to go beyond mere description of the features of lecture discourse to interpretation and explanation. This means that the three main elements of organising, informing and evaluating, and the interplay between them also need to be investigated and explained.

Thus, if conversation analytic studies into lecture discourse can reveal systematic patterns in both the structure and features of this kind of talk, then a clearer picture of what students are actually required to process can be developed. This type of research can then be of use not only in raising awareness but also in helping students overcome cultural differences in lecture discourse, develop more effective skills and strategies for comprehension and improve their note-taking practices.

1.5 Cognitive factors affecting lecture comprehension

Cognitive factors are those which affect how the listener works with incoming data. Bartlett (1932) was one of the first researchers to try to answer the question of what goes on in listeners' minds as they attempt to process connected discourse for retention. The fact is that listeners do not recall or reproduce a passage exactly, but rather reconstruct it in the light of their own schemata at the time of recall. This concept of listening as a process of reconstruction based on the listener's own expectations, analyses and inferences has resulted in schema theory. This is based on the belief that a text does not in itself carry meaning but rather 'a text only provides directions for listeners or readers as to how they should retrieve or construct the intended meaning

from their own previously acquired knowledge' (Adams and Collins, 1979:3). Listeners are therefore not viewed as passive receivers of information but as active participants who are constantly recreating the text they hear. This recreation of text involves a number of skills and processes.

Two basic processes have been identified in listening: bottom-up processing, and top-down processing (Chaudron and Richards, 1986:113). Bottom-up refers to the analysis of incoming data and categorising and interpreting data on the basis of information in the data. Examples of bottom-up processes would include those which assign grammatical status to words on the basis of syntactic and morphological cues and which assign topics and meanings on the basis of syntax and word order and the meanings of lexical items used in the message. Top-down processes make use of prior knowledge as part of the comprehension process. This could include expectations about the topic and structure of a piece of discourse based on world knowledge and reference to different types of frames and schemas. The fact that top-down processes involve prediction and inferencing means that they can allow a listener to bypass some aspects of bottom-up processing. Thus, comprehension can be viewed as an effective and economical combination of both bottom-up and top-down processing.

1.5.1 Cultural factors affecting comprehension

As discussed above (Tauroza and Allison, 1994; Tudor and Tuffs, 1991), as far as cognitive factors affecting students' listening comprehension of lectures are concerned, some may be cultural and based on past experiences with lecture discourse in the students' first language. Kaplan (1966) and others studied the notion of 'contrastive

rhetoric' and, in particular, the idea that different cultures have different assumptions about the ways to communicate ideas in both written and spoken language. Some culturally determined ways of organising discourse can thus create problems for non-native listeners. Cross-cultural differences can lead to lexical difficulties, with certain items having different connotations in different cultures. There may also be psychological problems caused by previous English language learning experiences and background. These can in turn lead to bad listening habits with students trying to focus on every single word or simply switching off because they do not know how to process the incoming information effectively.

In order to be able to draw on prior knowledge, each individual possesses a stored knowledge base or cognitive models which represent different fields (Ungerer and Schmid, 1996). However, cognitive models are not universal but depend largely upon the culture in which a person is raised and lives. In other words, a person's culture provides the background for all situations they have to experience in order to be able to form a cognitive model. Moreover, whilst cognitive models can differ cross-culturally, they may also differ between individuals since psychological states are necessarily private and personal experiences. In terms of processing lecture discourse then, the job of a non-native speaker student is made harder by the fact that they may simply have a different cognitive model for a particular domain. Worse still, they may have no cognitive model to refer to at all, because the domain may not be a part of their own culture and hence not yet form part of their own world knowledge and experience.

1.5.2 Skills needed for lecture comprehension

In terms of cognitive information processing, students are required to consolidate, delete and generalise the information they hear in a lecture as well as make notes on the important elements (Van Dijk, 1977). In order to comprehend the content of the lecture, students need to have a relatively clear idea of what the lecturer is doing at each stage of the lecture process. They cannot treat each piece of information they hear as discrete, but must instead acknowledge the thread of discourse that ties these pieces together. In other words, students have to understand the proposition as well as the content. The fact that some students have problems ranging from minor misunderstandings to major difficulties may be the result of their not being able to isolate the topic and focus on the meaning of the lecture as a whole, and are unable to recognise the relationship between main and supporting ideas.

It is therefore clear that non-native speaker students need to develop appropriate strategies for listening to lectures. They need to be able to learn how to formulate tenable hypotheses (Lebauer, 1984:43) which can be revised according to preceding or incoming data on lexical, syntactic and discoursal levels. They also need to be shown how to understand the purpose of each section, or instruct sequence, as well as content of the lecture itself.

Further problems may arise for students who, even though they may be competent listeners in their first language, are unaware of the conventions and cues that signal important information in lectures delivered in English. That is to say, they do not have an awareness of how information is packaged in English language lectures and how to

deconstruct the talk in order to take notes that reconstruct the main points of the lecture.

As Candlin and Murphy (1976) state, students:

‘have to be able to receive a verbally and visually transmitted message; to decode and memorise parts of it after reception; to relate the newly received parts to the already perceived parts; to select from these the elements they are to re-encode; and when this has been done, the re-encoded parts are written or copied down. (Candlin and Murphy 1976:63)

With this in mind, researchers have identified what they consider to be the skills necessary for successful lecture comprehension. Richards (1983) lists the following micro skills needed for academic listening:

1. ability to identify purpose and scope of lecture
2. ability to identify topic and follow topic development
3. ability to identify relationships among units within discourse (main ideas, generalisations, hypotheses, supporting ideas, examples)
4. ability to identify the role of discourse markers in signalling structure of lecture (conjunctions, adverbs, gambits, routines)
5. ability to infer relationships - cause, effect, conclusion
6. ability to recognise key lexical items related to subject/topic
7. ability to deduce meanings of words from context
8. ability to recognise markers of cohesion
9. ability to recognise function of intonation to signal information structure - e.g. pitch, volume, pace, key

10. ability to detect attitude of speaker toward subject matter
11. ability to follow different modes of lecturing - spoken, audio, audio-visual
12. ability to follow lecture despite differences in accent and speed
13. familiarity with different styles of lecturing: formal, conversational, read, unplanned
14. familiarity with different registers - written vs colloquial
15. ability to recognise irrelevant matter - jokes, digressions, meanderings
16. ability to recognise function of non-verbal cues as markers of emphasis and attitude
17. knowledge of classroom conventions - turn taking, clarification requests
18. ability to recognise instructional/learner tasks - e.g warnings, suggestions, recommendations, advice, instructions.

This list very clearly highlights the tasks students are expected to fulfil during a lecture. These tasks could be divided into macro or global comprehension of the major themes and topics of the lecture (1, 2, 3, 4, 5) and micro or local comprehension of more specific items within the lecture (6, 7, 8, 13, 14, 15, 17, 18). There are also some meta level comprehension tasks related to prosodic features and expression of the lecturer's attitude (9, 10, 11, 12, 16).

Chiang and Dunkel (1992) also discuss factors that may thwart a student's attempts at lecture comprehension. Their list includes other cognitive factors such as a student's limited short-term memory for English input, poor inferencing abilities, and failure to use appropriate cognitive or learning strategies. Thus, the recreation of lecture

discourse requires a number of skills that can be influenced by a variety of cognitive and affective factors.

1.5.3 Note-taking in lectures

In addition to these skills, as part of what students do in lectures, they usually take notes. The two main assumptions about the value of note-taking are that it can help students organise lecture content while listening and that it is a useful external record and stimulus for later recall and reconstruction of lecture content when studying (Chaudron, Loschky and Cook, 1994:76). In other words, the first reason for taking notes is concerned with the cognitive process of note-taking itself and the second with the resulting product. Regarding process, note-taking is seen as stimulating encoding processes in the learner and in turn increasing the likelihood that the material will be understood, coded and stored in a meaningful way during input. Note-taking also stimulates a generative process by which students connect lecture content with their prior knowledge (Peper and Mayer, 1976). However, as we have seen above, this is very much dependent on whether that prior knowledge is appropriate and relevant. Note-taking also seems to increase when students detect an underlying structure to the information being presented in the lecture (Einstein, Morris and Smith, 1985). Thus, if research can reveal systematic patterns in lecture discourse, then these can be presented to students and their note-taking skills can be developed. Moreover, as students take notes, their attention may increase and so lead to greater concentration on the material. If students are therefore expending more effort and energy, the material may be processed at a deeper and more meaningful level.

In terms of product, note-taking is valuable because the notes are available once the lecture is over. They provide an external store of information for later retrieval and revision as study aids outside class, and so can alleviate excessive demands on memory.

Note-taking is therefore viewed as valuable, since information that is recorded in notes is more likely to be remembered later than content that is not noted (Van Meter, Yokoi and Pressley, 1994). Notes are useful because they potentially help the learner to rehearse important content that has been recorded and serve as a mnemonic or reconstructive function and can help the student to remember or reconstruct other parts of the content not included in the notes themselves.

When listening to a lecture, a student therefore needs to be able to distinguish main and supporting information, understand the organisation of the argument presented by the lecture, use appropriate comprehension strategies for different parts of the talk and integrate information from a variety of sources such as handouts, slides, overhead transparencies and the lecturer's gestures and facial expressions. The fact that students have to do all these things and take comprehensive notes quickly and clearly often means that students miss or misunderstand vital elements of the lecture. Hartley and Davies (1978:207) claim that note-taking can be considered as a specific example of the higher order of cognitive processes called analysis. Analysis involves three separate but related activities of identifying and discriminating between elements, identifying and discriminating between relationships between the elements, and identifying the organising principle, that is, determining the plan which determines this structure for this material. It seems clear then that note-taking during lectures requires self management of strategies, relevant prior knowledge and attentional capacity.

1.5.4 Lecturing style and note-taking

It also seems clear that the lecturing style and approach of the lecturer can affect a student's understanding, note-taking and retention of information. If, in lectures, note-taking helps students organise lecture content while listening, then it would seem that a lecturing style that has a clear structure and signals the main and supporting points would facilitate note-taking and hence the comprehension process overall. Research by Van Meter, Yokoi and Pressley (1994) suggests that note-taking varies with respect to lecturing style and better note-taking occurs when lecturers signal the overall macro structure of the lecture and provide students with a clear outline or overview before lecturing, with the key points clearly identified. Good lecturers also follow this outline and do not deviate from it or become side-tracked by their own train of thought. These outlines can help students understand the overall structure of the lecture and help students to decide what should be noted down and how.

Ladas (1980) adds that if cueing is an important factor in successful lecturing, it is important that the lecturer assume responsibility for making encoding and retrieving cues compatible. This means signalling clearly either orally or via visual aids, by repeating important information, by slowing the rate of speech so that students can listen and write, and by simply telling the class what information is important. Lecturers need to cue main and supporting detail, organise the argument clearly and carefully, and be sensitive to the various comprehension strategies required for different sections of the talk. The paradox for students is that whilst they focus on the act of taking notes, they focus less on processing the talk (Lindsay and Norman, 1977). This suggests that lecturers need to be aware of what they cue, when they cue it and how they can allow for students to process what is being cued and make appropriate notes, such

as providing a break between chunks of information as Flowerdew and Miller (1992) propose.

Students are not only listening to understand the talk, but also to learn from it. Thus, lecturers need to have greater awareness of the cognitive demands placed on the students during a lecture and adapt their talk accordingly. Lecturers need to construct the talk or package the information in such a way that it helps the listener to create a coherent mental representation of what they are trying to say. This leads to lecturers approaching the task of lecturing in different ways and it resulting in a variety of lecturing styles. The problem is that these styles are not stagnant but approaches that can vary between speakers and disciplines as well as change and develop over time. The lecturer's style of lecturing is therefore a significant determinant of note-taking, although note-taking can vary with student characteristics and course content and demands.

1.5.5 Research into note-taking and second language lecture comprehension

It is important to note that there is not a clear relationship between students' notes and comprehension. For instance, students often do not note down everything they comprehend but leave out information they consider to be irrelevant, blatantly obvious, or easy to recall. In addition, as comprehension and note-taking activities in lectures are real time activities, students, particularly non-native speaker students, are limited by what they can write down by time restraints. Due to lack of time, students may omit to note something that they have comprehended even though they regard it as relevant.

Therefore, lecture notes inevitably provide an incomplete indication of what the note taker has comprehended.

It is therefore perhaps unsurprising that the impact of student note-taking on the comprehension and recall of lecture information in English of non-native speaker students 'has largely been ignored by the L1 and L2 educational communities as a phenomenon of study' (Dunkel, 1988:278). She also speaks of the 'dearth of research concerning cross cultural differences in students' notes' and 'the complete lack of research on the content of L2 students' notes' (1988:263). King (1994) supports this view and claims that most research that has been done has been approached from three angles: educational psychology, academic staff training and linguistics (sociolinguistics and discourse analysis), although some of the research has led to the development of EAP materials which now include lecture note-taking simulations and note-taking techniques.

Concerning the research that has been carried out into note-taking practices, there has been quite a lot of criticism. Clerehan (1995) highlights the limitations of the research such as contextual restraints with students watching lectures produced for the purpose at hand, usually on video and of a shorter than normal length. Hartley and Davies (1978) provide a comprehensive list of the problems with various studies on note-taking of students. Their main criticisms are that, in many cases, students knew they were taking part in an experiment on note-taking. The lectures were often inauthentic and irrelevant to the group of students taking part in the study, most tests were home made and not tested for reliability, there were no controls for test effects, there was an assumption that

there is one way of note-taking, and a complete neglect of sex, age, culture, personality factors.

However, both the naturalistic approach and the analytical approach are equally problematic. The former is criticised for not providing adequate controls for the number of potentially important variables. Whilst it is easier to be more precise about what is going on using the analytical approach, the problem then becomes one of external validity and whether or not the findings are relevant to normal situations. Hartley and Davies (1978) add that further experiments are then required in the natural situation in order to see if this is then so. On the whole, the findings of their research were that analytical studies were not directly transferable to the natural situation. They argue that if note-taking studies are to have any external validity, then they must be representative of the situation. This would mean naturalistic situations, replications with different lectures and lecturers and students unaware that they are taking part in an experiment. Dunkel (1988) also states that laboratory conditions affect the efficacy of the study of note-taking. She reiterates the need for the examination of authentic lectures and authentic student notes since this is still far from a stage where any kind of functional theory of lecture discourse processing can be developed, with literature focusing either on the lecture or the notes. All of this suggests a greater need for research into lecture discourse, content and structure and the features of student notes in a naturalistic setting to identify the differential effects a lecture might have on its audience.

1.6 Summary

This chapter has reviewed the significant studies into lecture discourse and second language lecture comprehension and has discussed the strengths and limitations of discourse analytic and ethnographic approaches to the analysis of this type of talk. One of the conclusions from this body of research is the need for further examination of authentic lecture discourse in naturalistic settings. The present study has interpreted this as the need for more studies taking a conversation analytic approach to lecture discourse. The next chapter introduces conversation analysis as the method of data analysis used in the present study.

Chapter 2

Methodology

2.1 Introduction

The previous chapter's review of the literature showed the strengths and weaknesses of some of the discourse analytic and ethnographic studies into lecture discourse. It also provided a rationale for the present study's methodological approach to the analysis of lecture discourse as a response to the demand for more descriptive work on naturally occurring data.

This chapter gives a brief introduction to conversation analysis and its goals, and shows how it is an appropriate methodological tool for the examination of lecture discourse as an example of institutional, rather than everyday, talk. The main practices of conversation analysis are discussed; in particular, its use of recorded data and transcriptions, and the issues of CA's reliability, validity and the generalisability of its findings are examined. The chapter also details how pragmatics can be used to complement conversation analysis and enhance the overall investigation.

2.2 Aims of conversation analysis

The predominant medium of social interaction is talk. Conversation is the unmarked mode compared with other kinds of communication and is the primary form of interaction to which children are exposed and through which they become socialised.

Moreover, in both the private and public arena, people perform their activities through talk. As Heritage states:

The social world is pervasively a conversational one in which an overwhelming proportion of the world's business is conducted through the medium of social interaction. (Heritage, 1984:239)

With talk being so pivotal to our everyday social activities, questions have been raised as to its organisation, how participants in talk co-ordinate what they say and the significance of talk in society as a whole (Hutchby and Wooffit, 1998:1). Conversation analysis, a methodical approach to the study of naturally occurring, mundane social action, has developed over the last thirty years or so as a means of finding the answers to these questions. It is a specific mode of analysis which can be used in order to gain a systematic insight into the ways in which participants in interaction actually *do* interaction. As Atkinson and Heritage (1984:1) state:

The central goal of conversation analytic research is the description and explication of the competences that ordinary speakers use and rely on in participating in intelligible, socially organised interaction. At its most basic, this objective is one of describing the procedures by which conversationalists produce their own behaviour and understand and deal with the behaviour of others. A basic assumption throughout is Garfinkel's (1967:1) proposal that these activities – producing conduct and understanding and dealing with it – are accomplished as the accountable products of common sets of procedures.

(Atkinson and Heritage, 1984:1)

Fillmore describes conversation as the genre in which 'the most straightforward principles of pragmatics' can be discovered such that 'other types of discourse can be usefully described in terms of their deviation from such a base' (1985:165). Since the relationship between conversation and the common sense understandings which constitute social order is reflexive, conversational structures are the product of both linguistic structures and more general social interaction through which participants negotiate their relationships with one another and whence a sense of social order is created (Garfinkel, 1967; Schiffrin, 1987). Thus, unlike other forms of linguistically oriented analyses, conversation analysis is interested in more than just the study of talk. It does not view the production of utterances and the sense they obtain purely in terms of linguistic structure, but primarily as a practical social accomplishment. In other words, its actual object of study is the interactional organisation of social activities, and so it focuses on the integration and contribution of both linguistic and non-linguistic processes to talk in interaction.

The main objective of conversation analysis is to discover how participants understand and respond to each other in their turns at talk and how sequences of activities are then generated (Psathas, 1995:2). In its attempt to uncover the organisation of naturally occurring talk, the interaction is not viewed from the external perspective of the analyst but rather from the perspective of how the participants display for one another their understanding of what is going on. In this way, talk is not regarded as simply the product of two 'speaker-hearers' and their attempts to exchange information or convey messages to each other (Hutchby and Wooffitt, 1998:1). Rather, conversation analysis examines interaction at a deeper level in order to reveal the underlying organised reasoning procedures which give rise to naturally occurring talk, and on which speakers

rely to produce utterances and by which they make sense of other speakers' talk. CA shows how participants in talk orient to, take into account, and make relevant particular features of the setting in which the interaction takes place, and how they work together to achieve both orderly and meaningful communication. Utterances are thus shaped by organising procedures which are linked to the contexts in which they are produced and to which participants have access as members of a natural language community. Moreover, it is important to stress that the interpretation of the meaning of utterances for participants in any instance of talk in interaction is not an end in itself, but one possible means to the end of the analysis of conversational organisation.

The basic position of conversation analysis is that social actions, located in everyday interaction, are meaningful for those who produce them and that they have a natural organisation or orderliness. This idea that conversations are orderly is not only for the analyst, but first and foremost for the participating members in the interaction (Schegloff and Sacks, 1973: 290). Moreover, the orderliness is not due to order among the sentences in conversation 'but because of the ways in which speakers and hearers co-ordinate their joint productions of meanings and actions' (Schiffrin, 1988:262). In other words, it is the interactional methods used by members as solutions to particular organisational problems in social interaction that produces this orderliness. These methods can be quite general but can also allow for a fine-tuned adaptation to local circumstances in which the talk is taking place. In this sense, they are both 'context-free' and 'context-sensitive' (Sacks, Schegloff and Jefferson, 1974).

2.3 Fundamentals of conversation analysis

Conversation analysis emerged in the mid 1960s from the sociological movement of ethnomethodology founded by Harold Garfinkel. Ethnomethodology seeks to understand and explain meaning systems and procedures between people and how they make sense of their social world. Conversation analysis was developed collaboratively by Sacks, Schegloff and Jefferson as an approach to the study of social organization in everyday interaction in order to discover not only how people share a common understanding of the world but also a common understanding of the actions of others. CA's distinctive feature is that it crosses the boundaries between sociology, linguistics and social psychology (Hutchby and Wooffitt, 1998:4), and draws on both affinities with Goffman's investigations of an interaction order to face to face communication, and Garfinkel's programme of ethnomethodology. The main contribution of conversation analysis relates to the sequential organisation of talk. As Paul ten Have puts it: 'it can be summarized briefly as the idea that what a doing, such as an utterance, means practically, the action it actually performs, depends on its sequential position' (1999:6).

Thus, whilst ethnomethodology shares some notions with conversation analysis, its analytic focus is slightly different. It does not rule out the sequential analysis of turn-by-turn talk, however, its main concern is the examination of the role of text and talk in the everyday achievement of institutional actions. Boden (1994) suggests that from a sociological perspective, conversation analysis has essentially turned this issue around such that the question to which an answer is sought is not how people respond to a social order and its normative constraints, but rather how that order is brought about in a specific situation, through activities in a specific time and place. Thus, for conversation

analysis, the examination of the subtle details of moment-to-moment existence and their sequential organisation is viewed as leading to an understanding of the orderliness of social life, being based on the assumption that everyday activities are performed and achieved by competent actors. Conversation is therefore a particularly salient activity in social terms. Moreover, the fact that talk can be recorded means that transcriptions can be used in comparative studies and for the development of wider generalisations.

2.4 Conversation analytic practice

As far as the methodology of conversation analysis is concerned, it does not exactly follow the standard format in the established methodological literature. This is largely because, in conversation analysis, there are hardly any prescriptions or instructions to be followed. Rather, what is found are descriptions of practices used in conversation analysis, together with their rationale. The idea behind this is that the methodological procedures should not be pre-specified on *a priori* grounds, but rather selected on their appropriacy to the materials at hand. However, its most distinctive methodological trait is that conversation analytic research is based on tape recordings of actual interactions which are recorded as far as possible in the ordinary happenings of people's lives rather than pre-arranged events for experimental purposes. CA researchers then make extensive use of transcripts, both in generating analyses and presenting analyses in published form.

Thus, in practical terms, qualitative research methods are generally best suited to the conversation analytic approach. Research of this kind is concerned with the study of human behaviour within the context in which that behaviour occurs naturally and where

the role of the researcher does not affect the normal behaviour of the subjects involved. The qualitative tradition in talk relies on descriptions of explanations based on the belief that it is in face to face interaction that all socially significant phenomena are constructed or created. In this way, qualitative research is holistic and heuristic with little or no manipulation of the environment and so can avoid the problems inherent to experimental settings (Seliger & Shohamy, 1990). This requires non-participant observation on the part of the researcher, who records and takes notes on the observed activity but without any *a priori* theories or categories as guidance. The researcher does not determine in advance the exact data to be sought, and may only have a rough idea of the procedures that will be used. The analysis is data driven, and as the data are collected, the researcher can look for patterns and commonalities. As categories emerge, these can be applied to the rest of the data, resulting in the refinement of categories and the discovery of new systematic phenomena. The ultimate goal of such qualitative research is to discover phenomena not previously found and to understand them in terms of the perspective of the participants.

As far as quantitative analysis is concerned, this is, in part, rejected by conversation analysts, as it requires analysts to view linguistic tokens in isolation from the multiple channels and contexts in which they occur, and to differentiate such tokens into mutually exclusive categories. Moreover, quantitative analysis is thought to be more appropriate to a field that is already quite well researched. Silverman (1993:22) points out 'there are no principled grounds to be either qualitative or quantitative. It all depends upon what you are trying to do'. Since the aim of this study is to discover more about the practices of academic discourse, a relatively new area of research, a qualitative approach is more appropriate.

As Silverman (2000:43) states: 'social science traditions which inform the analysis of transcripts of tapes are conversation analysis and discourse analysis'. However, whilst both discourse analysis and conversation analysis are concerned with giving an account of how coherence and sequential organisation in discourse are produced and understood, Levinson (1983:284) argues that the two approaches are incompatible. This is largely because the former is top-down or rule/grammar driven, unlike conversation analysis which is bottom-up and data driven. In this light, discourse analysis is similar to classical, syntax-oriented grammar, in that it isolates a few short sentences as representative examples and then builds theories around them. Mey (1993) argues that discourse analysis is neither relevant nor useful as a descriptive method for analysing conversation (talk in interaction). Its focus on the isolated sentence not only leads to an analysis of sentences solely in terms of syntactic and semantic features, but treats them as independent of discursive considerations (Atkinson & Heritage, 1984). Discourse analysis is seen as an approach which ignores the fact that utterances are understood by reference to their placement and participation within sequences of actions.

2.5 Conversation analysis and institutional talk

As stated in the Introduction, despite having identified conversation analysis as the research methodology for this study, it may not be very clear why something apparently associated with the analysis of everyday conversation can be applied to more formal, institutional talk. However, it can be argued that even from its inception, conversation analysis has never focused exclusively on informal or mundane conversation. For example, the period 1963-1964 could be taken as the most immediate origin of

conversation analysis. During this period, Harvey Sacks analysed telephone calls to the Suicide Prevention Centre in Los Angeles. He investigated how callers' accounts of their problems were produced in the course of, and fitted into, their interactions with the Prevention Centre's staff at the other end of the telephone. From these initial institutional exchanges, Sacks began to explore the 'machinery' of conversational turn taking as well as the sequential patterns associated with the management of activities in conversation. Only then, in collaboration with Gail Jefferson & Emanuel Schegloff (Sacks, Schegloff, & Jefferson, 1974) did he start to collect a larger corpus of more mundane telephone calls for analysis and develop a more comprehensive picture of conversational organisation. Conversation analysis has developed in relation to a wide range of data. The term 'conversation' therefore seems to be a slight misnomer, and many researchers have opted to use the term 'talk in interaction' to refer to the object of CA research (Schegloff, 1987).

Since Sacks's early work, a large part of CA has dealt with talk in interaction in institutional settings, especially in the areas of doctor-patient interactions, emergency phone calls, news interviews, courtrooms and classrooms. These settings can be further divided into informal and formal arenas. For example, doctor-patient interactions can be regarded as largely informal, taking place in private rather than public, and oriented to more local and negotiable understandings. Studies in this area have largely focused on the asymmetry of the question-answer format of consultations (Byrne & Long, 1976; West, 1984), the dispreference for patient initiated questions (Frankel, 1990), shifts in register and footing, and how lexical choice can formulate context (Tannen & Wallat, 1987; West, 1990), and the differences in the goals between participants (Heritage & Sefi, 1992). Linell & Luckmann (1991) stress that while asymmetry exists in these

types of institutional interactions, it has often been oversimplified in the literature. The apparent asymmetry of interaction is often collaborative between the lay and institutional participants as information is exchanged and the different goals of the participants are realised.

Asymmetry in interaction is in greater evidence in more formal and public institutional settings such as courtrooms (Atkinson & Drew, 1979; Drew, 1992; Zimmerman, 1992) and news interviews (Heritage, 1985; Greatbatch, 1988). In both cases, the audience is present, but the turn taking system is designed to limit and control the nature of audience participation in the ongoing sequence. The conduct of participants is largely shaped by their orientation to the powerful, and in some cases legally enforceable, external constraints of the institutional setting. Participants thus organise their turn taking in a way that displays and realises its institutional character over the course of the interaction. This orientation, together with the specialised institutional turn taking systems inevitably has an impact on the shape and sequences of actions (Drew & Heritage, 1992).

2.6 Lecture discourse as dialogue

The academic discourse of lectures finds itself somewhere on the fuzzy boundary between more formal and less formal types of institutional talk. It can be described as formal in that the talk is produced for an overhearing audience and in a public arena. The conduct of participants could be said to be oriented to the external constraints of time and the establishment's requirement for a syllabus to be followed. In this case, the turn taking system could be seen as largely uniform. Participation is asymmetrical, and

audience participation is kept to a minimum in order for the required amount of information to be presented within the allotted time. On the other hand, academic discourse has elements of more informal types of institutional talk. It could be argued that goals are local and indeed negotiable between lecturer and students. Moreover, with studies reporting moves towards a more interactive style of lecturing (Benson, 1994; Mason, 1994), the organisation of turn taking might be less scripted and more closely related to ordinary conversation than previously thought. Whilst the data in the preliminary study in the present research show asymmetrical turn allocation, this study aims to go beyond the notion that talk is addressed to an audience, and to suggest rather that monologic discourse in fact mimics certain features of dialogue. One area of speculation in this regard is that of footing shifts and how these could be viewed as potential turn taking devices within a monologic sequence. Additionally, if a turn is potentially a member's method, then a formulation for example, could be treated as a turn.

Conversation is any discourse produced by more than one person and includes just spoken dialogue (Schiffrin, 1988). However, as Schiffrin points out, such a definition should not imply that forms of talk that seem monologic, in the sense that they are produced at length by one speaker, do not also have conversational importance. She stresses that stories contain certain features precisely because they are told to audiences, and many features of rhetorical argument are only understood if such argument is defined as basically dialogic in intent. Goffman (1967:3) adds that whatever occurs in the presence of another is potentially communicative.

Morson (1986) discusses Bakhtin's ideas on the dialogic nature of language and states that he presents two distinct senses of the term dialogue. In one sense, dialogue is the product of social situations in which social factors such as real or potential audiences, earlier and possible later utterances, habits and genres of speech and writing shape all utterances. In this sense of dialogue there can be no monologue because language is believed to be universally, and, by definition, dialogic. Holquist (1990) states that Bakhtin views dialogue as real and monologue as if not an illusion, then a logical construct necessary to understand the workings of dialogue. On the same subject, Vice (1997) adds that monologism is words that expect no answer, or addressivity that only goes in one direction. For true dialogue to take place, participants need to exchange more than statements or sentences, they need to be willing to exchange ideas and to be both listeners and respondents. The theory of dialogism is focused on the idea that culture is responsive involving individuals acting at a particular point in time and space, in reaction to what has gone before and in expectation of what is to follow.

If the above arguments hold, then it would seem reasonable to apply a conversation analytic approach to lecture discourse. Lectures may seem monologic on the surface, but are more dialogic in intent. As long as the audience in the lecture is co-present, then there is always potential for two way communication. Moreover, the definition of monologue, if it exists at all, is clearly problematic. Lectures are based on the exchange of ideas, and the general move towards a more interactive style of lecturing would suggest that this type of institutional talk has more in common with conversation than previously thought.

Montgomery (1988) also argues that conversation analysis could be applied to DJ talk, a monologue in the sense that it is speech produced and controlled exclusively by one speaker. The potential difficulty of doing so, lies in the fact that CA seeks to explicate the orderliness of talk by examining, for example, turn taking. In DJ talk, turn taking is suspended and so there is no possibility of using notions of turn taking to determine the boundaries of units. However, despite issuing from a single vocal source, Montgomery maintains that DJ talk is as a thing of many 'voices' addressed to many 'audiences' or different segments of the audience from single listeners to particular social groups to the entire audience. The DJ uses many first and second person pronouns, interrogatives and imperatives: 'how's Virgo doing?', 'Oi! Libra stop that it's dirty', as well as greetings tokens: 'hi to Bob Sproat', and often treats the audience as if they were co-present. Such methods implicate the audience into the discourse. Montgomery concludes that even as monologue, DJ talk is an unstable albeit dynamic mode. DJ talk addresses the audience in a personal, even intimate manner, yet despite this fragmentation of the audience, individual listeners are made constantly aware of other elements in the audience in which they form a part. Moreover: 'this kind of fragmentariness [...] provides in the phenomenon of interpolation a route into the isolation of unit boundaries in the compositional structure of monologue' (1988:103), and, by the same token, a route into a conversation analytic approach to monologue.

Conversation analysis could, for similar reasons, be applied to sermons, a much more highly ritualised form of monologue than either DJ talk or the lecture. Smith (1993) examined the framing of the exegetical self in sermon performances, and found that many of the strategies females and males use in everyday conversation such as the projection of self (Goffman, 1981) and involvement strategies (Tannen, 1989) were also commonly employed in the more formal discourse of sermons. Smith found, for

example, evidence of self references such as 'I think', 'I believe': the preacher displaying him/herself as spokesperson on behalf of the audience with evaluative comments embedded in 'we can see', 'we find' statements; explicit appeals for attention: 'listen' and indirect imperatives such as 'you'll remember', 'you'll notice'. As with the DJ talk, the audience is implicated into the discourse through these kinds of footing shifts.

If mundane conversation is taken to be the basic forms of social action and interaction out of which patterns of repetitive activity taken as evidence of social structure are built, then talk in interaction can be seen as contributing to the constitution of institutional settings (Boden & Zimmerman, 1991). In other words, it could be assumed that:

Institutional talk operates through the modified use of patterns deriving from ordinary conversation. (Heritage, 1984:239-240)

For the purposes of this study, empirical analysis will accomplish the normal CA tasks of analysing the conduct of participants as well as their orientation to the context or social institution, and the underlying organisation of their activities. The analysis that follows will therefore show that the conduct of participants and its organisation manifest orientations which are specifically institutional or at least responsive to characteristically institutional constraints. Further, the analysis will show how non-specialised conversation procedures are adapted and altered for use in an institutional context, how talk in interaction is selected and adjusted to reflexively produce and reproduce social structure. In this way, CA shows how participants conduct their activities in institutional contexts, and in this study in particular, how participants collaborate in the unpackaging of knowledge.

2.7 Use of recorded data in conversation analysis

Since CA tries to account for speaker/hearer procedures for constructing talk, the only way to do so is through the analysis of participants' actual talk. Therefore, the focus on naturally occurring spoken dialogue is critically important to conversation analysis. Schiffrin (1988:253) points out that, in general, most conversation analysts agree on the study of naturally occurring talk and that their reasons for doing so are founded in both methodology and theory. In terms of methodology, the argument is that it is only through the analysis of actual interactions between speakers and hearers that evidence for the function of a particular conversational device can be found. In terms of theory, it is speakers and hearers whose conversational procedures are the focus of inquiry and the analyst's perspective should be to replicate the language user's perspective. In other words, conversation analysts can only discover the procedures which participants in interaction use to make sense of talk and their procedures for constructing talk if they study precisely the data which those participants articulate and attend to during talk. As Psathas and Anderson state:

the analyst experiences the interactional events as actual occurrences, with a sensitivity to their meanings as these emerge and are displayed by and for the persons engaged in the interaction. (Psathas and Anderson 1990:77)

In this way, conversation analysis avoids pre-formulated theories and categories, allowing itself to be led by the phenomena being studied. Moreover, rather than focusing on isolated sentences or utterances as the primary units of study, CA focuses on sequences and turns within talk in interaction, describing observable behaviours and activities or 'methods' in their natural context with many contextual variables present.

2.7.1 Transcription

In conversation analysis, it is important to stress that the transcriptions of recordings of naturally occurring interaction are not regarded as ‘the data’ (Psathas and Anderson, 1990:77). Rather, transcription is viewed as a convenient means of presenting recorded data in a written, linear fashion, and as one version of the data that can be used for analysis. The audio or video tape is in turn viewed as a reproduction of a specific social event, since neither medium can capture absolutely everything or depict an event in entirely neutral and objective ways. However, for the purposes of CA, recordings made are defined as the basic data. When CA was in its infancy, and to some extent today, analysts focused on the analysis of telephone conversations, such as Sacks’s investigations of telephone calls to the Suicide Prevention Centre in Los Angeles. This clearly allows researchers to focus exclusively on the talk and exclude other features of the interaction. It is true that more video recordings are currently being made use of in conversation analysis, but CA’s particular focus on the organisation of talk means that features such as gesture and facial expression would only be examined in terms of their relationship to the speech being investigated and not studied in their own right.

Transcription is fundamental in facilitating the analysis of recorded data in accordance with CA principles (Hutchby and Wooffit: 1998:73) and is a critical step in the analytic process. Whilst the process of transcription requires the researcher to pick out details in the interaction that might escape the layperson, it may not yet be the best way to present data. This is partly because the researcher faces a dilemma in that whilst he or she is conscious not to make transcriptions with a specific hypothesis or research problem in mind, they also need to make deliberate choices about what and how much detail to include so that the transcription is not only easily readable but also adequately

represents the original data and allows for subsequent analyses (Atkinson and Heritage, 1984:12).

However, the fact that there is the opportunity for repeated and detailed examination of different phenomena has several positive advantages and is therefore a practice supported by CA (Heritage, 1984:238). Firstly, such examination should enhance the scope and accuracy of observations that can be made. Secondly, knowing that recorded data can be made available for public scrutiny works to minimise the influence of an analyst's individual preconceptions or reliance on intuition and recollection. Finally, the fact that CA's aim is to show how talk is sequential means that features such as repair and hesitation are included in the analysis and not passed over, as can often be the case in other linguistic analyses of idealised versions of well-formed sentences.

2.7.2 Transcription conventions used in the present study

In conversation analysis, the transcription conventions¹ that are used are mainly adapted from the sequential approach to notation for transcribing talk developed by Sacks, Schegloff, and particularly Jefferson (1974). It should also be noted that transcription is a skill that can only be acquired through extensive training, and that the actual process of transcription often raises quite difficult and often unbridgeable problems for the analyst. Thus, whilst the researcher aims to make the transcription readable and as faithful to the original data as possible, any transcription can only ultimately be an incomplete representation. The present study uses an adapted version of Jefferson's notation and tries to capture the significant features of lecture discourse such as pauses

and repair, as well as other paralinguistic features considered to be significant. The full transcription of the data used in the present study is located in the Appendix.

2.8 Issues of reliability

In much of the discussion on qualitative and quantitative research, there is a clear implication that quantitative, statistical analysis is the norm, whilst any qualitative data are 'non-quantified' (Sellitz, Jahoda, Deutsch, and Cook, 1964:435) and qualitative research is a minor methodology in comparison. It is true to say that qualitative research is more closely associated with descriptive narratives than statistical tables, and consequently, there is a suggestion that qualitative research is best carried out only in the preliminary stages of a study to facilitate a researcher's understanding of and familiarity with a particular setting before more serious sampling and counting can commence.

Silverman (2000:11) argues that the qualitative versus quantitative research issue a little too black and white, since qualitative research often makes use of simple quantitative measures. He suggests that the debate should focus less on the means and more on the fundamental aim of social science, which is the objective analysis of data. The danger of constructing a distinct divide between quantitative and qualitative research is given warning by Hammersley:

We are not faced, then, with a stark choice between words and numbers, or even between precise and imprecise data; but rather with a range from more to less

¹ For the transcription conventions used in the present study, please refer to the Appendix.

precise data. Furthermore, our decisions about what level of precision is appropriate in relation to any particular claim should depend on the nature of what we are trying to describe, on the likely accuracy of our descriptions, on our purposes, and on the resources available to us; not on ideological commitment to one methodological paradigm or another. (Hammersley, 1992:163)

Hammersley's comments should therefore allay some of the doubts about the reliability of more descriptive, qualitative research methods. As far as reliability of the methodology of the present study is concerned, conversation analysis has been argued as appropriate to the question being asked about lecture discourse, and the literature review has made clear the present study's connection and contribution to the existing body of knowledge. This chapter discusses the accepted procedures and practices of conversation analysis and their utilisation in the present study. The subsequent analysis chapters aim to provide a systematic and holistic analysis of lecture discourse and the final chapter discusses the strengths and weaknesses of the present study. As discussed above, conversation analysis is seen as being free of many of the limitations in reliability which are found in other forms of qualitative research. For example, it is felt that CA's use of recorded data and transcriptions goes some way to reducing the problems ethnographic research has with unspecified accuracy of field notes and limited public access to them (Peräkylä, 1997:203). CA's reliability essentially lies in the effort put into the selection of what is recorded, the quality of the recordings, the adequacy of transcriptions and the fact that the data is publicly accessible.

2.9 Issues of validity

As far as the validity of research findings is concerned, this relates to the researcher's interpretation of observations and whether he or she is calling what is being measured by the right name (Silverman, 1993:149-66). The issues of validity in conversation analysis are related to its commitment to a naturalistic description of the interaction order (Goffman, 1983) and the social action that takes place within that order. Despite the paradox between the complexity of CA's methods and the simplicity of the results, it is the transparency of its analytic claims that give it its apparent validity (Kirk and Miller, 1986:22).

In terms of CA research into interaction in an institutional setting, as is the case in the present study, the issue of validity focuses on the grounds a researcher has for claiming that the talk being produced is connected in any way to the institution. The fact that talk takes place in a particular institutional setting does not necessarily mean that it is determined and influenced by it. Different institutional roles and tasks of participants, such as those of lecturer and audience, may or may not be present at particular moments in various institutional interactions. The basic premise of conversation analysis is that if any are present, then they will be apparent to both the participants in the interaction as well as the analyst.

Schegloff (1987) sets out two basic criteria for claims of validity concerning the institutional character of talk in an institutional setting. The first criterion is related to the relevancy of categorization. He states that for any interactional event, there are many contextual aspects available, such as gender, social class, occupation etc., and that

participants may understand the setting of their interaction accordingly. In the moment-by-moment unfolding of interaction, Schegloff argues:

The parties, singly and together, select and display in their conduct which of the indefinitely many aspects of context they are making relevant, or are invoking, for the immediate moment. (Schegloff, 1987:219)

However, the danger for the analyst is simply to assume that a particular feature in the talk is an indication of a specific context affecting the interaction. This may not only lead to possible misinterpretation of a particular social activity, but also to the analysis being cut short and the basic organisation within the talk not being properly or thoroughly understood. Thus, the examination of any talk in interaction in an institutional setting needs to ensure that any phenomenon that initially seems to result from the workings of this context actually does so, and is not primarily connected to the organisation and dynamics of the talk without reference to the institutional context.

Schegloff's second criterion for claims of validity relate to what he calls procedural consequentiality (1991, 1992). He argues that any claim that a particular context is oriented to by the participants in talk in interaction needs to be supported by clear evidence of how specific aspects of the context are consequential for definite features of the interaction. In other words, the aim of the analyst should be to make a direct procedural connection between the context and what actually happens in the talk (Schegloff, 1991:17). This emphasis on procedural consequentiality of the context is important. If any research project can identify specific procedural links between a context and talk in interaction, such identification is not only relevant in terms of

throwing light on the organisation of interaction, but also contributes to the understanding of the context per se.

Thus, Schegloff's criteria of the relevancy of categorisation and procedural consequentiality of context constitute a validity test for concerns over the institutional character of interaction. The CA researcher can demonstrate both by focusing on, as does the present study, particular phenomena in the interaction, such as lexical choice, turn design, sequence organisation and overall structural organisation.

2.10 Issues of generalisability

The question as to the generalisability of findings of CA studies arises from the fact that since CA is quite intensive in nature, most CA studies are necessarily based on relatively small databases, such as case studies. In terms of the study of ordinary conversation, Peräklyä notes that:

the baseline assumption is that the results are or at least should be generalisable to the whole domain of ordinary conversations, and to a certain extent even across linguistic and cultural boundaries. (Peräklyä, 1995:214)

She also concedes, however, that this depends on the type of CA research being carried out. Silverman (2000:110) suggests that qualitative research should not be pushed into a corner because of its more descriptive claims compared to the hard statistics found in quantitative research, since its way out of this corner is its natural flexibility which can allow for new cases to be included after initial findings and can thereby further the generalisability of its findings overall. Silverman also quotes Alasuutari (1995) who

suggests that generalisability is perhaps an inappropriate term for the analytic focus of qualitative research:

Generalisation is...[a] word...that should be reserved for surveys only. What can be analysed instead is how the researcher demonstrates that the analysis relates to things beyond the material at hand...*extrapolation* better captures the typical procedure in qualitative research. (Alasuutari, 1995:156-7)

As far as talk in interaction in institutional settings is concerned, most studies are more like case studies. These are based on data collected from one or a few sites with a relatively small number of subjects involved. The results of such studies can only have restricted generalisability or extrapolation. However, if the results are approached from a different angle then generalisation is, to some extent, feasible. The possibilities of language use are central to CA case studies on talk in interaction in different institutional settings. If we accept the concept of possibility, then the possibility of various practices can be generalised, even if the practices themselves are not realised in similar ways across different settings. Results can then be considered as descriptions of a practice or practices that are possible across a wide variety of settings. A study can show how different practices are made possible through the details of the participants' actions.

2.11 Conversation analysis and pragmatics

As stated earlier, CA adopts a bottom-up approach to research. This can then lead to the advancement of theoretical claims, which, although grounded in the observed orientations displayed by the participants in the interaction, are often quite general in

nature (Clayman & Maynard, 1991). If the belief is that CA relies to some extent on forms of intuition and common sense reasoning, then its descriptions and explanations of talk in interaction would perhaps not be as systematic as they could be. Mey, for example, states that conversation analysts confine their analysis to the co-text of an utterance, where co-text is taken to mean the text immediately surrounding that utterance (1993:184). However, in order to get a clearer understanding of people's linguistic behaviour, the social aspects also need to be taken into consideration, and so the analyst must look beyond the co-text to the context, or the totality of circumstances, surrounding an utterance.

One means of compensating for any apparent lack of systematicity and minimalism is to use a pragmatic account of language together with a conversation analytic approach. While CA can be used to demonstrate the ways in which participants construct the talk by referring to familiar methods of conversational organisation, a pragmatic account will allow for a more precise description of the talk. The identification of pragmatic features can demonstrate how participants orient to the context, and their placement within the sequence of talk can show how the talk is procedurally consequential for those participants. Together, this should lead to a fuller and more accurate analysis of the talk in interaction, and provide some explanation to the 'why that now?' orientation of interaction (Sacks, 1972; Schegloff & Sacks, 1973).

However, pragmatics alone cannot explain the study of language used in communication nor pragmatic principles. Pragmatic explanation requires a meta level or one level up from the object language. Metapragmatics therefore, contextualises pragmatic forms and signals to the listener how these forms are to be interpreted.

Sequencing is an important factor in the structuring of talk, both at the level of formal signals and the level of what utterances mean, and metasequential awareness also enables listeners to interpret the speech they are hearing.

Language is essentially reflexive, such that speakers can use language to communicate about the activity of using language and so 'remark on language, report utterances, index and describe aspects of the speech event, invoke conventional names and guide listeners in the proper interpretation of their utterances' (Lucy, 1993:11). Moreover, social situations cannot be viewed as separate from participants' descriptions of these situations to the extent that 'context and talk are now argued to stand in a mutually reflexive relationship to each other, with talk, and the interpretative work it generates, shaping context as much as context shapes talk' (Goodwin & Duranti, 1992:31).

One school of thought with influence in CA is that of Gricean pragmatics and the notions of conversational principles and maxims as alternatives to conversational regularities in accounting for the orderliness of conversation. Within Gricean terms, conversations are not a series of disconnected remarks, but are rational, co-operative events (Grice, 1975). Grice refers to the general principle of conversational interaction as the Co-operative Principle (CP), made up of four general categories of Quantity, Quality, Manner and Relation, helping to organise participants' contributions around a common purpose. The orderliness of conversational sequences facilitating the maximally efficient exchange of information leads Grice to posit the existence of a CP governing conversational behaviour. In other words, conversationalists observe the CP, and the addressees expect this because rational human beings are not expected to act irrationally. Grice states that the principles and maxims which he claims to govern

conversational interaction are derived from more general principles of rational interaction, but 'makes no more of an attempt to demonstrate the strength of his rationalist argument' (Taylor & Cameron, 1987:85).

Critics of rationalist pragmatics claim that Grice's maxims are too broad and general, and cases can be cited of the flouting of these maxims in areas such as politeness and face saving, and where the participants' desire the speaker to flout maxims such as in the case of joke telling. The apparent assumption that these maxims work cross culturally is open to question. Keenan's 1976 study of the Malagasy demonstrated that their particular form of co-operation seemed to consist of making their contributions as obscure and complicated as possible. Whether this behaviour is interpreted not as a violation of the CP but as a normal means of conversational co-operation in this culture (Gazdar, 1979) or whether Malagasy speakers do abide by the CP but sometimes value the maxim of quantity over that of quality (Green, 1989) is arguable, but any interpretation is very much context-determined. Haviland's study of a Zinacantec legal dispute in which a large number of Tzotzil speakers talk at once and of a personal argument between two Mexico City academics demonstrate that the notions of cooperation, rationality, relevance and politeness are problematically applied. Haviland (1997:547) argues that these two cases confirm that co-operativeness cannot simply be assumed across all talk in interaction and that most work on conversation: 'if not invented then is too often drawn from mundane and culturally familiar (although frequently ethnographically underexamined) situations'.

Further reservations about rationalist pragmatics are that Grice expresses the conversational principles as injunctions rather than descriptions of behaviour. Thus, if

they are merely general descriptions of conversational behaviour, then their imperative form seems out of place (Taylor & Cameron, 1989). Sperber & Wilson (1986) replace these prescriptive principles with the principle of relevance, which is presented as a descriptive generalisation about the nature of conversational communication. However, it is not made clear whether their principle of relevance is claimed to cause or describe the regularities observed in conversational interaction and: 'if it is the latter, then we have not solved the riddle of the observable orderliness of conversational interaction' (Cameron & Taylor, 1987:96). Mey (1993) criticises the way relevance theory is presented as being able to account for all the phenomena that earlier had been assigned to Grice's maxims. He states that Sperber & Wilson assume their principle to be without exception such that 'in the end, being relevant may either be obvious and hence not interesting, or the notion of relevance itself becomes so encompassing as to lose its explanatory force' (Mey, 1993:81). Mey adds that relevance theory appears only to pay lip-service to a commitment to communication and has little to say about naturally occurring interaction, and so misses out on the social dimensions of language.

With these various frameworks within the rationalist approach, it seems that the best way to test their adequacy would be against empirical analysis of talk in interaction. However, this sort of analysis is one that the rationalist orientation of the Gricean approach does not entertain. Yet 'until one of the Griceans motivates their choice of maxims and principles by means of an empirical analysis of particular conversational events, we will be unable to evaluate the cogency of their competing proposals' (Taylor & Cameron, 1987:92).

Schiffrin confirms that 'many pragmatic phenomena can be better understood if their analysis is based in a thorough description of how those phenomena are conversationally situated'(1987:387), and is supported by Levinson who claims that 'many of the central concepts in pragmatic theory may be amenable to CA or other discourse-analytic treatments' (1983:364). The ethnomethodological conversation analyst uses both emic and empirical analytical methods (Taylor & Cameron, 1987:107), such that the researcher does not impose an analysis on the data, but examines the 'ways in which tacit rules and common sense theories [are] used by members in accomplishing the orderliness of particular settings' (Atkinson & Drew, 1979:21-22). The analyst not only requires evidence that a particular aspect of the interaction can be viewed in the way suggested, but that the participants producing it also view it in the same way. For ethnomethodologists, social actors are seen to strive to produce what they and others in the community will recognise as orderliness in their activities. These actors are aware of the accountability of their behaviour; they know what is expectable in the situation in which they find themselves, but may choose to do the expectable or not, conscious of the interactional consequences of that choice. Thus whatever is expectable does not determine behaviour but is conformed with because participants are generally aware of the consequences of non-conformity. Participants are no longer viewed as the 'rule governed cultural dopes' suggested by traditional sociological models, but are 'practical rule using analysts' who make conscious behavioural choices, aware of their accountability (Atkinson & Drew, 1979:22).

Any action is situated in a sequential context. The action adds to the context, is interpreted in that context, is held accountable and is responded to by other participants in the interaction (Heritage, 1984:107). Thus actions reflexively and accountably

predetermine the features of the scenes in which they occur. These principles of reflexive accountability and sequentiality of understanding also provide the rationale underlying CA methodology. Goodwin & Duranti confirm the importance of context to the analysis of talk in interaction, and state how the two stand in a mutually reflexive relationship to each other (1992:31). Context is viewed as something that is dynamic, an environment that develops as the interaction between participants develops (Mey, 1993:10). Both conversation analysts and pragmatists share a common methodological interest in providing an adequate explanation of context.

2.12 Summary

Spoken academic discourse at the tertiary level is an area in which there has been relatively little research compared to other areas of talk in interaction. The present study adopts a data driven approach, being led by naturally occurring phenomena and viewing the data from the participants' perspective, showing how participants construct the speech event and, more precisely, showing how knowledge is packaged in lectures. As a result, a conversation rather than a discourse analytic approach is adopted. However, a pragmatic account of talk in interaction makes CA more systematic and more precise, by accounting more fully for face to face interaction, showing how participants orient to the context rather than the co-text, and how talk is procedurally consequential for those participants. Participant orientation to context is invoked not only by the mechanisms of talk but also through pragmatic cueing of members' methods. This in turn shows that speakers have both metapragmatic and metasequential awareness. Pragmatics shows how contextual features are encoded in the structure of language and how context is necessary to determine meaning, and pragmatic features

demonstrate speaker orientation to context. The methodology therefore adopted in this study is a conversation analytic/empirical pragmatic one, aimed at achieving greater insights into the analysis of spoken academic discourse.

Chapter 3

The Pilot Study

3.1 Introduction

In a conversation analytic approach, the first stage of research should be an ‘unmotivated’ examination of the data (Schegloff, 1996). Whilst the analysis of any data has to be motivated at some level, an unmotivated examination is meant to suggest that the researcher is open to discovering phenomena in the data, rather than simply searching for instances of previously identified or described patterns or commonalities.

This chapter presents the findings from the unmotivated examination of data collected in the pilot study. This pilot study was carried out for a number of reasons. Firstly, it was an opportunity for me to familiarise myself with conversation analytic practices, to develop and practically apply the ‘conversation analytic mentality’ Schenkein (1978) describes, and to become accustomed with the system of data transcription. Secondly, this study was undertaken to understand how legitimate and workable the extension of CA was in practice to the lecture, as the most prototypical form of academic discourse. Finally, it was carried out to identify, describe and analyse any patterns and other interesting phenomena in the data, and to determine whether these phenomena would provide sufficient motivation for a more detailed analysis of lecture discourse¹.

For these reasons, the procedure followed in the preliminary study is similar to that suggested by Seliger & Shohamy (1990:122):

1. Define the phenomenon to be described.
2. Use qualitative methods to gather data.
3. Look for patterns in the data.
4. Validate initial conclusions by returning to the data or collecting more data.

3.2 The data set

In the present study, the phenomenon under examination was the packaging of knowledge in lectures by lecturers to postgraduate students. Consequently, the data set used for the preliminary study was one two-hour lecture given by a native English speaking Geography lecturer² in January, 1997 as part of a module on Geographical Information Systems in rapid and participatory appraisal to the same group of nine postgraduate students at the University of Durham. Three Bangladeshi students, one Syrian, one Malaysian, one German, one South African, one student from the Seychelles and one British student made up the group.

In order to allow for an initial analysis, the data set was limited to this one two-hour lecture. The dataset was then limited further to a single sequence in order to discover

¹ Since this initial analysis was, to some extent, a testing ground, the results by necessity lack the detail and description of the data analysed in the main study.

² Hereby referred to as Lecturer A. This module was chosen for two reasons. Firstly, geography lecture discourse had not, to the researcher's knowledge, been subjected to analysis in previous studies. Secondly, compared to modules in other disciplines in the university, this had a fairly high proportion of non-native speakers in the group, thus making it an interesting case from an EAP perspective.

the various strategies and devices that inform and shape this particular sequence. As Hutchby and Wooffit state (1998:122):

Analysing a singular sequence can be a key starting point in research, and even by beginning with relatively innocuous data, this technique can be used to discover a great deal about how the 'technology of conversation' (Sacks, 1984:413) operates in particular instances. (Hutchby and Wooffit, 1998:122)

With the present study being an investigation into lecture discourse, the starting point in the pilot study turned out to be the identification of an instruct sequence that had clearly identifiable boundaries in the talk, and a clear topic, in this case, the philosophy behind rapid rural appraisal. This piece was then analysed in order to come up with a reasonable description of the significant phenomena in the sequence and to develop a formal account of a sequential pattern.

Qualitative methods focus on the study of human behaviour within the context in which that behaviour occurs naturally and where the presence of the researcher would not affect the normal behaviour of the subjects. In the preliminary study, the researcher observed and took notes on the lecture in a non-participatory manner, and without having any *a priori* theories or categories as guidance. The data were recorded on to a video camera and a tape recorder with a condenser microphone. The researcher was positioned away from the group, but could see and hear all participants in the talk. The

researcher transcribed the lecture and looked for patterns and commonalities in the data³.

The following extract from the lecture was analysed:

Extract 1:

190 [...] (10.0) by comparison (3.0) the philosophy of rapid rural appraisal (4.0) has essentially two
191 features which I've listed there for you on the handout (..) firstly (.) what Chambers calls (.) the
192 pursuit of optimal ignorance (3.0) the pursuit of optimal ignorance (.) which is ((laughs)) a rather
193 funny way of saying you don't need to know everything (..) ok the the- the old paradigm uh the
194 positivist paradigm of knowledge is that the scientist uh needs to know everything about a
195 situation in order to make an objective scientific judgement i-in my view and in Chambers's
196 view this simply is not the case in the real world (3.0) all you need to do is spend sufficient time
197 to collect just enough data to ful-fulfil the objectives which you set yourself (..) and this is much
198 more time efficient and cost efficient as well (3.0) ((coughs)) secondly (.) you need a diversity of
199 analytical techniques (3.0) several different sources of information (..) which will help you to
200 check the truth of the situation that you're looking at (.) and Chambers invents a new word (.) or
201 adapts a word anyway to sum this up and he calls it triangulation and it simply means coming at
202 a problem from some- several different angles so by all means use published government data if
203 you think that's going to help use aerial photography use remote sensed data use questionnaire
204 surveys all these might be useful for a certain part of- of what you are doing but also ask the
205 people themselves in some participatory fashion (.) in order to get a rounded picture of the
206 situation (4.0) [...]

From the preliminary analysis, a relatively methodical sequence emerged that seemed to function as part of the lecturer's interactional strategy and task of packaging information

³In order to address the ethical issues surrounding the present study, the researcher gained the informed consent of the subjects being studied after providing them with information relevant to their decision about whether to participate or not. The researcher also ensured that participation was voluntary.



to present to the student audience. The researcher noticed macro level patterns, in terms of the structure of the lecture, the framing of knowledge and agenda setting, and micro level patterns where the talk is structured into units of information. A meta-level was also identified. In addition to these regular, recurrent instruct sequences, 'deviant cases' (Hutchby and Wooffit, 1998:96) were also noticed. This preliminary study also therefore attempted to account for these cases in the same way as the others.

3.3 Macro level features

At the macro or global level of the lecture discourse it was observed that the interactional work of signalling the agenda or structure of the instruct sequence to the audience was achieved by the lecturer by means of discourse markers, pauses, or a combination of these. The function of these markers is thus to indicate to the audience new topics and directions the instruct sequence will take. In line 1, '*(10.0) by comparison (3.0)*' operates at the macro level and frames a new information unit within the talk. The long ten second unfilled pause acts as a transition point or boundary marker between neighbouring information units, and together with the marker 'by comparison' and the subsequent three second pause, it signals to the audience the relationship the upcoming information has to the information stated in the previous information unit. Stenström (1986) claims that silent pauses function as discourse markers and separate major syntactic constituents, and in this instance, their macro level function appears to be not only this but also to separate global instruct sequences.

The complex combination of markers used in line 1 indicates quite heavy signalling on the part of the lecturer and is a means of relaying to the audience that what follows is

important and requires their full attention. The ten second pause and the three second pause also serve to cue the audience and give them time to prepare themselves for the processing required for the next piece of information. The information unit also ends with a four second pause that functions as a boundary marker between this and the subsequent unit of information. It is therefore clear from this initial analysis that non verbal features of the talk such as pauses have a significant role in lecture discourse in terms of signalling the structure of the lecture to the audience. In different types of analysis, such features could be excluded or overlooked.

3.4 Micro level features

In conversation analysis, the analyst aims to put together a set of examples from the data that clearly illustrate the existence of a particular phenomenon. From this, the aim is to then analyse patterns in the sequential organisation of talk in interaction. In the pilot study, the analysis revealed the existence of recursive, three part sequences that seemed neither *ad hoc* nor arbitrary and which seemed to fulfil the function of presenting a unit of information to the audience. At this stage of the study, these three-part structures seemed to reflect previous findings in the literature, in particular Young's 1991/1994 phasal analysis of lecture discourse and elements of Coulthard and Montgomery's 1981 model. It therefore became interesting to investigate to what extent these existing models could accommodate the data from this pilot study.

3.4.1 Young's model of lecture discourse

As discussed in the literature review chapter, Young examined seven two-hour lectures given by native and non-native speakers of English to undergraduate students from a variety of disciplines. In an attempt to represent the macro structure and micro features of the information units in these lectures, she used a three-part model consisting of a 'Discourse Structuring' phase, a 'Content' phase, and a 'Conclusion phase'. These phases recur discontinuously and can be interspersed with other 'Evaluation', 'Interaction' and 'Examples' phases. I have applied Young's three phase model of lecture discourse to the data from the present study. In addition, I have represented these phases in tabular form (in Tables 1-10) in order to highlight the differences between the phases more clearly.

In terms of the pilot study, the analysis at this stage suggested that there were macro level instruct sequences that covered a complete topic, as exemplified by the data extract above, and that these were then made up of micro level information units. These micro level information units seemed to fit more comfortably with Young's Discourse Structuring phases, Content phases and Conclusion phases, and are shown in tabular form below. The deviant cases referred to above are those that are missing either a Discourse Structuring phase or a Conclusion phase, and will be discussed in more detail below.

Table 1: Application of Young's model to data

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 1	(10.0) by comparison (3.0)	the philosophy of rapid rural appraisal (4.0) has essentially two features	which I've listed there for you on the handout
Unit 2	(..) firstly (.) what Chambers calls (.)	the pursuit of optimal ignorance	
Unit 3	(3.0)	the pursuit of optimal ignorance	(.) which is ((laughs)) a rather funny way of saying that you don't need to know everything
Unit 4	(..) ok	the the- the old paradigm	
Unit 5	Uh	the positivist paradigm of knowledge is that the scientist needs to know everything about a situation in order to make a scientific judgement	i-in my view and in Chambers's view this simply is not the case in the real world
Unit 6	(3.0)	all you need to do is spend sufficient time to collect just enough data to ful-fulfil the objectives which you set yourself	(..) and this is much more time efficient and cost efficient as well
Unit 7	(3.0) ((coughs)) secondly	you need a diversity of analytical techniques	
Unit 8	(3.0)	several different sources of information	which will help you to check the truth of the situation that you're looking at
Unit 9	and Chambers invents a new word (.) or adapts a word anyway to sum this up and he calls it	triangulation	and it simply means coming at a problem from some-several different angles
Unit 10	so by all means	use published government data	if you think that's going to help
Unit 11		use aerial photography	
Unit 12		use remote sensed data	
Unit 13		use questionnaires	all these might be useful for a certain part of- of what you are doing
Unit 14	but also	ask the people themselves in some participatory fashion	(.) in order to get a rounded picture of the situation (4.0)

3.4.2 The Content phase

The Content phase contains the main idea or the main point being made in the information unit and so consists largely of content language. If both the Discourse Structuring phase and the Conclusion phase were to be removed, there would be no loss of content. This suggests that both of these phases may be optional in the overall information sequence. In the extract in Table 1, the main idea is that rapid rural appraisal has two main features: *the pursuit of optimal ignorance* and *triangulation*. These elements are clearly found by reading down the italicised Content phases shown in Tables 2-4 below. Table 2 highlights the overall macro instruct sequence structure, whilst Tables 3 and 4 focus on the micro level information units found within it:

Table 2: Example of macro structuring in Lecturer A data

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 1	(10.0) by comparison (3.0)	<i>the philosophy of rapid rural appraisal (4.0) has essentially two features</i>	which I've listed there for you on the handout

Table 3: Example 1 of micro information unit in Lecturer A data

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 2	(..) firstly (.) what Chambers calls (.)	<i>the pursuit of optimal ignorance</i>	
Unit 3	(3.0)	<i>the pursuit of optimal ignorance</i>	(.) which is (laughs) a rather funny way of saying that you don't need to know everything

Table 4: Example 2 of micro information unit in Lecturer A data

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 9	and Chambers invents a new word (.) or adapts a word anyway to sum this up and he calls it	<i>triangulation</i>	and it simply means coming at a problem from some-several different angles

It is therefore clear that the Content phase contains more factual, textbook information.

3.4.3 Discourse Structuring phase

The Discourse Structuring phase serves as the motivation for the topic or content, has either a macro level or micro level function and can take a variety of forms. In Table 2, the Discourse Structuring phase: '*(10.0) by comparison (3.0)*', as discussed above, operates at the macro level and introduces a new topic within the talk. Micro level markers then occur at specific points within the overall framework initially set up by macro markers.

In Table 3, '*(.) firstly (.) what Chambers calls (.)*' in the Discourse Structuring phase signals the position of the ensuing Content phase within the larger information unit. The discourse marker *firstly* and the marker *secondly* in unit 7 signal that the following core sequences are new but related topics and orient the students to the lecturer's agenda. The pauses that coincide with these markers are also interesting in that they now seem to be functioning on a micro level rather than on a macro level as in unit 1. The Discourse Structuring phase also seems to have a contextualising function in that the citation *what Chambers calls* in unit 2 is a clear signal to the audience of the real world context in which the subsequent statement is to be understood and that this statement derives from another source. In this case it is another expert in the field and not the lecturer himself. It is also evident that co-ordinations of markers and pauses feature at the micro level.

In other Discourse Structuring phases, for example in units 3 to 6, there is either an unfilled pause, a filled pause or the marker *ok*. The Content phases that follow these Discourse Structuring phases all relate to the topic of the pursuit of optimal ignorance in unit 2. This seems to suggest that the micro level is quite a complex level with perhaps another or other levels underlying it.

In units 10 to 13 the lecturer does not include a Discourse Structuring phase in these sequences. The Discourse Structuring phase seems to be missing in these so-called deviant cases as the Content phases are overtly linked by the repetition of the imperative *use* and a subsequent noun. A metalinguistic device such as repetition seems to be used here to focus the audience's attention on the structure of the repeated discourse and thus on the specific lexical items contained within these Content phases (Johnstone et. al, 1994). In this instance, the lecturer is drawing the students' attention to different ways of gathering information and stresses his point through the repeated use of an imperative, thus making redundant the need for any Discourse Structuring phase in these sequences. The Discourse Structuring phase therefore seems to be an optional element in the interactive functioning of the three-phase information unit structure.

3.4.4 The Conclusion phase

The Conclusion phase seems to be more problematic in terms of both form and function. Young (1994) discusses the problems of attaching labels to phases, and stresses the importance of clarifying the function of each phase in the process of information transfer in lectures. In her data, the Conclusion phase consists mainly of the lecturer summarising and emphasising information introduced in the Content phase.

The findings of the preliminary study show that in this case, the Conclusion phase consists mainly of glosses, comments, asides or a combination of these, as seen in Tables 5-8 below:

Table 5: Example of a gloss in the Lecturer A data:

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 3	(3.0)	the pursuit of optimal ignorance	<i>(.) which is (laughs) a rather funny way of saying that you don't need to know everything</i>

Table 6: Example of a comment in the Lecturer A data:

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 6	(3.0)	all you need to do is spend sufficient time to collect just enough data to ful-fulfil the objectives which you set yourself	<i>(..) and this is much more time efficient and cost efficient as well</i>

Table 7: Example of an aside in the Lecturer A data:

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 1	(10.0) by comparison (3.0)	the philosophy of rapid rural appraisal (4.0) has essentially two features	<i>which I've listed there for you on the handout</i>

Table 8: Example of a gloss and a comment in the Lecturer A data:

	Discourse Structuring Phase	Content Phase	Conclusion Phase
Unit 7	(3.0) (coughs) secondly you need	a diversity of analytical techniques (3.0)	<i>several different sources of information which will help you to check the truth of the situation that you're looking at</i>

In the data from the preliminary study, the third phase seems to be motivated as a response to unspoken questions from the audience to the lecturer. In other words,

although no questions are directly asked, the lecturer’s talk suggests a response to either a non-verbal display of the students’ state of understanding, or to what is assumed to be their current state of understanding. This feature suggests that lectures are more dialogic than is sometimes realised. Thus, a fourth column could be inserted throughout the data with a question, typically a wh- question such as ‘What’s that?’, ‘Why?’ or ‘Would there be a good reason for doing that?’, as shown below:

Table 9: Example 1 of unspoken question in the Lecturer A data

	Discourse Structuring Phase	Content Phase	Question	Conclusion Phase
Unit 3	(3.0)	the pursuit of optimal ignorance	<i>What’s that?</i>	(.) which is (laughs) a rather funny way of saying that you don’t need to know everything

Table 10: Example 2 of unspoken question in the Lecturer A data

	Discourse Structuring Phase	Content Phase	Question	Conclusion Phase
Unit 14	but also	ask the people themselves in some participatory fashion	<i>Why? / Would there be a good reason for doing that?</i>	(.) in order to get a rounded picture of the situation (4.0)

However, as with the Discourse Structuring phase, the Conclusion phase also seems to be optional and can be omitted, as is the case in units 2, 4 and 7. In each instance, the Content phase in the subsequent sequence is either a simple repetition of the current Content phase or a reformulation thereof. Thus, in units 2 and 3 the Content phase is the same: ‘*the pursuit of optimal ignorance*’. In unit 5, the reformulation ‘*the positivist paradigm*’ is more specific and hence more informative than the Content phase that precedes it ‘*the the- the old paradigm*’. ‘*Several different sources of information*’ is a reformulation of the Content phase in unit 7 ‘*a diversity of analytical techniques*’ and

seems to function as further explanation or clarification of this Content phase. Analytically, this is slightly problematic in terms of Young's model as the function of unit 8 is that of a Conclusion phase but its form seems to be more in line with a Content phase. At this stage, whilst the pilot study agrees in principle with Young's three phase analysis, the present analysis suggests that the actual structure of lecture discourse is slightly more complex than Young's model allows for.

3.4.5 Coulthard & Montgomery's model of lecture discourse

Tables 9 and 10 above have also indicated that the lecture discourse in the pilot study is dialogic in essence. This notion is also supported by Coulthard & Montgomery (1981). Their discussion of the structure of lectures is based on the analysis of a lecture broadcast on the radio. They argue that despite the fact that, in lectures, turn taking is suspended during the process of information transfer, the discourse of lectures is essentially interactive. This interaction occurs when the lecturer constructs their talk and reacts and responds to non-verbal information from the audience about their state of knowledge and understanding. They claim that 'subsidiary discourse', consisting of either a gloss or an aside, is oriented to the audience's reception of the 'main discourse' and indicates that the speaker is overtly attempting to respond to possible audience reaction. These categories of main discourse and subsidiary discourse would seem to be equivalent to Young's Content phase and Conclusion phase respectively. In terms of the pilot study data, this subsidiary discourse of a gloss or an aside would follow an implicit unvoiced question after the Content phase of the information unit.

From the above discussion it can be seen that both Young's model and Coulthard & Montgomery's model are useful starting points after initial noticings for the micro level analysis of the main study data. The former is useful for its three-part phasal analysis of lecture discourse and the latter for its understanding of lecture discourse as essentially dialogic. The micro level analysis chapter therefore takes into account both Young's and Coulthard & Montgomery's models in developing a model from the data set, and, in particular, the third phase, which appears to be largely motivated interactionally as a response to unspoken questions from the audience. At this stage, it seems that this phase has less of a summarising and emphasising role than Young's model suggests, and more of a clarifying and evaluating function.

3.5 Meta level

As discussed above, one metalinguistic phenomenon in the data is repetition which functions as a signal to the audience that what is being repeated is important, simply by virtue of the fact that it is repeated. Thus, the lecturer draws attention to a key piece of new information, *the pursuit of optimal ignorance* in units 2 and 3 by stating it twice, and so draws the audience's attention to the various methods used to gather data by re-using the same grammatical structure. Repetition works as a rhetorical device to emphasise key points and phrases within the overall instruct sequence because it deviates from the standard information unit functionally, by going over an old point rather than introducing a new one as might be expected.

Another meta-level phenomenon is instances of self-repair on the part of the lecturer. As with most interactions, the lecturer's aim in the lecture is to ensure that his talk is

intelligible to his audience. Thus, instances of self-repair can be seen as clear interactional, dialogic devices to sustain intelligibility. The lecturer is aware of his institutional role and responsibilities and so when self-repairs occur they are the result of his perceiving there to be a breakdown in communication and a loss of understanding on the part of the audience. It can also be assumed that if the lecturer moves on to another topic after the repair, then he also perceives the repair as having resolved the problem. In the data in the pilot study, the lecturer repairs *the old paradigm* in line 4 with the reformulation *the positivist paradigm of knowledge* in line 5. This self-correction suggests that he realises that his initial assumption that the *old* paradigm is shared knowledge is not the case, and that he needs to identify the specific paradigm to which he refers. This metapragmatic self-editing by the lecturer demonstrates his implicit awareness of the structure of his talk and his ability to modify aspects of his speech as a conscious interactional device, signalling to the audience how to interpret and understand the speech they are hearing.

3.6 Indications of the pilot study

Conversation analysis has at its core the exploration of the sequential structures of social action, and aims to discover this orderliness of social action through the analysis of discursive practices in everyday interaction. The unmotivated examination of a single sequence in the pilot study data revealed a recursive pattern that comprised the information units in the lecture. The information units followed a three part sequence that initially seemed to reflect Young's phasal analysis of lecture discourse. Most of the data examined in the pilot study seemed to fit into this three part structure and deviant cases could generally be accounted for in this model.

However, in order to validate these initial conclusions, more data needed to be collected and analysed in greater detail. Moreover, there are still aspects of this initial analysis that are problematic. For example, unit 5 does not quite sit comfortably in this three part framework. Whilst *the positivist paradigm of knowledge* is clearly content, the rest of this phase provides an explanation of this piece of terminology and perhaps therefore would be better placed in the Conclusion phase. However, the next phase whilst clearly closely related to this Content phase also seems ill-placed, as its function seems to be more towards contextualising a Content phase rather than explaining or commenting on it. The problem is that it is contextualising this preceding Content phase rather than contextualising a subsequent phase, and so is not readily accommodated in this initial model. The main study therefore looks at this issue, in particular, in closer detail in Chapter Six.

The validation of initial conclusions and the analysis of more data are important for two reasons. Firstly, they both ensure that the analyst works carefully to discover the orderliness of talk from the perspective of the participants (Hutchby and Wooffitt; 1998:115) and not simply from the analyst's own commonsense interpretation of the interaction. Secondly, it avoids hasty and rudimentary forms of quantification by placing:

great emphasis on the close description of empirical examples, and often the analysis of a phenomenon will grow from the careful description of one instance, which then [...] becomes a description capable of covering a whole collection of cases. (Hutchby and Wooffitt, 1998:116)

This, again, is only feasible through close consideration of how the participants in the interaction orient to each other's actions.

3.7 Collecting the data for the main study

Following on from this preliminary study, the researcher followed a seven stage procedure recommended by ten Have (1990) as one suitable CA approach to collecting, selecting and analysing data. It is important to note that ten Have presents this as an idealised approach, to be adopted and adapted by researchers according to local needs. In the present case, having done the preliminary study and having found certain categories emerging, the collection and analysis of this data were thus regarded as a means of validating original findings and refining the categories that had initially emerged. The application of ten Have's seven stage procedure to the data is detailed as follows:

1. The material to be analysed is recorded with audio (visual) equipment.

The data set used for the main study were taken from ten two-hour lectures given by a team consisting of the lecturer from the preliminary study and two others, forming a complete module on Geographical Information Systems in rapid and participatory appraisal to two native speaker postgraduate students from January to March, 1998⁴.

⁴ Generally, as in the case of the preliminary study in the previous year, the module consisted of a large number of overseas students. In 1998, the department experienced a drop in numbers for this particular module, which started off with three native speakers taking the module (dropping to two). Since the recording of the module had already been arranged and agreed, this change in circumstances could not stop the research going ahead. This change actually worked to the researcher's advantage in that comparing lecturer A's speech to the largely non-native and native speaker audiences, there was no evidence of any modifications in speech on the lecturer's part. In other words, the non-native speaker students were expected to comprehend speech composed for a native speaker audience. This has important implications for the teaching of second language listening comprehension.

The data were collected by the researcher using a video camera and a tape recorder with a condenser microphone placed unobtrusively near the lecturer and students. The researcher was positioned away from the group, but could see and hear all the participants.

2. The recording is transcribed using conventional transcription notations.

The researcher began transcribing the data soon after the recordings were complete, and these transcriptions were improved over the period in which the data were analysed as earlier omissions were noticed.

3. The researcher decides on the episodes to be analysed. This varies according to the individual study, but generally consists of a number of sequences in which an action is initiated and responded to.

The data were primarily sorted in order to investigate the practices of academic discourse in terms of how knowledge is packaged. Following on from the preliminary study, the data was also analysed on expectation that similar categories at the meta, micro and macro levels would emerge. The data were checked for the occurrence of any other patterns and commonalities, in order to produce a final set of reliable, representative and systematic, consistently recurring divisions.

4. The researcher then considers what the interactants are 'doing' in the actual utterances and sequences of talk.

In this stage, the researcher examined the sequential properties of the talk in interaction as well as the pragmatic phenomena used by the interactants in the aim of packaging knowledge.

5. From the interpretation of the sequential properties in step 4, the researcher constructs a reasoning which supports and accounts for these 'typifications'. In particular, the 'details of the episode' with regard to the methods used are made clear.

This equates to the micro and macro levels which emerged during the preliminary study.

6. The analysis may then consist of inspecting subsequent utterances and sequences as the participants may refer implicitly or explicitly to the episode under study.

This is the meta level of the preliminary study.

7. There may be a comparative element in the analysis and from this the researcher tries to ascertain what is likely or normal. However, a distinction is made between 'single case analysis' and a 'collection study'.

In analysing data collected from three different lecturers teaching on the same module, the main study has a comparative element. However, care is taken not to generalise findings too far but rather to provide as robust an account as possible of how lecturers package information.

The next three chapters discuss the analysis of the main study data at the macro, micro and meta levels.

Chapter 4

Exploring the Macro Level of Lecture Discourse

4.1 Introduction

After the data had been collected and transcribed, six instruct sequences were selected for closer analysis, two from each lecturer in the study. It was noted that the first few minutes in each lecture consisted of general greetings and non-academic small talk as the students settled down and the lecturers organised themselves. The first instruct sequences to be analysed in more detail were considered from the point where these preliminary social exchanges ended¹. An instruct sequence occurring later in the same lecture was then randomly chosen for each lecturer in order to compare results and test out any provisional or emerging hypotheses about the packaging of information in lecture discourse.

In the analysis of the data at the macro level, two main features emerged. The first of these confirmed the findings of the pilot study that macro level discourse markers contributed to student comprehension of the lecture by making the flow of information less complicated, by signalling shifts from one instruct sequence to the next, and by indicating the relationship between successive moves within the lecture. These macro level phenomena are discussed in the first part of this chapter. The second macro level phenomenon to emerge from the analysis was that of metaphor. The second half of this

¹ For this reason, the line numberings for the first instruct sequences of each lecture do not start from line 1 onwards.

chapter argues that metaphor is an organising principle in lecture discourse and is evident in the structuring of the talk that also facilitates the process of student lecture comprehension.

4.2 Discourse markers as a macro level phenomenon

4.2.1 Function of macro markers in a lecture

In a lecture, the lecturer has the job of conveying items of information to the audience, evaluating and commenting on the subject matter and telling the audience about the organisation of the lecture. According to Thompson (1994b), this interplay of the three elements of informing, evaluating, and organising creates the particular character of lecture discourse. In the data in the present study, these different roles are performed through a kind of layering of the lecturers' linguistic behaviour. At one layer or level, the global or macro level, the lecturers deal with the lecture content, and present information to the audience. At another level, the lecturers relate this information to the real world beyond the confines of the lecture. Finally, at the local level within the information unit, the lecturers comment on, evaluate or provide glosses for the information presented.

In order to process lecture discourse in real time, the successful listener must actively construct a coherent interpretation of this complex and cognitively demanding spoken message. In relation to this, Jucker (1993) describes what he calls a trade-off between processing effort and the information the addressee can get out of a particular utterance. He argues that as far as lectures are concerned, listeners are more willing to put in a fair amount of processing effort, since they can reasonably expect to get quite a lot of

information in return for that effort. For a lecture audience then, anything that can facilitate this process and ease the amount of processing effort will be beneficial. Flowerdew and Tauroza (1995) claim that discourse markers are features of talk which can contribute to the comprehension of a lecture by diluting the density of information, and by signalling important transition points as well as the relationship between successive episodes and moves within the lecture. Moreover, as the lecturers shift frames to incorporate the different layers in the instruct sequences, so discourse markers contribute to the hearers' understanding of the overall connectedness of these layers. Markers function as directional signals in the lecture, indicating how the information is organised and how it is to be evaluated (DeCarrico and Nattinger, 1988). These functions are analysed later in this section.

4.2.2 Definition of discourse markers

It is clear from the research that whilst there seems to be a finite list of discourse markers made up of words such as *but*, *therefore*, and *so*, this group of expressions does not constitute a separate syntactic category. For example, while markers such as *because* and *but* form constituents of the clause in which they appear, others, such as the sentence adverbs *moreover* and *therefore*, do not. Although discourse markers do not form a separate syntactic category, Fraser (1999) has attempted to demarcate discourse markers as a group of expressions mainly, but not exclusively, drawn from the syntactic classes of conjunctions, prepositions and adverbs. Discourse markers then are a closed class in the sense that they are a group of words which contains a limited number of items, but together they do not constitute a separate word class according to traditional classifications. It is important to add that this group is not only made up of single

lexical items such as the ones mentioned above, but also fixed phrases e.g. *as a matter of fact*; semi-fixed phrases, e.g. *as far as I can tell*; highly variable phrases, e.g. *any time there's X, there's Y*; combinations of markers, e.g. *now then*; and periphrastic forms, e.g. *bearing X in mind*.

This difficulty with categorisation is reflected in the variety of labels which different researchers have applied to essentially the same phenomena. These include 'sentence connectives' (Halliday and Hasan, 1976), 'discourse particles' (Schourup, 1985), 'discourse operators' (Redeker, 1991), 'discourse connectives' (Blakemore, 1992), 'pragmatic connectives' (Stubbs, 1983), and 'pragmatic markers' (Fraser, 1990). Following Schifffrin (1987), Flowerdew (1994), Aijmer (1996), and Fraser (1999), the term 'discourse markers' is used in this study.

Researchers have found it more fruitful to try to identify the basic features which characterise discourse markers and their functions within talk in interaction. An intuition that often surfaces in the literature on discourse markers, though one that does not weigh equally in the different approaches, is that discourse markers function as linking devices (Rouchota, 1998). Fraser (1999) appears to be a proponent of such a view. He suggests that, with few exceptions, discourse markers share a single identifying feature in that they all impose a relationship between some aspect of the discourse segment they are part of, and some aspect of a prior discourse segment. Accordingly, discourse markers are understood to link either two clauses, e.g. 'He will not go to the party *unless* she goes too'; a clause and the preceding text, e.g. 'Anne had the flu. Mary had to work late. *So*, I went to the cinema on my own'; or an utterance and

a speech act, e.g. 'Are you busy on Saturday evening? *Because* I need you to baby-sit' (Rouchota, 1998).

Whilst this argument holds for many examples of discourse markers, it does not present a comprehensive picture of their function in talk. For example, the link may be between an utterance and a non-linguistic context, as claimed by Redeker:

a discourse marker is a linguistic expression that is used to signal the relation of an utterance to the immediate context. Context in this definition can be thought of as the current common ground. (Redeker, 1990:372)

Rouchota (1998) also regards the account of the function of discourse markers as linking devices between discourse segments as inadequate. To support this, he cites cases where communication starts with an utterance, and where the role of discourse markers is then to assist in actively creating the context in which the utterance is to be understood. It could therefore be argued that discourse markers do more than simply link discourse segments, as they are actively involved in the construction and selection of a context in which an utterance is to be understood:

connectives do not link linguistic units but rather the events in the world or the hypothetical eventualities described in these clauses, or the linguistic events carried out by these clauses, such as the expression of the speaker's intentions, desires, beliefs or thinking patterns. (Rouchota, 1998:24)

Discourse markers thus function either in the global or local discourse context. At the global level, macro markers or macro organisers (DeCarrico and Nattinger, 1988) signal to the hearer the structuring and direction of the discourse and the relations within it. They mark the opening of conversation, occur with the introduction of new topics, assist in turn taking, and order points in a discussion sequentially (Aijmer, 1996). They help in the top-down processing of talk by prompting hearer expectations and predictions about upcoming discourse. Local or micro markers, on the other hand, appear within the flow of communication and signal the relationship between adjacent utterances. These connections between discourse units at a more micro or clause level occur at specific points within the overall framework initially set by the global or macro discourse markers.

The above distinction was taken up in studies by Chaudron and Richards (1986) and Dunkel and Davis (1994) in order to understand to what extent macro and micro discourse markers contributed to lecture comprehension. As discussed in the literature chapter, the negative findings and research design of both studies are heavily criticised by Flowerdew and Tauroza (1995), but more importantly for the present study, the criterion employed by Chaudron and Richards to distinguish micro markers from macro markers has also come under attack. DeCarrico and Nattinger (1988) show how the Chaudron and Richards study suggests that length of phrase is a distinguishing factor for micro and macro markers. Micro markers are presented as a group largely made up of one-word markers, whereas macro markers consist largely of phrases two or three words in length. As the present study and that of DeCarrico and Nattinger show, length of phrase is an unreliable measure for classifying micro and macro markers. As will be

shown later in this chapter, a discourse marker such as *so* can function at both the micro and macro level.

Whilst such studies have highlighted the fact that discourse markers operate on both a micro and macro level, this notion that they have more than just a linking function is developed and supported in a relevance theoretic account. Aijmer (1996) suggests that most attention has been paid to discourse elements expressing logical relations between clauses because these micro level relations are of importance in writing. She claims that a relevance theoretic approach can widen the scope and thus also account for markers operating at the macro or global level, and particularly in talk in interaction.

According to relevance theory (Sperber and Wilson, 1986), the message conveyed by an utterance is recovered with reference to the context in which it appears. An important feature of the theory is that context is not defined solely in terms of the physical context or the co-text, but also in terms of speaker and hearer assumptions, their beliefs and knowledge. The context of an utterance therefore is not pre-determined but gets selected or constructed while the utterance is being processed. The search for the appropriate context is guided by considerations of optimal relevance. Following Blakemore (1987), Wilson and Sperber (1993) extend this characterisation, and show how the function of discourse markers is to integrate utterances into the flow of conversation and instruct the hearer as to how their interpretation is constrained by the context. In other words, discourse markers can be explained in terms of how they guide or direct the hearer's search for relevance (Blakemore, 1987).

In relevance theoretical terms, a discourse marker can, for example, signal that the ‘most immediately accessible context is not the most relevant one for the interpretation of the impending utterance’ (Jucker, 1993:435). A relevance theoretical approach can thus explain how certain elements in talk in interaction function to highlight the speaker’s communicative intentions and guide the hearer’s interpretation of the discourse.

Originally, discourse markers were seen as procedural encodings without propositional meaning (Blakemore, 1987). Wilson and Sperber (1993) developed this and showed that within a relevance theoretic approach, discourse markers are understood to encode either procedural or conceptual meaning. Thus, since discourse markers encode meaning, some may be seen as linking conceptual representations, while others constrain the inferential processes these representations are expected to undergo.

Conceptual discourse markers establish conceptual links between propositions, or contribute a concept which forms part of a conceptual representation communicated by an utterance (Rouchota, 1998). These conceptual representations have logical properties, so that they can, for example, be true or false, act as input to inference rules, and can enter into logical relations such as contradiction and entailment. Thus, for example, the discourse marker *because* is conceptual as it affects the truth conditions of the utterance in which it occurs. *Because* then is one device which establishes a conceptual link between two propositions. In cases where communication starts with an utterance and contains a conceptual discourse marker, i.e. where there is no preceding discourse segment, then that utterance, according to relevance theory, is elliptical. This

means that a full interpretation of the utterance requires establishing the relation expressed by the marker and the identification of the implicit proposition.

Wilson and Sperber (1993) add that if a meaningful linguistic expression does not encode a concept, then it must encode procedural information. The relevance theoretical account of procedural discourse markers is that a speaker usually has a specific interpretation of their utterance in mind and expects the hearer to arrive at that interpretation by processing the utterance in the intended context. Context selection is determined by considering optimal relevance. The speaker may decide either to leave the hearer unaided, or to direct the hearer towards the intended interpretation by making a certain set of assumptions immediately accessible. Procedural discourse markers are a linguistic device a speaker may use to guide the hearer. A marker like *moreover* is meaningful, but its meaning does not affect the truth conditions of the utterance in which it occurs. This marker, therefore, does not encode conceptual meaning and so does not contribute to the proposition expressed by the second clause. Procedural information is a means of constraining or guiding the inferential phase of communication by restricting the number of hypotheses the hearer needs to consider in order to arrive at an optimally relevant interpretation (Rouchota, 1998). Procedural discourse markers facilitate this task.

To sum up, according to relevance theory, discourse markers encode either conceptual or procedural meaning. Conceptual discourse markers establish conceptual links between propositions, whereas procedural discourse markers do not link propositions at any stage of the interpretation process. Rather, they indicate the computations such representations are intended to undergo. Blakemore's (1987) initial analysis of

procedural and conceptual meaning was in micro contexts, but the above discussion and forthcoming analysis in this study will show that this can be extended to show that they also function in macro contexts.

Discourse markers thus play an important role in participants' joint production of understanding of the coherence of a particular instance of talk in interaction. They serve to put constraints on the range of coherence relations a hearer can infer from talk, and contribute to an understanding of the overall connectedness of the parts of discourse in terms of both context selection and construction. Rather than being a text-inherent property, conversational coherence is a dynamic, ongoing process of negotiation between the speaker and the hearer (Lenk, 1998). Discourse markers contribute to this process at both the macro and micro level.

4.2.3 Discourse markers at the macro level

In the analysis, the data confirmed that discourse markers are an organising principle at the macro level. The discussion below describes how discourse markers function at the macro level and indicates similarities in terms of form across the different lecturers.

(1) Lecturer A: Instruct Sequence 1 extract

125 (1.0) what I want to start with is what I should have done in here item
126 number five last week (.) we didn't get round to it (.) and this was the (.)
127 conscientisation (.) process of Paolo Freire (1.0) and then also the
128 problems of observing and measuring rural poverty (6.0) sorry that's not
129 very good is it (5.0) Paolo Freire was (2.0) till he died relatively recently
130 one of the most famous educators in the third world

In the above extract, the two pseudo-clefts in lines 125-6 '*what I want to start with is...*' and '*what I should have done in here item number five...*' suggest that the lecture is structured, and, as macro level markers, signal this structure to the audience. Weinert and Miller (1996) claim that WH-clefts project forward and can either introduce topics or mark an important starting point for the following discourse. They add that there is a deictic element within this forward pointing, focusing function, in that WH-clefts are indefinite deictics which point to some piece of information which is specific to the speaker but unknown, or treated as unknown to the listener. The speaker then elaborates on this new element. Moreover, the more complex syntax of WH-clefts may have a stronger focusing function and make a bigger impact on the listener, as well as giving the listener time to prepare for the informationally dense talk to follow in the second clause. In this extract, the preliminaries to the lecture have just been dealt with, and the effect of the pseudo-clefts is to signal to the audience to pay attention as the lecture proper is about to start. Pseudo-clefts have a macro level discourse function; they are forward pointing and so introduce a new topic to the audience. They also display to the audience that the institutional setting is being oriented to and invoked.

In the above extract, the second pseudo-cleft: '*what I should have done in here item number five last week (.) we didn't get round to it (.) and this was...*' (lines 125-6) shifts the focus to the real-world context outside the lecture. These real world and real events outside the lecture may be referred to as 'extra-lecture' information. Thus in this instance, the lecture is placed within a wider, extra-lecture context, and the lecturer's role as organiser is understood to extend beyond the context of this particular lecture to a whole series of lectures which make up the course. The lecture itself is seen as one of

an integrated series. Moreover, the modal verb '*should*' orients to the lecturer's awareness of his obligation to adhere to the agenda and ensure that the main points are covered, or indeed '*done*' (line 126). His obligations to his students in terms of covering these points are thus made explicit by '*should have done*'. The choice of '*do*' over '*say*' suggests the lecturer views the imparting of information to his students as a job of work rather than simply talk and reinforces his awareness of his role within this institutional activity. The above-mentioned reference to an extra-lecture level (lines 125-6) also occurs in line 129 with the deictic '*relatively recently*'. This serves to place the topic within a real world time frame and so underlines its relevance beyond the scope of the lecture to the real world outside.

In line 126: '*and this...*' and line 127: '*and then*', the discourse marker *and* has a sequencing function. Whilst *and* is the most frequently occurring discourse marker at the micro level, in the above extract it clearly displays global relations and forms part of the agenda setting process. '*And*' in line 126 defines the preceding talk '*we didn't get round to it*' as peripheral to the main topic and signals a continuation of the prior topic. In other words, it serves to mark a return to the main lecture content, bringing the focus of the lecture back to the global level. '*And*' in line 127 indicates a return to the main lecture organisation and signals that the upcoming unit is co-ordinate in structure to a prior unit. That is, the lecturer will present two equally important items of information: firstly, the conscientisation process of Paolo Freire, and secondly, the problems of observing and measuring rural poverty. In each case, the discourse marker *and* is accompanied by more explicit indicators of the overall structure of the lecture. In line 126 '*this*' refers back to '*item number five*' on the lecture agenda and reinstates this

agenda after the aside '*we didn't get round to it*', and '*then*' in line 127 links preceding and upcoming points in the lecture.

The six second pause in line 128, and the five second pause in line 129 also seem to function as global discourse markers. The first unfilled pause could be argued to mark the end of a main thought unit, and this is followed by subsidiary discourse in the form of an aside²: '*sorry that's not very good is it*'. The five second pause then marks a return from the aside to resume the topic initiated earlier in the pseudo-cleft sentence. This second unfilled pause in the extract serves to signal a transition point and important upcoming material; it also cues the audience and gives them time to prepare themselves for the information to follow.

The aside between these pauses is also interesting as its structure is carried over from more everyday conversation. It works to suspend and step back from the lecturer's orientation to his institutional role of unpackaging information, and shifts to the real world context of the here and now. '*Sorry*', in this instance, functions as a disarming apology, appealing to the audience and indicating the lecturer's desire to maintain some kind of harmony between himself and his audience. At this point the lecturer is having problems with an overhead transparency (see footnote 2). The neutrality of the apology and the absence of any intensifiers suggest that within this apology, the lecturer is also trying to downplay the problem of his seeming incompetence. The question tag '*is it*' at the end of the aside appeals directly to the audience. It serves to facilitate co-operation between the lecture and his audience and adds padding to the event described by the

² At this point, the lecturer changed the acetate on the overhead projector. The new acetate had a landscape format and did not fit the screen. Moreover, the text was quite small and so difficult to read. The lecturer apologised whilst he tried, in vain, to enlarge the text and fit all the information on the screen.

speech act which is potentially face threatening for both parties. The tag is a mitigating, down-toning element which modifies the preceding speech act (Aijmer, 1996), downplays the problem, and implies friendliness and intimacy between the speaker and his audience and puts them on a more equal standing. The five second pause at the end not only signals a return to the main topic but also the lecturer's resumption of his institutional role.

Finally, whilst an argument or idea is often presented through a journey metaphor, it is interesting to note here that orientations to agenda are also presented as a journey. Thus we have in line 125 '*what I want to start with*' which presents the agenda as a journey with a beginning and a path along which the lecturer guides the students. In line 126 '*we didn't get round to it*' also suggests a journey, but one in which the travellers return to the place where their journey began. The lecturer sets out the agenda as a path to be followed and students gather knowledge along the way, but the lecturer also guides the students home. Such instances of metaphor function at the macro level and signal to the audience the structure and direction of the lecture agenda. This aspect will be discussed in more detail in the latter part of this chapter.

In this short extract then, it can be seen that the talk contains three sorts of layering or scaffolding – the global, intra-lecture level, the extra-lecture level, and the local level. In order to fulfil his roles as provider of information, organiser of the lecture, and evaluator of the information given, the lecturer is required to shift between these three levels and make the relation of the lecture and the context salient. In the above extract, these shifts are largely signalled by discourse markers, and include pseudo-clefts, unfilled pauses and the conjunction *and*. The complexity of the macro markers used by

the lecturer seems to relate to the importance of the talk to follow. Thus, the two pseudo-clefts at the beginning of the extract could be argued to signal an important shift to the main topic of the lecture, whereas the other markers in the extract signal a resumption or continuation of the main topic introduced by the initial pseudo-cleft sentence.

(2) Lecturer B: Instruct sequence 1 extract

66 never mind right so what I'm going to do is (.) just go through the political
67 issues in GIS (.) um which may be (.) you know uh all standard to you you
68 may've thought about it all before there may be nothing new I don't know
69 and then talk specifically about participatory GIS (.) and use the you know
70 the the uh the January workshop and the ideas that came out of that (2.0)
71 um (1.0) so um in terms of political (.) issues (1.0) uh knowledge is power
72 you know this is the whole (.) central core of the debate (.)

In the above extract, '*never mind*' in line 66 signals a closing down of the initial greetings and settling talk, and a topic change. '*Never mind*' also marks what has just gone as being of secondary importance and directs attention to what is coming as being of greater importance. The macro level marker '*right*' also serves to separate the preceding and following discourse units. '*Right*' seems to have the dual purpose of closing down the previous topic and initiating a new topic. It projects both back and forth, and is similar to the marker *ok* in that it is married to ongoing activities, and signals a state of readiness for forward movement and a topic change (Beach, 1993). '*Right*' is followed by '*so*'. As with the discussion of *and* in the earlier extract, *so* typically operates at the micro level and marks either a conclusion or result. Here it functions as a turn initial marker at the global or macro level, orienting the listeners to

the agenda and signalling an upcoming main clause or idea unit (Schiffrin, 1987). ‘So’ is followed by a pseudo-cleft sentence in line 66 ‘*what I’m going to do is...*’, and as discussed earlier, functions to push the discourse forward and signal important upcoming talk. In this case, this combination of macro markers means that the lecturer’s readiness to turn to the main topic of the lecture is heavily signalled, and the students are given a clear indication to pay attention to the following discourse which highlights the structure of the lecture.

After taking control over the direction of the lecture and signalling the agenda, the lecturer concedes that the information she is about to present could be familiar to the students. This is a reasonable assumption to make, since the students are postgraduates and are therefore likely to have already attended other lectures and to have had some experience in the field. However, this does not explain why this apparently common ground is invoked by the lecturer, nor why, despite acknowledging the fact that she might be about to tell her audience something they already know, the lecturer signals that she will still adhere to the agenda she outlines.

On the one hand, there seems to be an attempt to minimise this potentially face threatening act, so that the lecturer’s talk includes several mitigating devices which could be argued as functioning to build up her audience’s positive face. In line 67, the use of ‘*you know*’ implies common ground and shared knowledge. In this way, the lecturer addresses her audience’s positive face and their need to be treated as equals. In addition, this is not general knowledge but rather specific knowledge of the field assumed to be shared by the audience. In line 68, the aside ‘*I don’t know*’ orients to their knowledge state, with the lecturer admitting her uncertainty about it. Such devices

serve to minimise a potentially face threatening act. '*Just*' in line 66, minimises the force of '*go through*' and implies that during this part of the agenda, the pace of the journey will speed up because the material presented could already be familiar.

On the other hand, Jucker and Smith (1998) view the use of 'you know' from a relevance theoretic point of view. From their data, they argue that 'you know' does not in fact appear to be concerned with what information is already shared between speaker and hearer. Rather, they view the role of 'you know' as 'a device which aids in the joint construction of the representation being described' (1998:194). In this way, the audience is prompted to recognise the relevance and implications of the utterance marked by 'you know'. They claim that this applies equally regardless of whether the information in the marked utterance is common ground or not. In terms of the data in this study, it could be argued that because the information is possibly already known to the students it may not appear as relevant as supposedly unknown or new material. Hence, after Jucker and Smith, the relevance is assumed by 'you know' as a kind of implicit acknowledgement of its possible non-new status.

As with lecturer A's sequence discussed above, there is an instance in line 68 of the markers '*and then*'. Again, these markers display macro rather than micro relations, encode procedural meaning, and signal a return to the agenda of the lecture initiated in the pseudo-cleft sentence in line 66. In line 69 '*you know*' signals a shift to an extra lecture context, and sets the lecture within the larger frame of the university context. '*You know*' also suggests assumptions about shared knowledge of events in the real world outside the lecture. '*You know*' serves as a solidarity marker both here and in line

72, and again, attempts to minimise any threat to positive face as the lecturer begins to establish what is really shared knowledge and what is not.

After this, in lines 70-71: '(2.0) *um* (1.0) *so um*', the combination of pauses, filled pauses and the procedural discourse marker '*so*' together signal a return to the global level and the main topic of the lecture introduced by the pseudo-cleft sentence. Moreover, '*so*' prefaces information whose understanding is supplemented by information which has just become shared background.

It is interesting to note that the similarities between these two speakers. Lecturer B here also fulfils the roles of information provider, evaluator and organiser and shifts the discourse between the three layers of scaffolding discussed above. There is also a striking similarity in terms of the macro markers used to signal these shifts. Moreover, the same metaphor of orientations to agenda as a journey is also evident in line 66, where the lecturer states she will '*go through the political issues in GIS...*'. Again, there is a sense that the agenda is a journey and the lecturer is the guide along the journey's path. Finally, as with the first extract, the lecturer chooses '*do*' over '*say*' in line 66 '*what I'm going to do...*', reinforcing the idea that a lecture is more than simply talk and that the imparting of knowledge requires effort.

(3) Lecturer C: Instruct Sequence 1³ extract

99 (4.0) well um let's think um (2.0) let's do this thing logically um

100 (2.0) I said last week didn't I that (2.0) we spend far too-an awful lot of

³ In this lecture, some sections of the first part of the lecture were irrecoverable from the recording. It was therefore decided to start the transcription from the first clearly distinguishable instruct sequence. Before this, both the lecturer and students had been discussing various questionnaires they had carried out. The transcription starts at the point where the lecturer decides to take greater control over the talk and impose a clearer structure on to the talk that follows.

101 time on rapid rural appraisal and participatory rural appraisal and all that
102 sort of stuff and in a sense questionnaires are more important (.) in terms
103 of how often they're done and here we are we've got one session on
104 questionnaires and it doesn't really reflect the importance of
105 questionnaires so I'm going to do that before it sort of applies here um

In this extract from this instruct sequence, after a general discussion about questionnaires, the lecturer orients to the organisation of the lecture and signals how the next part will be structured. This is followed by a four second pause in line 99, during which the lecturer is presumed to be thinking about how he will organise the next part of the lecture. This is then followed by the discourse marker '*well*'. According to Sacks, Schegloff and Jefferson (1974) *well* often begins a turn, and in this case the speaker seems to be responding to his own talk and thoughts and constructing a dialogue. '*Well*' is operating here at the macro level and could be viewed as a presentation marker, or as a re-basing strategy, aimed at advising the addressees that the upcoming talk is new.

The pseudo-imperatives '*let's think*' and *let's do*' in line 99 also work with the pauses and the marker '*well*' as introductory devices to the macro level organisation of the lecture. '*Let's*' signals some kind of solidarity or alignment with the audience, points forward in the discourse, and, in orienting to the agenda, also seems to include the audience in the construction of that agenda. As with the two previous extracts, '*do*' in line 99 implies that the lecture is more than just talk, and the presentation and handing over of knowledge is viewed as a task. This task is made more difficult by the fact that the knowledge that needs to be presented is abstract and vague. Thus, in line 99 the audience is invited to '*do this thing*', and again in lines 101-2, the lecturer talks about

'...participatory rural appraisal and all that sort of stuff...'. These examples of unspecifying practices distance the lecturer from what he refers to, and in doing so, signal his solidarity with the audience. The lecturer admits that too much time was spent discussing PRA and RRA, and so to avoid loss of face he attempts to align himself with his audience through the unspecifying practices that he uses. Finally, the fact that abstract knowledge cannot easily be defined in concrete terms, encourages all the lecturers to view the content of the lecture as something that is done rather than said.

In lines 99-100 the filled pause and unfilled pause *'um (2.0)'* function as global discourse markers and mark the end of a main thought unit. These are followed by a shift from the global level to the extra-lecture level *'...I said last week...'* placing the lecture in a wider context as one of a series of lectures that constitute a whole course. Moreover, the deictic *'last week'* anchors the current talk in the real world. This is followed by the question tag *'didn't I'*, an aside which appeals directly to the audience. In orienting to his own uncertainty, the lecturer involves his audience in the current agenda setting process, and encourages their co-operation. This idea of solidarity and co-participation is enhanced by the use of the pronoun *'we'* in lines 100 and 103. In both cases, *'we'* seems to refer inclusively to both lecturers and students as participants in the entire series of lectures. The lecturer aligns himself with the students in the sense that he implies neither he nor they have any control over the structure and content of the course as a whole. However, at the level of the individual lectures that make up the course, both parties can have some control over the direction and content of the talk.

In line 103 *'here we are we've got one session on questionnaires'*, the deictic *'here'* also anchors the talk in the real world. The pronoun *'we'* has been discussed above as a

solidarity marker, including the audience in the agenda setting process. '*We've got one session*' orients to the agenda and situates the current lecture in the series of lectures that make up the whole course. The metaphor '*got*' in line 103 '*we've got one session*' orients to the agenda as an object. The agenda or structure of the lecture is communicated or expressed in the way objects can be moved or transferred. Thus, it is not only abstract ideas, knowledge or information that are characterised metaphorically in talk, but the metaphor extends also to the organisation and structure of the presentation of those ideas and information.

In line 105, as seen in the previously discussed extract, the discourse marker '*so*' operates at the macro rather than the micro level, marking a resumption of the main topic, and shifts attention from the extra-lecture to the intra-lecture context. Once again, the predicate '*do*' is employed '*I'm going to do that*', reinforcing the idea that the lecture is work rather than just talk.

This extract reinforces the points made earlier about the two previous extracts in terms of the layering of the lecture discourse and its relation to the differing roles of the lecturer. There are again further similarities with the markers used in the previous extracts, including pauses, filled pauses, and the procedural markers *and* and *so* operating at the macro level.

The next extract is from an instruct sequence chosen randomly from lecturer A's talk. It is seen to be consistent with the above three extracts in terms of the macro markers used and confirms their function as an organising principle within the talk. Its corresponding features are the use of a pseudo-cleft to signal new items of information; the discourse

marker *and* to mark global or macro relations; the structure of the lecture's agenda being presented through a journey metaphor; and the shift between the local, global and extra-lecture levels as the lecturer informs, evaluates and organises the lecture content.

(4) Lecturer A: Instruct sequence 2 extract

686 I've rather lost my way here (5.0) yes the next point I was going to make
687 was about (4.0) the um the mapping process (2.0) damn it I forgot to bring
688 that key (.) document with me (.) there's one particularly interesting (.) um
689 (.) IIED publication I've got in my office if you want to come and see it
690 anytime (.0 .hh ((coughs)) is about rapid agro ecosystem zoning (2.0) as it's
691 called rapid agro ecosystem zoning (1.0) .hh and the argument of (2.0) the
692 IDS and the IIED (1.0) is that participatory rural appraisal is perhaps at its
693 best in actually mapping the resources in a village

In line 686, '*I've rather lost my way here*' orients the audience to the agenda. The agenda is presented through a journey metaphor, and the lecturer is the guide responsible for the journey who has temporarily lost his way at this point in the journey and led his audience from the ordained, expected, intended path. The deictic '*here*' in line 686 serves to anchor the text in the real world and places the lecture and its agenda within the wider context of a series of lectures. This orientation to the agenda is then followed by a five second pause. During this pause, the lecturer checks his notes in order to find where he is on his agenda and what he should discuss next. He then says 'yes' in line 686, and this seems to be a response to his own thoughts during the previous five seconds and the manifestation of some sort of internal dialogue in which he identifies the stage of the agenda he has reached.

This backward pointing 'yes' is then followed by a pseudo-cleft sentence in line 686 '*the next point I was going to make was...*'. This pseudo-cleft is forward pointing and signals to the audience that they should pay attention to what follows. It also suggests that the agenda or structure of the lecture is presupposed and made up of a group of numbered points. The pseudo-cleft thus functions at the macro level and focuses the audience on the organisation of the lecture, and the role of the lecturer as the organiser thereof.

In line 687, the lecturer makes an aside '*damn it I forgot to bring that key (.) document with me...*'. The two second pause before this seems to act as a signal of a shift in focus from the global level to the extra-lecture level or real world level. The presupposition with '*that key document*' also shifts the talk to the extra-lecture context and seems a continuation of the lecturer's internal dialogue discussed above.

The aside in line 690 '*as it's called*' serves to distance the lecturer a little from the referent and underlines a previously expressed dislike of too much jargon. This aside is then followed by a one second pause and the discourse marker '*and*'. '*And*' here operates at the macro level, displaying global relations and forms part of the agenda setting process. Together with the short pause, this macro marker resumes the topic initiated before the aside. The audible in-breath also indicates the lecturer's preparation to speak at length on this next important topic.

4.2.4 Summary

From the extracts examined above, it can be seen that macro discourse markers assist in the scaffolding of a lecture and signal to the audience shifts not only in the three different roles of informing, evaluating and organising that a lecturer may assume, but also shifts in context. The discourse markers assist the audience in selecting or constructing the appropriate context in which to process the information being provided by the lecturer. The use of discourse markers indicates the lecturer's assumptions about the knowledge state of the audience, i.e. the lecturer's assumptions about what knowledge is shared and what is new. Items that are signalled by a combination of markers are considered to be both new and of import to the listeners. For example, line 66 of Lecturer B: '*right so what I'm going to do is...*' combines the macro markers *right*, *so* and a pseudo-cleft. Initial items of information are signalled by pseudo-cleft sentences or a combination of macro markers. The consistency in the discourse markers across these lecturers in their talk shows that a fairly limited range of conversational markers were used to signal the structure and content of the lectures. Moreover, whilst it has been the case that earlier analyses have concentrated on the micro-level function of discourse markers, these markers are seen in this study to operate at the macro level to display global relations both within the individual lecture and in the sequence of the lecture as a whole and form part of the agenda setting process.

4.3 Metaphor as a macro level phenomenon

In the following section, metaphor will be discussed as another important macro level phenomenon present in the lectures analysed in this study. Verschueren (1999) states that in order to understand various forms of social behaviour, we need to attain a better

understanding into the way in which participants in talk habitually conceptualise what it is they are doing. As stated earlier, what a lecturer does is to pass on items of information, evaluate, comment on and explain these items within an organised structure. If we then assume that language use is largely attributable to conscious linguistic choices, then we can infer that language users know, both tacitly and consciously, what they are doing when using language. Thus, some language choices may be highly motivated, whilst others are almost automatic. In terms of lecture discourse, it is clear that due to the very nature of lectures, the essential content, and, to a certain extent, the language that is used to convey it, are pre-planned, although in response to the immediacy of the interaction, many parts of the lecture consist of fresh talk. Hence, some linguistic choices in a lecture will be more consciously made than others.

Ortony's (1975) inexpressibility thesis claims that certain aspects of natural experience are never encoded in language. In terms of education, Mayer (1993) states that the goal of science, for example, is both to describe and explain how things work in the universe. Students of science therefore need help in understanding these descriptions and explanations, and metaphoric language often plays a role in this process as it brings together 'two different concepts in a linguistic expression that encourages some meaningful transfer of sense in interpretation' (Cameron and Low, 1999:2). Thus, in order to describe Ohm's law, it is common to find an explanation of electricity in terms of waterflow through pipes; the abstract concept of voltage becomes water pressure; resistance becomes the width of the pipe; and amperage, the rate of flow (Goatly, 1997).

Metaphor then is evident in both the passing on of information to students and in the explanations and evaluations of that information. Goatly also argues that metaphor is evident in the structuring of text:

metaphor can be used, consciously or subliminally, to structure the development of a text, as the organising principle which gives the text a lexical cohesion.

(Goatly 1997:163)

In the spirit of Goatly's insight, this study claims that metaphors are also macro level phenomena and are orientations to agenda within the lecture discourse. Thus, it is not only abstract knowledge that is understood and presented by means of conceptual metaphors, but also the agenda or lecture structure within which this abstract knowledge is framed and given coherence. As has been shown in the extracts from the lectures analysed above, both the information in the lectures and orientations to the lecture structure itself are presented through metaphors and indeed frequently through the same metaphors. Thus, whilst the information in the lecture is often presented through the metaphor 'an argument is a journey' so the agenda is also presented as a journey. For example, in line 125 (Lecturer A: Instruct Sequence 1) '*what I want to start with*' the lecturer orients to the agenda. The agenda is viewed as a journey with the lecturer acting as the guide who has both planned the journey and who will highlight fixed points of knowledge and information along the way. In line 126 of the same extract, '*we didn't get round to it*' suggests the idea of the agenda having a certain direction. Thus, not only is the lecturer the guide on the journey out, but he also guides his audience home. Whilst working as the guide on the journey, the lecturer can also vary the pace on the journey, and hence the pace of the lecture and the amount of time spent

on each piece of information. In line 66 (Lecturer B: Instruct Sequence 1) '*what I'm going to do is (.) just go through..*' the use of *just* suggests that the pace of the lecture will speed up as the lecturer will quickly go over material that should already be familiar to the audience. A further illustration is provided by the conceptualisation of knowledge, ideas or information as an object that can be handed over from the lecturer to student. In the same way as abstract ideas and knowledge are conceptualised and expressed metaphorically as objects, so the agenda or structure of the lecture is expressed as something that can be handled or transferred. In line 103 (Lecturer C: Instruct Sequence 1) '*we've got one session*' the metaphor '*got*' orients to the agenda as an object shared by both the speaker and his audience.

The above is only a brief summary of the metaphors used to describe the structure or agenda of the lectures. These and other metaphors are discussed in greater detail in the next part of this chapter. Moreover, the metaphors which occur at the macro level, are shown to recur consistently throughout the discourse across the data.

4.3.1 Definition of metaphor

The benefits of analysing metaphor in a given discourse community are that it can provide an insight into how existing knowledge is structured within that community and its development. In this study, by examining metaphorical expressions in real language use in a given discourse community, the aim is to gain a better understanding of macro level discourse organisation and ultimately, a better understanding of how knowledge and information are disseminated to students.

Metaphor itself appears to have been born from certain human cognitive limitations. Human knowledge specifically requires structures in order for us to make sense of our reality. According to Lakoff and Johnson (1980), these structures are grounded in physical, bodily experience, and human understanding and reason arise from the way we perceive and interact with our environment (Boers, 1996). As infants, we have certain pre-conceptual experiences such as body movements, and our ability to move objects and to perceive them as wholes. However, since many of the concepts that are important to us are either abstract or not clearly marked out in our experience, we are forced to understand them by means of these early conceptual experiences. Thus, most abstract concepts arise from these pre-conceptual physical experiences by metaphorical projection (Lakoff and Johnson, 1980:267-8), and metaphorical definition, and thus conceptual metaphors are essential to our conceptual system. Metaphors, when expressed through the medium of language, are a powerful tool for overcoming our cognitive limitations (Sticht, 1993).

4.3.2 Metaphor and learning

The two main aims of a lecture are to present the maximum amount of comprehensible information to students within the allocated time and to maximise student retention of that information. In order to achieve the former, the lecturer would have to reduce repetition and redundancy in order to present as many points as possible in the time given. However, successful achievement of the latter would imply an increase in repetition and redundancy for greater student understanding and memorisation (Johnstone et al, 1994). For the lecturer, this problem is compounded by the fact that they have relatively little idea how much information has been retained or by whom.

For the student, there is the task of acquiring the knowledge that the lecturer presents, and also the 'code of transmission' that the lecturer uses in order to present that knowledge (Bourdieu et al, 1994:5). Students then are not only required to learn the content of the lecture, but to acquire the code or academic discourse in which it is couched. Thus, the lecturer needs to take advantage of any linguistic tool that can facilitate this learning process. One of these tools is metaphor.

It is argued that generally metaphor can facilitate learning in a number of ways (Sticht, 1993). Firstly, speech is a short-lived, temporally linear means of communicating, and we are limited in how much information we can maintain and process at any one time in active memory. In any interaction, participants will benefit from tools which effectively bring information into active memory, and it is widely agreed that metaphor, due to its greater imagery and vividness, is one means of encouraging more memorable learning and extending the capacity of active memory via the medium of speech (Sticht, 1993). Goatly (1997) adds that those metaphorical expressions which involve nouns and refer to imaginable things are particularly effective. In experiments carried out by Honeck, Riechemann, and Hoffman (1975), and Mayer (1983) these imagistic metaphors have been shown, either intentionally or unintentionally, to enhance memory.

Secondly, according to Ortony's (1975) compactness thesis, as a tool for creating knowledge, conceptual metaphors are a means of transferring chunks of experience from well-known to less well-known contexts. This is particularly important in lectures, where the lecturer assumes that the students possess the knowledge addressed in the metaphor and so can recall and structure this knowledge according to the metaphor.

Thirdly, Ortony's inexpressibility thesis claims that certain aspects of natural experience are never encoded in language. Metaphors can, however, carry with them the extra meanings not encoded in language. In terms of education, Mayer (1993) states that the goal of science, for example, is both to describe and explain how things work in the universe. Students of science therefore need help in understanding these descriptions and explanations, and metaphoric language often plays a role in this process. Thus, in order to explain Ohm's law, a science textbook asks students to compare electricity to the flow of water in pipes (Pasachoff, Pasachoff, and Cooney, 1986:390).

Sticht (1993:622) claims that Ortony's compactness and inexpressibility theses support the view that metaphor originated in the spoken language and, by assisting in the transfer of large chunks of information, facilitates cognitive economy and efficiency. In acquiring new knowledge by means of old knowledge, metaphors also provide a meaningful, functional context for the transferral of information. Sticht concludes:

the metacognitive knowledge of how to manipulate ideas explicitly so as to transform either one's own or another's knowledge into new knowledge makes metaphor a major tool for extending our capacities for analytical thought.

(Sticht, 1993:631)

With metaphor working both as a tool for communication as part of the academic 'code' and as a tool for thought as part of the lecture's information content, the presence of metaphor in lecture discourse enhances students' powers of understanding, analysis and memorisation. In other words, when metaphor is considered as a tool for communication, it facilitates the exchange of information among participants, while as a

tool for thought, metaphor is a means of discovering relationships between apparently unconnected domains so that what is easily understood in one domain may facilitate understanding in another. In the following analysis, metaphor will be considered in both these aspects.

4.3.3 Metaphor at the macro level

Before analysing the data, it is useful to consider Cameron and Low's (1999) distinction between linguistic metaphor (or to be more precise, linguistically realised metaphor) and conceptual metaphor. As a macro level phenomenon, the former can be seen as:

Instantiating a metaphorical way of conceiving something, but the words involved have semantic values, contrasts and overtones, and being parts of utterances, they can also serve to create rhetorical effects, cue inferences/ implicatures and help organise the discourse. (Cameron and Low, 1999:4)

Linguistically realised metaphors must have some V term (Vehicle) (also known as Source) which may be of a different form from the Topic (T) (also known as Target). Thus, LOVE IS A JOURNEY⁴ is a conceptual metaphor, while *our relationship is at a crossroads* is a linguistically realised metaphor. Both will be considered in the analysis of the data, and presented in capital letters and italics respectively.

A further point worth considering is that of 'dead' and 'active' metaphors. Through frequent association with a certain linguistic form, the figurative meaning of a word is

⁴ In the literature, conceptual metaphors are normally capitalised. This convention is adopted where appropriate in this thesis.

so established or conventionalised that it becomes part of the vocabulary as one sense of the word in its own right. When this happens, the metaphorical force of the word is regarded as no longer active, and the metaphor is 'dead'. Ungerer and Schmid (1996) claim that from a cognitive perspective, this notion is misleading, since although metaphor is a conceptual phenomenon, we access those metaphors that structure the way we think through the language we use. Lakoff and Turner state that:

the mistake derives from a basic confusion: it assumes that those things in our cognition that are most alive and most active are those that are conscious. On the contrary, those that are most alive and most deeply entrenched, efficient, and powerful are those that are so automatic as to be unconscious and effortless.

(Lakoff and Turner, 1989:129)

According to this view, the most important metaphors are those that have entered the language in this way. Fauconnier (1997:9) supports the idea that there is little or no distinction to be made between 'dead' and 'active' or 'creative' metaphors.

Domain projection mappings may also be set up locally, in context, in which case they are typically perceived not as belonging to the language, but rather as 'creative' and part of the ongoing reasoning and discourse construction. There is however, no formal difference between the lexically entrenched (opaque) cases and the ones that are consciously perceived as innovative. Many of the latter are in fact simple extensions of the former. (Fauconnier, 1997:9)

In the analysis of the data no distinction will be made between 'dead' and 'alive' metaphors. However, it will be seen that the lexical realisations of certain conceptual

metaphors that have become part of the lexicon appear consistently across the units of information, and so constitute an organising force at the macro level, whereas those metaphors that are perceived as innovative and creative form part of the structure of explanation and can be considered as micro level phenomena.

4.3.4 UNDERSTANDING IS SEEING

As a tool for communication, one recurrent conceptual metaphor across the data is that of UNDERSTANDING IS SEEING. This is linguistically realised by all three lecturers in the study, with the need for students to see and thus understand the information being presented reflected in the metaphors used in the academic code.

For example, in Lecturer B, Instruct Sequence 1, the linguistic realisations of this conceptual metaphor occur systematically across the information unit. Here, the lecturer is presenting the political issues in GIS and discusses GIS and GIS potential, and the example of GIS being used in Ghana. The linguistic metaphors or Source are realised as both verbs and nouns, and so can appear in a different form from the Target which is both GIS itself and the Ghanaian example. Thus, it seems that in order for students to understand the political issues in GIS, they need to see and understand both the above mentioned points.

(5) Lecturer B: Instruct sequence 1 extract

- 80 ... so two different ways of *seeing* GIS
- 81 and *seeing* GIS potential and I have certainly seen that played out in
- 82 Ghana...

Things may either be present or absent in the visual field, and when available knowledge is made visible, or perhaps taken out of its container, then the chances of understanding are heightened, suggesting that what is not seen cannot be understood. In this way, two conceptual metaphors are linked, that is the concept of knowledge as an object and the concept of seeing as understanding.

(6) Lecturer B: Instruct sequence 1 extracts

69 ...talk specifically about participatory GIS and use the you know
70 the uh the January workshop and the ideas that *came out of* that

90 people who are *emerging* right across Africa

Sometimes, however, the container itself can be made transparent in order for people to see and therefore understand what is being made visible:

(7) Lecturer B: Instruct sequence 1 extract

105 ...it's (Ghana) a sort of *showcase* for
106 structural adjustment

If understanding is seeing, then mental faculties are eyesight. As the eyes focus, so the mind concentrates on a particular item:

(8) Lecturer B: Instruct sequence 1 extract

89 ...it
90 does sort of um give you a different *view*...of how people
91 in poor countries can uh use stuff

By using GIS, which sees and so understands particular situations, so those people who use GIS will not only gain an understanding of these situations but of GIS itself and its potential. In other words, if the students can see GIS working via the Ghanaian example, then they will understand its use and the political issues involved. Here the linguistically realised metaphors of the conceptual metaphor UNDERSTANDING IS SEEING serve as a tool for communication as their familiarity and status within the lexicon facilitate the exchange and retention of information.

With Lecturer C, Instruct Sequence 2, the lecturer discusses the phrasing of questions in questionnaires, and the need to ask the right question. This would suggest a need for clarity, since something which is easy to understand is clear and transparent, whilst things that are difficult to understand are opaque:

(9) Lecturer C: Instruct sequence 2 extracts

214 ...reading

215 off I mean if the question's *clear* to begin with then reading off is ok

231 ...piloting

232 also (.) picks up things which are gonna be *unclear*

If something is in your way and presents itself readily then it can be viewed by the eye and consequently the mind:

(10) Lecturer B: Instruct sequence 1 extract

178 ...you have to be very careful

179 particularly when words are translated into local languages (.) about even

180 things that seem fairly *obvious*

In addition, if a medium such as an enumerator is used to ask the questions, clarity in that person's mind about what is required is essential:

(11) Lecturer B: Instruct sequence 1 extracts

203 if the enumerator's absolutely *clear* about what you're trying to get
204 at (1.0) um then that's probably ok but I mean that means that you know
205 the training of the enumerator (.) becomes (.) extremely important (.) so
206 that they're *crystal clear*

Clarity is thus required in both the construction of a questionnaire and in the minds of those who are given the responsibility for its execution. The linguistically realised metaphors of UNDERSTANDING IS SEEING have these two target domains in this information unit. In other words, if students wish to have a clearer picture and thus understanding of a situation from a questionnaire, the questions need to be clear and so easy to understand and the enumerator, if required, needs to see and understand the aims behind them. As with Lecturer B, Instruct Sequence 1, the metaphors, realised as adjectives in this case, serve as a tool for communication.

4.3.5 IDEAS/INFORMATION/WORDS ARE OBJECTS/GOODS

In Lecturer A, Instruct Sequence 1, the lecturer discusses the conscientisation process of Paulo Freire. In this information unit, education, knowledge and qualifications are presented as objects or goods. These abstract entities are metaphorically handled and manipulated in the talk. Educators send these parcels of information, and, in this case,

people in developing countries receive or get education and knowledge in a variety of ways:

(12) Lecturer A: Instruct Sequence 1 extracts

- 152 ...education (.) as it was in Brazil and
153 as it still is in in most developing countries (.) *had been imported*
- 170 ...the banking type
171 of curriculum (1.0) um which is (2.0) basically um (2.0) uh *getting* as
172 many qualifications as you possibly can
- 177 ...knowledge is the *property* of the individual

Getting the object ‘knowledge’, and that knowledge becoming the property of the individual, suggests that that individual has control over the information, and is thereby to some extent empowered. This object of knowledge can also be handed over from one party to another, such that the teacher is not only the guide but also the benevolent provider of information and knowledge:

(13) Lecturer A: Instruct Sequence 1 extract

- 210 ...the teacher *hands down* knowledge
211 as a gift to the student

The lecturer’s aim here is to show that knowledge cannot simply be handed over, since in order to become more knowledgeable, students need to participate in their own learning. In the metaphor, if knowledge is understood as an object, then it is both easier to assimilate and easier to transfer from one party to another. However, part of this

metaphorical concept does not fit, since while the knowledge is ‘given’, it is still kept by the giver. This issue is resolved further on in the information unit, when the lecturer states:

(14) Lecturer A: Instruct Sequence 1 extract

230 according to Freire, knowledge is *gained* as a collective property

Moreover, these different types of knowledge have centres and peripheries and can be divided up into smaller parts, perhaps so that they can be more easily handled and therefore acquired:

(15) Lecturer A: Instruct Sequence 1 extracts

151 ...*part of the problem* that people found

152 themselves in was education

200 ...*knowledge* is set down in textbooks

201 in the official syllabus and it's *divided up* into subjects

230 ...*knowledge* is gained as a collective property and

231 you know we we we shou-should *share* this

This is also evident in other information units, and it is also seen that knowledge is regarded as an object being contained within a marked out area. Two conceptual metaphors are again used to clarify the point being made.

(16) Lecturer B: Instruct Sequence 1 extract

72 this is the *whole* (.) *central core* of the debate

(17) Lecturer A: Instruct Sequence 2 extract

722 he thought of it as being a counterproductive modernist *core*

723 knowledge type uh technique

The sending and receiving of ideas, knowledge and information in the form of objects or goods conceptualises how linguistic communication works. Speaking involves taking ideas, thoughts and emotions and putting them into words and sentences. Linguistic communication is then the transfer of these ideas to the hearer or receiver who is then charged with unpacking and extracting the ideas from the language (Ungerer and Schmid, 1996). In other words, words are containers for ideas from the speaker/sender to the hearer/receiver. This conceptualisation of linguistic communication is called the CONDUIT metaphor (Reddy, 1993).

In this particular information unit, the lecturer is transferring knowledge in an educational setting about the transferral of knowledge in other educational settings. The linguistically realised metaphors evoke both a speaker and hearer perspective of communication; educators send parcels of knowledge to students, and students receive these parcels and become part-owners. Viewed as objects or goods, knowledge becomes the property of the individual. Thus, whilst the lecturer is describing Freire's conscientisation process in developing countries, he is also putting his own ideas and knowledge into a container of words and sending them to his students to unpack and extract meaning therefrom.

In Lecturer A, Instruct Sequence 2, the IDEAS ARE OBJECTS metaphor is extended to cover practical attainment of knowledge in the field. Like objects, this fieldwork which

the students may not have experienced first-hand, can be metaphorically handled and collected, as if they were plants or crops:

(18) Lecturer A: Instruct Sequence 2 extracts

708 ...rapid ecosystem uh agro ecosystem

709 zoning (.) actually can *gain* results which are more sophisticated than

710 those which you *get* through traditional questionnaire techniques

756 ... *gather* the data (.) through village

757 meetings (.) on a number of uh set criteria that you want to know about

766 secondary data *was collected*

In Lecturer B: Instruct sequence 2, the lecturer also refers to the practical attainment of information in the field. Here again, information is an object which needs to be collected and put into some unspecified container by any means and presumably then controlled as an individual's property:

(19) Lecturer B: Instruct Sequence 2 extract

177 ...it's just *getting it in* you know not not what will we use it

178 for (.) are there any ethical issues (.) here just let's *get it in*

As researchers carry out fieldwork and collect and interpret information, so students need to actively carry out their own interpretation of the information being communicated to them through the lecturer's words.

4.3.6 IDEAS/INFORMATION/WORDS ARE LIQUID

Whilst the majority of metaphorical expressions present information as an object, there are some expressions in the data, where ideas are seen as liquid. Thus, extracting information is obtaining liquid:

(20) Lecturer A: Instruct Sequence 1 extracts

245 potentially it has the ability to *absorb* data

254 the greater awareness that we *absorbed* as

255 a result

(21) Lecturer B: Instruct Sequence 1 extract

122 ...the environmental protection

123 agency were *lapping this up*

(22) Lecturer C: Instruct Sequence 2 extract

226 and then you go on to more detailed

227 questions so the actual *flow* (.) needs to be sensible

In these cases, the target domains vary from people taking in information to the tools they use in order to collect it, and both become containers for that information. ‘Absorb’ and ‘lap’ both suggest wilfulness and eagerness to take in information, a thirst for knowledge, and if students are keen to learn and make themselves containers of information, they will also reap the benefits to be had.

4.3.7 WORDS ARE CONTAINERS

As mentioned above, in the Lecturer A, Instruct Sequence 1, there is evidence of the conceptual metaphor WORDS ARE CONTAINERS:

(23) Lecturer A: Instruct Sequence 1 extract

200 ...knowledge is *set down* in textbooks in the
201 official syllabus and it's divided up into subjects

When ideas are contained by words and put down on paper they become fixed and accessible for people to read and discuss. Ideas, or in this case knowledge, become more stable through being attached to paper, and as a result these ideas can be more easily considered and studied. Again, the metaphor works only partially, since although the 'idea' or 'knowledge' is fixed, it is never clear exactly what it is:

(24) Lecturer A: Instruct Sequence 1 extract

234 ...you have
235 to have something *written down* in a brochure

In a sense, the use of 'something' admits the vagueness and abstractness of knowledge and education. Earlier, when the lecturer discusses exam preparation, there is still vagueness about what students are expected to learn:

(25) Lecturer A: Instruct Sequence 1 extract

212 ...so you learn *things* by rote and you are successful
213 if you can rem- if you can memorise these *things* and reproduce them in an
214 examination

It seems that 'thing' is a coverall term used when the lecturer has difficulty in expressing that which is to be understood. However, this seems to contradict the earlier statement on metaphor and learning that 'metaphor, due to its greater imagery and vividness, is one means of encouraging more memorable learning'. This seems to be one area where we have not managed to bridge the gap between language and thought. Fauconnier (1997:2) puts across this point quite clearly:

the paradox that we know more about faraway galaxies than we do about the core of our own planet has a cognitive analogue: We seem to know a good deal more about the world around us than we do about our minds and brains'.

(Fauconnier, 1997:2)

As Fauconnier goes on to explain, the problem here is that we need to rely on thought in order to study it. In other words, language and thought are the tools we use to analyse both language and thought themselves. And, since knowledge pertains to the area of thought, we have difficulty in conceptualising its complexity. This difficulty is then reflected in the lecturer's use of the conceptually empty term 'thing'; it seems the lecturer cannot, and therefore does not, attempt to quantify this abstract concept.

4.3.8 AN ARGUMENT IS A JOURNEY

Ungerer and Schmid (1996:122) give the following as the three traditional meanings of the word argument: a line of thought; a disagreement or quarrel; and a reason given to support or undermine something. They argue that these definitions do not do justice to the amount of information we have stored under the cognitive model ARGUMENT.

Moreover, Lakoff and Johnson (1980) state that our conceptualisation of this model is based on four related metaphors: AN ARGUMENT IS A JOURNEY; AN ARGUMENT IS A BATTLE; AN ARGUMENT IS A CONTAINER; AN ARGUMENT IS A BUILDING. The first metaphor conceptualises an argument as having progress or movement forwards. Within this, Ungerer and Schmid point out that there are both nominal categories such as (STARTING-) POINT, LANDMARK, WAY, PATH, and GOAL, and action categories such as SETTING OUT, MOVING ON, COVERING GROUND, FOLLOWING A PATH, and ARRIVING (1996:123). These in turn give a structure to the model JOURNEY which can then be mapped onto the model ARGUMENT.

In the data, the ARGUMENT IS A JOURNEY METAPHOR is lexically realised in the instruct sequences on questionnaires (Lecturer C, Instruct Sequences 1 and 2), on GIS used in Ghana (Lecturer B, Instruct Sequence 1) and Freire's conscientisation process (Lecturer A, Instruct Sequence 1). Each process has a number of stages with a starting point, a choice of paths or ways, and an ultimate goal. As the lecturers use this conceptual metaphor to present the argument within each information unit, so they are the guides taking their students on a journey to the ultimate goal of attainment of the knowledge being presented. The conceptual metaphor is a tool for communication,

In Lecturer C, Instruct Sequence 2, the journey metaphor is mapped onto the domain of doing questionnaires. This process has a linear progression with a clearly defined starting point, path and goal.

(26) Lecturer C: Instruct Sequence 2 extracts

223 ...if you *start off with* questions like you know

224 how old are you

230 ...you know what

231 questions *go together*

237 ...I thought

237 that would be a sensitive issue and I wasn't quite sure how to *go about* it

203 if the enumerator's absolutely clear about what you're trying to *get*

204 *at*

As stated above, any journey and thus any argument requires some kind of starting point. In Lecturer A, Instruct Sequence 1, the conscientisation process of Freire is presented as being triggered by Freire himself:

(27) Lecturer A: Instruct Sequence 1 extract

239 ...so Freire

240 um (.) then (1.0) I think is (1.0) quite a (.) *stimulus* anyway to a to a new

241 sort of thinking about (.) about knowledge

Here the nominal category is preferred over the action category, linguistically realised by the word *stimulus*. Goatly (1998) claims that such noun V (Vehicle/Source) terms seem to be more readily recognisable as metaphors than other word classes, afford richer interpretations through their greater vividness and so are more memorable. Perhaps in order to emphasise the powerful and lasting effects of Freire on education,

using the same metaphor but this time with the verb *V* term, the lecturer comments on his own failed attempts and actions to get students to react during a previous discussion:

(28) Lecturer A: Instruct Sequence 1 extract

- 221 I mean it wasn't as if (1.0) you know there was a riot
222 in the end or anything which um I would have liked to have *stimulated*
223 you know for people to get up and shout

In Lecturer B, Instruct Sequence 1, the lecturer explains the government agencies' desire for GIS in Ghana:

(29) Lecturer B: Instruct Sequence 1 extract

- 121 they were (.) *pushing the idea* of providing lots of fancy
122 equipment funded by DFID

In this case, the idea becomes an object, and since it is being pushed, there is a sense that it is resistant to the force acting upon it. '*Push*' suggests that the force does not act on the object for a brief moment, but rather continues to act on the object as it travels. The desire for the '*fancy equipment*' amongst the government agencies is thus both strong and determined.

AN ARGUMENT IS A JOURNEY is evident elsewhere in Lecturer B, Instruct Sequence 1, when the lecturer explains the political issues in GIS. In discussing the case of Ghana, the department of wildlife is presented as:

(30) Lecturer B: Instruct Sequence 1 extract

126 ...one of the more um go *go ahead* um (.) parts
127 of the government ministries

Not only is there movement forwards, but also a sense of enterprise and progress.

(31) Lecturer B: Instruct Sequence 1 extract

123 ...they very much want to *get*
124 *on to the* GIS information *bandwagon*

People want to join others who are doing something that is fashionable and likely to be successful. Getting on to the bandwagon also suggests faster movement forwards and so more rapid success and attainment of goals. In contrast, if the journey is neither started soon enough or travelled fast enough, opportunities may be missed:

(32) Lecturer B: Instruct Sequence 1 extract

150 ...Durham is very s- is *very slow*
151 *off the ground* on this and they you know it was too late

The distance moved and the speed with which the distance is covered are a measure of success.

THE ARGUMENT IS A JOURNEY metaphor is also linguistically realised in the metatalk at the beginning of the information unit, when the lecturer defines the content of what is to follow:

(33) Lecturer A: Instruct Sequence 1 extract

125 what I want *to start with* is what I should have done in here

(34) Lecturer B: Instruct Sequence 1 extract

66 so what I'm going to do is (.) just *go through* the political

67 issues

Thus, the introduction to the argument or information unit is understood in terms of a journey, and as the argument defines the path, so the lecturer is the guide who points out what is important and interesting along the way. This is stated explicitly in Lecturer A, Instruct Sequence 1:

(35) Lecturer A: Instruct Sequence 1 extract

237 the teacher's a *guide* to learning

238 and tries to relate ideas to the practical world of the student

As stated earlier, in relation to this particular information unit, lecturer A was seen to be transferring knowledge about transferring knowledge. These two levels are again evident here where the lecturer, whilst explaining that the teacher is a guide for the student, is himself being a guide and so is realising the argument he is in fact describing. Moreover, the metaphor of guide suggests that students are taken to a place where they wish to go. However, the lecturer warns that whilst the teacher acts as a guide, no student should blindly follow or assume that the teacher is on the right path; students should actively participate in and take some responsibility for their own learning:

(36) Lecturer A: Instruct Sequence 1 extract

227 most students are completely (2.0)
228 you know they're just not aware of that sort of thing they just take it
229 passively (1.0) because teacher's *right in some way*

Moreover, different paths can be taken in order to reach the goal. In Lecturer A, Instruct Sequence 2, in explaining the 'mapping process', the 'path' or 'way' on the journey to understanding GIS may take a variety of directions:

(37) Lecturer A: Instruct Sequence 2 extracts

704 quite a detailed um (.)
705 map which potentially anyway (1.0) um could be (1.0) *i-in quite a detailed*
706 *sophisticated way* I think put on to a GIS

724 ...but there is a possibility
725 of using GIS *in a participatory way*

731 *in a relatively simple way* they've done it haven't they yes they'd they'd
732 shown where the local farmers had had i-identified uh fertile patches

As the aforementioned guide, the lecturer is responsible for showing students different options, possibilities and paths and assessing their relative value, and in doing so students will be able to understand and assess the relative value of GIS and its uses.

From these examples it can be seen that, as a macro level phenomenon, conceptual metaphors are linguistically realised across all information units. Moreover, there is consistency within the information units, in that individual conceptual metaphors are linguistically realised by different word classes throughout those units. This recurrence, and hence consistency, helps organise the discourse within the information units and lends coherence. Their familiarity and fixedness in the lexicon also facilitate the

process of understanding and memorisation, as they are almost unconsciously and effortlessly assimilated by the students as the lecturer speaks.

4.3.9 Summary

In the information units analysed in this study, it is clear that each lecturer uses multiple metaphorical concepts to represent their understandings, knowledge and beliefs. The conceptual metaphors UNDERSTANDING IS SEEING; IDEAS/INFORMATION/ WORDS ARE OBJECTS/LIQUIDS; WORDS ARE CONTAINERS; and AN ARGUMENT IS A JOURNEY are common across the units of information and their linguistic realisations serve an explanatory function rather than being central to a particular theory. In other words, they serve as tools for communication, facilitating the exchange of information by forming part of the lecturer's spoken discourse and academic code.

In the information units where UNDERSTANDING IS SEEING is linguistically realised across these units, the students are shown the tools of their trade by the lecturers. In the case of lecturer B they are GIS, and in the case of lecturer C they are questionnaires. By seeing and thus understanding how these tools operate, students will then see and understand the information they would wish to obtain when using these tools for themselves. In the information units where IDEAS etc. ARE OBJECTS, the former are sent by educators to students, who receive these goods and become part-owners of that knowledge. Knowledge is transferred through the transfer of knowledge in a loop input fashion, and WORDS ARE THE CONTAINERS which facilitate this exchange between the lecturer and students. Where the ARGUMENT IS A JOURNEY,

the loop input surfaces again, as the lecturer, for example lecture A, guides the students along the journey of the argument in order to facilitate a clearer understanding of that argument.

Lakoff and Johnson (1980) state that we all share general assumptions about the world which allow us to infer the meaning conveyed by a metaphor in the process of mapping our knowledge from one source domain to another. Since these mappings are well established in our common experience of the world, they are automatically understood and assimilated, and so easily accessible for future use. In the lectures, the familiarity of these conceptual metaphors and their establishment within the lexicon facilitate student processing of the information being shared within the limited time allocated to this process. Additionally, as they occur across the information units they act as an organising factor on the discourse and provide coherence, which in turn facilitate comprehension and memorisation of the information being presented.

Moreover, if these metaphors evident in the talk spark off the same or similar associations among the participants in the lecture, then the illocutionary force of the lecturer's words is more or less guaranteed. The process of information transfer is greatly facilitated as new information is introduced by what is old and familiar. Since conceptual metaphors are assumed to be cross cultural, there should then be relatively little difficulty for non native speaker student comprehension in this regard.

Metaphor is a way of wording the world, and as Mey states:

in order to understand another person's wording I have to participate in his or her contexts, to word the world with him or her. The pragmatic view of language demands thus a sympathetic understanding, a practice of co-wording in solidarity with the context of its users. (Mey, 1993:62)

In lectures, where the lecturer controls and dominates the interaction, students are less able to actively join in with the lecturer's wording than participants in other types of institutional interaction. The responsibility is therefore on the lecturer not only to think about how appropriate a particular metaphor is in a particular context, but also to encourage the participation of students on some level.

Chapter 5

Exploring the Micro Level of Lecture Discourse

5.1 Introduction

In the macro level analysis of the data discussed in the previous chapter, the introductory phase to each initial instruct sequence was analysed for the three lecturers and the means by which the lecturers signalled the structure of the lecture to their audience were revealed as macro discourse markers and conceptual metaphor. Similarities across the data were evident, and the analysis of a further phase from another randomly chosen instruct sequence for each lecturer confirmed the consistency and similarities in the markers observed in the agenda setting structure of the talk. The study now turns its attention to the analysis of micro level phenomena in the talk.

5.2 Methodology

After any initial ‘noticings’, Schegloff (1996) states that there are many ways in which the analyst can proceed with a more systematic analysis of the data. In the present study, the five tools of analysis suggested by Pomerantz and Fehr (1997) are utilised for the analysis of data at the micro and meta levels. The first, second and fifth tools are applied to the

analysis of data at the micro level and are discussed in this chapter. The third and the fourth tools are perceived as being more relevant and hence appropriate to the analysis of the data at the meta level and are applied in the next chapter.

In terms of the micro level, Pomerantz and Fehr's tools were felt to be the most appropriate for the analysis as they would serve to clarify the form of the information units revealed in the pilot study findings and reveal the specific features of each phase within them. Since Pomerantz and Fehr propose that these tools be applied to data whose essential property is turn-taking, in the present study, where the dialogic nature of the talk is largely implicit, the procedure is slightly adapted. The tools of analysis are listed below, followed by brief details of how the procedure is adapted and applied to the data. This is followed by a detailed analysis of the data. In the next chapter, the selected tools are applied to the data and reveal the role of metadiscourse in the accomplishment of acts of instruction.

1. Select a sequence

Pomerantz and Fehr suggest that the analyst search for the start and end of a sequence of which the noticed talk or action is a part. In other words, in order to characterise a sequence, the analyst needs to identify sequence boundaries. In the present study, the sequence is identified as an information unit.

2. Characterise the actions in the sequence

The aim here is for the analyst to describe the actions of a sequence on a turn-by-turn basis. In conversation, the relationship between actions consists of initiatives and responses of

some sort. For the purposes of the present study, the aim will be to describe and define the structure of the information units in the data. In the information units, as revealed in the pilot study, there is relatively little turn-taking between lecturer and audience but rather an implicit dialogic structure to the lecture as a whole. In this, the Conclusion phase is motivated as a response to unspoken questions from the audience after the Content phase.

In order to describe the actions of the information units in the data in the present study, this section will explain why a model derived from the X-bar theory of phrase structure accounts more comprehensively for these sequences, and expands on other models in the literature.

3. Consider how the speakers' packaging of actions, including their selection of reference terms, provides for certain understandings of the actions performed and the matters talked about. Consider the options for the recipients that are set up by that packaging.

Here 'packaging' refers to the form chosen to produce the action from the alternatives that might have been available. The idea is that speakers package the actions they perform in particular ways. The job of the analyst is not to produce an accurate description of the speaker's decision-making processes on a particular occasion, since speakers often perform their actions without consciously thinking about how they are doing so, but rather to reflect on the alternatives that could have been used but were not. The analyst then needs to identify the terms that the speaker has used and how these provide for the understandings of

the audience. In other words, the analyst has to identify the packaging of a given action and its consequentiality for the participants.

For the purposes of the present study, packaging is understood to do with showing how the actions of the information units take the form they do on each particular occasion with these particular participants. This section will identify the packagings the lecturers choose over a possible set of alternatives at the meta level, and how these packagings help provide for the understandings and inferences that the audience are to draw from them. Included in the analysis of the packaging of an action will be the ways in which the lecturers refer to items such as people, places, objects and activities. These terms provide in part for the audience's understanding of the talk as a whole.

4. Consider how the timing and taking of turns provide for certain understandings of the actions and the matters talked about.

Pomerantz and Fehr state that this refers to the essential aspect of 'getting the floor' in a conversation. For each turn in the sequence, the analyst needs to consider how the speaker obtained the turn, the timing of that turn, and whether the next speaker self selected or was selected by the previous speaker. From this, the analyst has to reflect on how this fits with the actions being performed and how the timing of the turn is connected to the understandings of the participants.

In orienting to their relevant institutional roles and identities, the participants in a lecture take on certain responsibilities associated with those roles and identities. The responsibility

of the lecturer is mainly to impart a certain amount of information to the audience within a specific time period. In order for this action to be successfully accomplished, contributions from the audience need to be kept to an absolute minimum. The overall preference then is for non-verbal responses from the audience. Preference in this sense is not about the individual desires of the speakers and hearers, but rather relates to turn design (Levinson, 1983). Certain first pair parts will make a range of actions relevant in second position. These alternatives are non-equivalent, such that the granting of a request, for example, is labelled as the 'preferred action turn shape' (Pomerantz, 1984:63) and is expected and chosen if possible. When a person declines a request, this is called a 'dispreferred action turn shape'.

In a lecture, the preferred action is a non-verbal response and the dispreferred action is for the audience to attempt to take the floor. As shown earlier, there is an implicit dialogic structure to the lecture with many items in the Conclusion phase taking the form of responses to implicit questions after the Content phase. Since the interaction is one-to-many, the audience's turn is taken care of in these non-verbal responses unless the lecturer specifically invites a member of the audience to take the floor. In terms of the initial characterisation of an instruct sequence, an initiative-response structure can be applied, if the implicit exchange of turns at talk and the subsequent asymmetrical nature of each party's contributions to the lecture are acknowledged.

In the analysis of the timing and taking of turns, this section will illustrate how the lecturer and the audience manage their institutionally relevant roles. It will also take into account

the ways in which the audience is expected, on the one hand, to respect the one-to-many constraints of the lecture on most occasions, and to set it aside on others. This will include a focus on the strategies used by the lecturer to retain the floor and to regain the floor after both interactive sequences with the audience and asides.

5. Consider how the ways the actions were accomplished implicate certain identities, roles and/or relationships for the interactants.

Conversation analysis aims to explicate the methods people use to make sense and be understood by others in everyday social interaction. The idea is that these methods are meaningful for the people who produce them and that they have a natural orderliness. This orderliness results from the ways in which participants in interaction co-ordinate their production of meanings and actions. (Schiffrin, 1988). Mutual understanding of such methods depends on the notion of membership, in that participants demonstrate common social behaviour in order to show group membership. In other words, membership is signalled through the interactional strategies or members' methods of the participants. As the interaction develops, so participants select and display in their actions those aspects of context they are invoking or making relevant for the immediate moment. Thus, members' methods index or encode context, and show which aspects of context are relevant and consequential for the talk.

In the present study, the aim is to show how the lecturer and students orient to, take into account and make relevant particular features of the institutional setting in which the lecture takes place. Moreover, as the lecture progresses, so the roles and relationships of

the participants are re-negotiated. Part of this re-negotiation is signalled by shifts in footing. The lecturer's presentation of self and the creation of involvement will also be analysed in terms of how both are constructed through verbal and non-verbal strategies at the level of footing. These are meta-level phenomena and so will be discussed in the next chapter.

5.3 Micro level analysis

5.3.1 Select a sequence

For the micro level, the concern in this section of the chapter is initially to analyse data from Lecturer A in order to build on and develop the three-part structure revealed in his talk in the pilot study. Once a model of the micro level structure of the information units has been derived, this model will be applied to data from Lecturer B and Lecturer C. This is done in order to see to what extent the model also represents other lecturers' styles, and thus to provide empirical support for the information unit model identified in the data from Lecturer A.

In order to be able to analyse a complete sequence and to be helpful to the reader, the data selected immediately follow the data analysed at the macro level. Thus, the extract used for analysis for Lecturer A is that which immediately follows the introductory phase analysed for macro level features in the previous chapter. This sequence follows an account-

formulation structure, with the formulation signalled by *so* in line 239 terminating the sequence at line 241:

239 *so* Freire
240 um (.) then (1.0) I think is (1.0) quite a stimulus anyway to a to a new
241 sort of thinking about (.) about knowledge...

This formulation operates at the macro level and concludes the entire instruct sequence, as opposed to the preceding Content phase and Response phase to which it bears no direct relation:

Table 1: Example of beginning and end of one instruct sequence in Lecturer A data

Discourse Structuring Phase	Content Phase	Conclusion Phase
And	the teacher’s a guide to learning and tries to relate ideas to the practical world of the student	(.) in other words there’s greater practice involved in all in all of this
(1.0) <i>so</i> Freire um (.) then (1.0)	<i>I think is quite a stimulus anyway to a to a new sort of thinking about (.) about knowledge</i>	

In terms of the three-part phasal analysis, its macro level function motivates analysing *so* as occurring in the Discourse Structuring phase rather than in the Conclusion phase. If this were not the case, *so* would be operating at the micro level and instead be signalling a gloss of immediately preceding content, and would appear in the third phase. In the above extract, it is clear that *so* marks not a gloss but rather a macro level formulation.

The same pattern occurs in the Lecturer B data, where a macro level formulation is marked by *so* in line 157 ‘*so which is why I think it’s also very important to get [?] here*’ and ends in line 161 ‘*(.) so I think it’s very important to get somebody like that (.) aware of the issues*’. This finishes the sequence and relates back to the political issues in GIS which are mentioned by the lecturer at the beginning of the sequence in lines 66-67 ‘*so what I’m going to do is (.) just go through the political issues in GIS*’.

Table 2: Example of beginning and end of one instruct sequence in Lecturer B data

Discourse Structuring Phase	Content Phase	Conclusion Phase
And	I mean the ethics of GIS and so on they're they're much less (1.0) concerned about (.) at this stage	
(1.0) so	<i>which is why I think it's also very important to get [?] here</i>	so he's much more aware now
	and he does a lot of work for the World Bank	he's very much involved in all the World Bank projects
	he's their GIS man in Ghana	
(.) so	<i>I think it's very important to get somebody like that (.) aware of the issues</i>	

In Lecturer C's data, the sequence dealing with the issue of how to design questionnaire items ends with a formulation consisting of two macro markers: ‘*but anyway*’ in line 242:

Table 3: Example of beginning and end of one instruct sequence in Lecturer C data

Discourse Structuring	Content Phase	Conclusion Phase
(1.0) I remember once	I wanted to ask about um (3.0) contraceptive use	(.) and you know I thought that would be a sensitive issue and I wasn't quite sure how to go about it
and	as it proved to be not an is- sensitive thing at all	
	people were quite happy to talk about it (.) um men in front of the women women in front of men [?]	not something people have a problem with
	[?] that you know they use contraception or not	
(.) but anyway	<i>I suppose piloting gives you an opportunity to do that to work out what's sensitive</i>	

The discourse marker *anyway* signals that the speaker is returning to an earlier point in order to summarise it. This reference back to a previous topic indicates that the marker is not operating at the micro level but rather at the macro level and that what follows is a macro level formulation.

In each case for each of the lecturers, the data to be analysed then are the talk following the data analysed at the macro level and preceding these macro level markers of topic completion.

5.3.2 Characterise the actions in the sequence

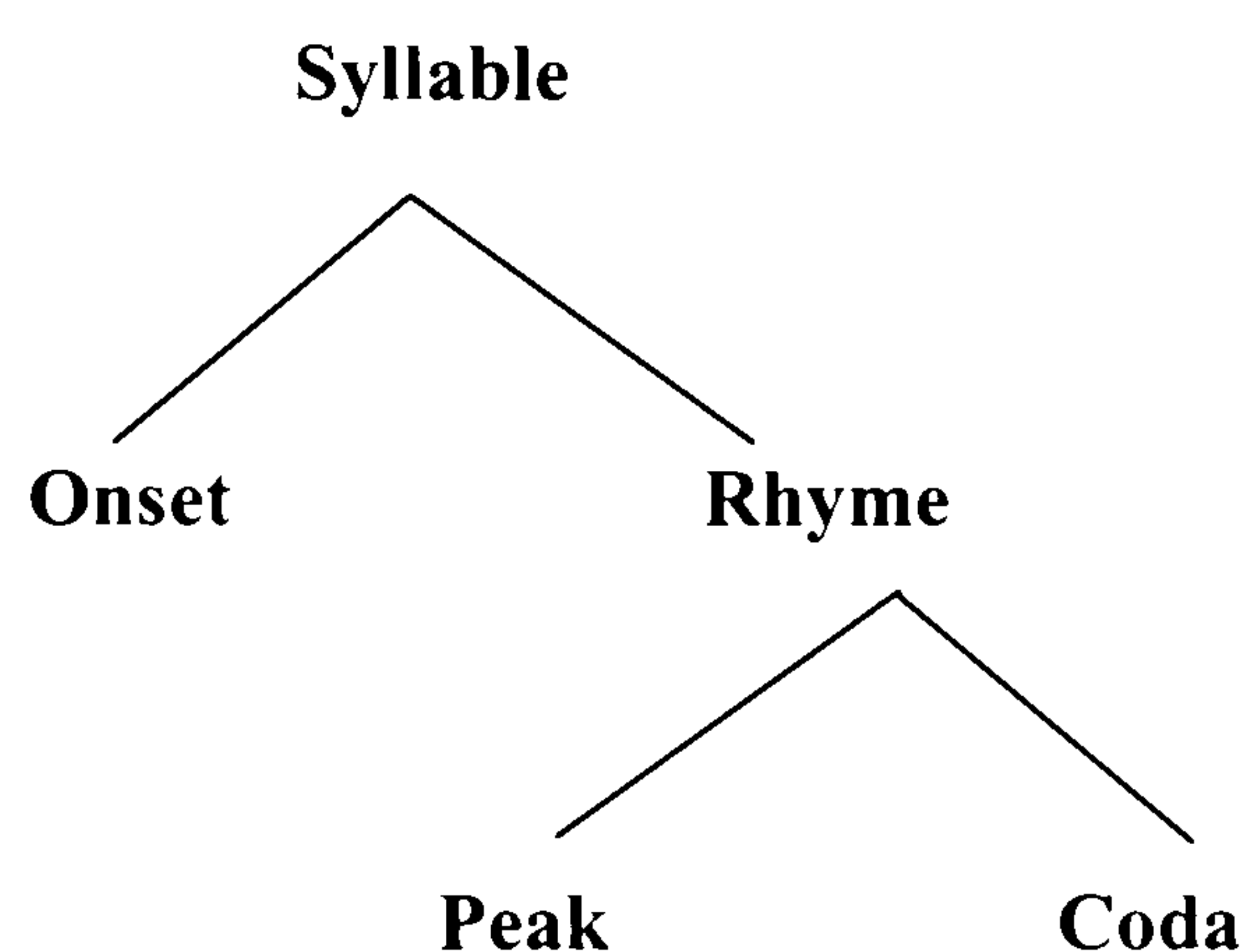
The analyst's aim here is to describe the turns within the sequence. However, in a lecture, there is relatively little turn-taking between lecturer and audience. As shown above, the Conclusion phase of an information unit is motivated as a response to unspoken questions from the audience after a Content phase, so giving an implicit dialogic structure to the lecture as a whole.

In her study, Young (1994) acknowledges the problems of attempting to characterise the function of each different phase in the lecture and then how to label them. She also stresses that her three main labels of Discourse Structuring Phase, Content Phase and Conclusion phase should be interpreted neither as definitions nor as structure labels. Her rationale in doing so is that rather than suggest either a hierarchic or linear structure to the discourse, the labels serve to indicate the function or purpose of each phase as the discourse of the lecture develops. In other words, the labels themselves do not carry any specific meaning but rather serve to remind the reader of what happens at the different stages or phases of the process of information transfer in a lecture.

Recognising the difficulties of encapsulating the form and function of the different phases within an information unit, the present study turned to the ways in which structural and functional patterns below the level of discourse, i.e. word and sentence, are represented diagrammatically for the purposes of analysis in linguistics. The complex structure of language is represented in linguistics as consisting of different levels, with the central core of language being grammar, and phonology constituting the level below this.

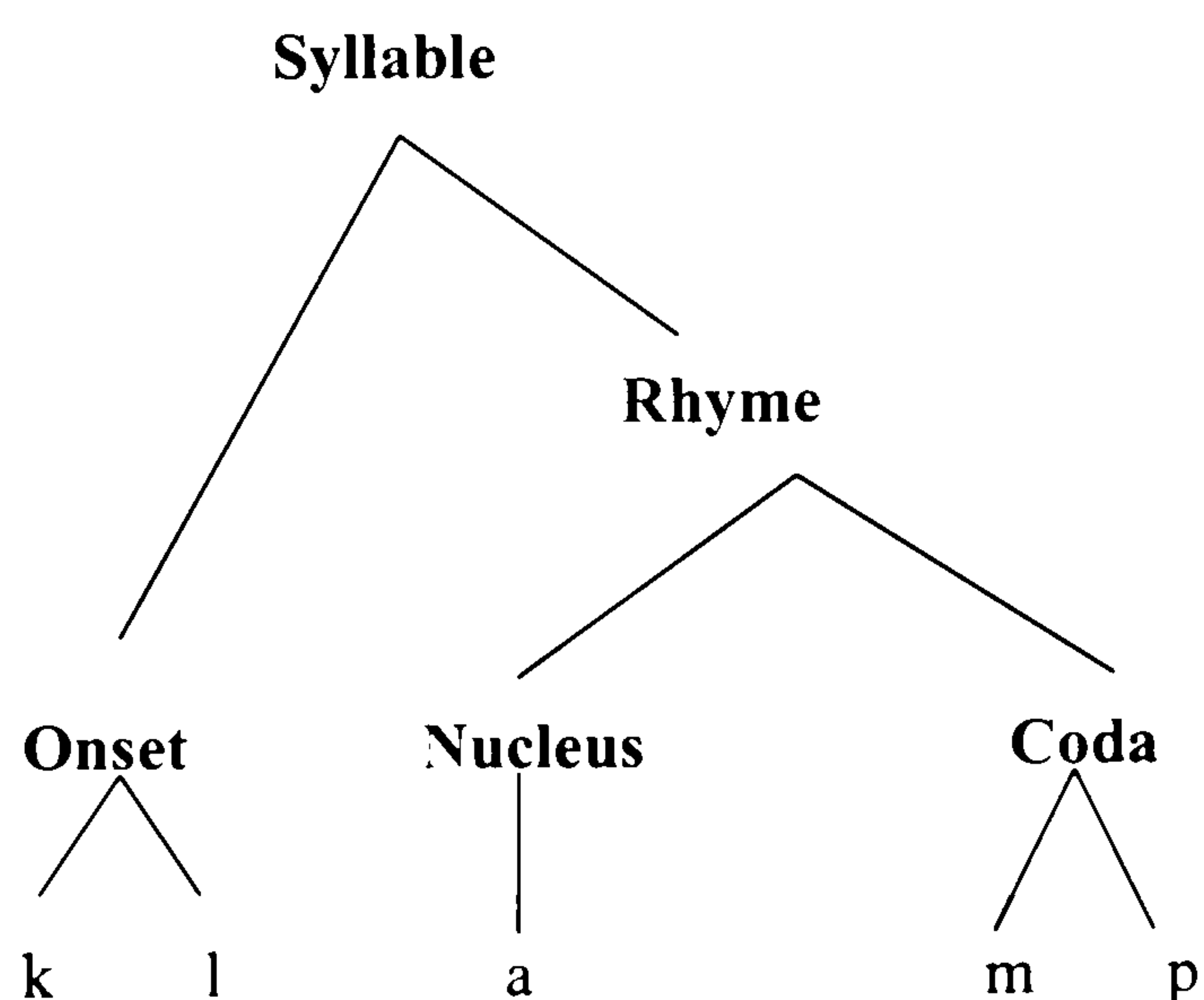
Starting with the level of phonology, in the sound system, the syllable consists of an onset and a rhyme. The rhyme then consists of a nucleus and a coda. This structure is expressed diagrammatically as:

Diagram 1: Syllable structure



Thus a word like *clamp* can be represented as follows (Giegerich:1992:138):

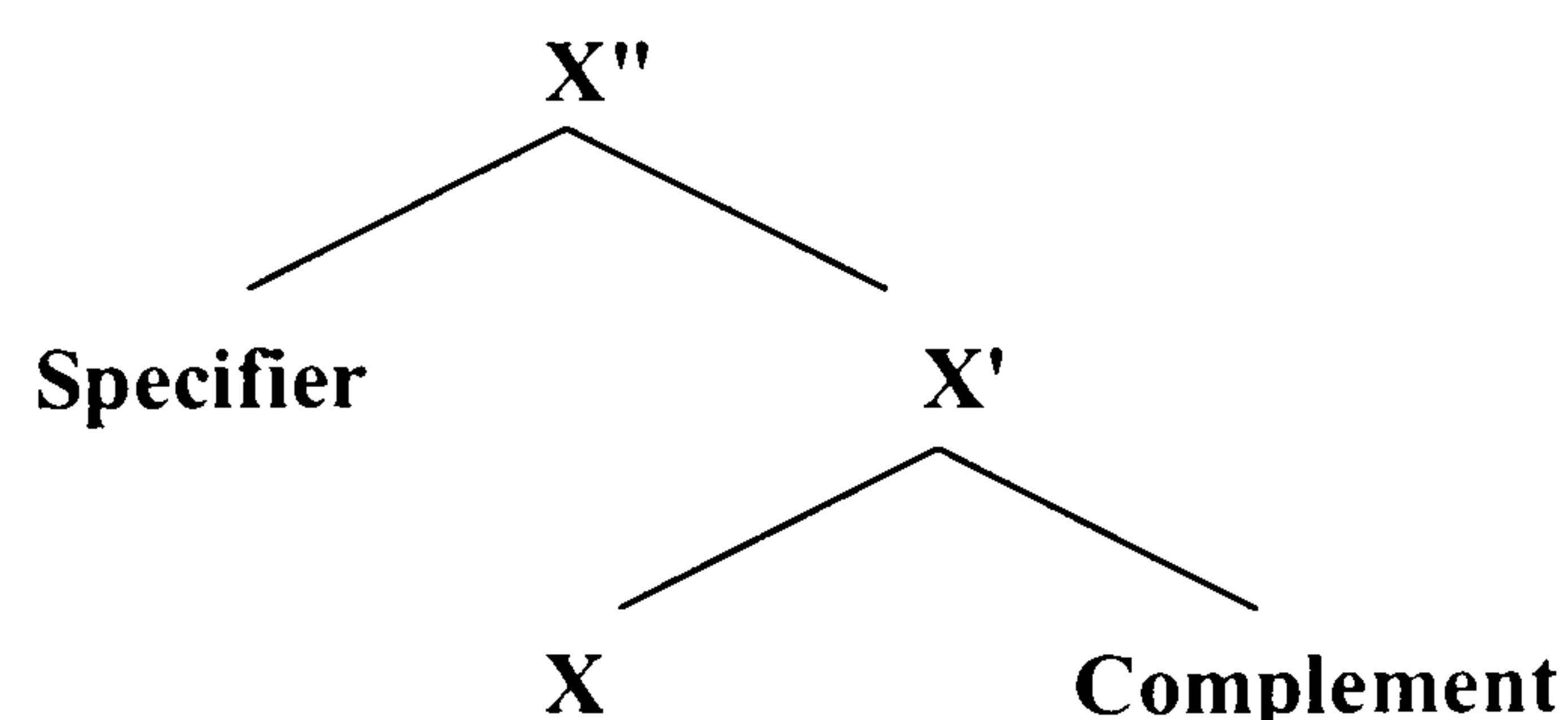
Diagram 2 : Structure of the syllable ‘clamp’



Syllables are used to build feet, and feet are used to build tone groups. In this way the sound system is expressed as a hierarchy of constituents.

In terms of investigation into syntax, a five rank hierarchy is a widely used model, with the sentence forming the upper limit of grammatical study. Thus, when analysing a sentence, one needs to look for groupings within it, or sets of words or morphemes which hang together. Such divisions lead to phrases and heads of phrases, these phrases are then divided into constituent words and these words are analysed into morphemes. The syntactic representation of an expression in a language is largely determined by principles of phrase structure. This is achieved via X-bar theory, which uses phrasal projection to formally associate lexical phrases and expressions of the same general type (like nouns and noun phrases) and to present the notion 'head of a phrase' within a phrase structure grammar. In order to capture the generalisation that similar complement structures are found across the major categories, Chomsky (1970) proposed the single phrase structure schema or tree diagram, where the X or head is interpreted as a variable over the major categories. This is shown in the diagram below:

Diagram 3: Phrase structure

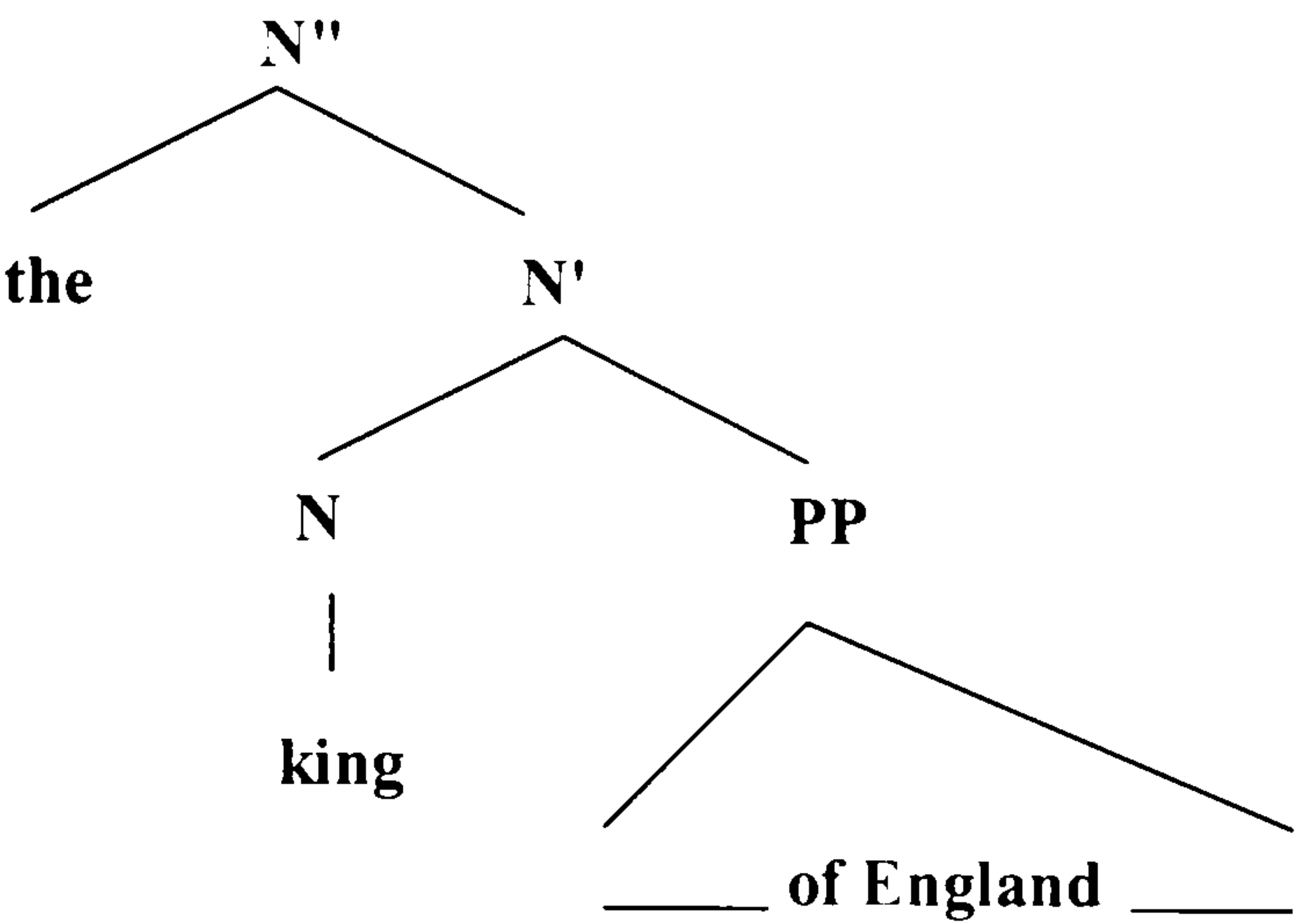


As with the diagram of syllable structure, X-bar theory claims that all types of phrases need two levels of internal structure. The first level (X'') consists of the head (X) and possible specifiers, and the second level (X') consists of the head and possible complements. This X' is not a full X'' , but belongs to a smaller type of phrase. This X' phrase consists of a head and a complement to that head. It is an intermediate category which is smaller than X'' , but larger than X . One argument in support of this X' analysis is that of Pronominalisation. Radford (1988:175) explains that only a unitary phrasal constituent can be replaced by a proform such as *one*. He gives the following example:

- a) The present [king of England] is more popular than the last *one*.
- b) * The [king] of England defeated the *one* of Spain.

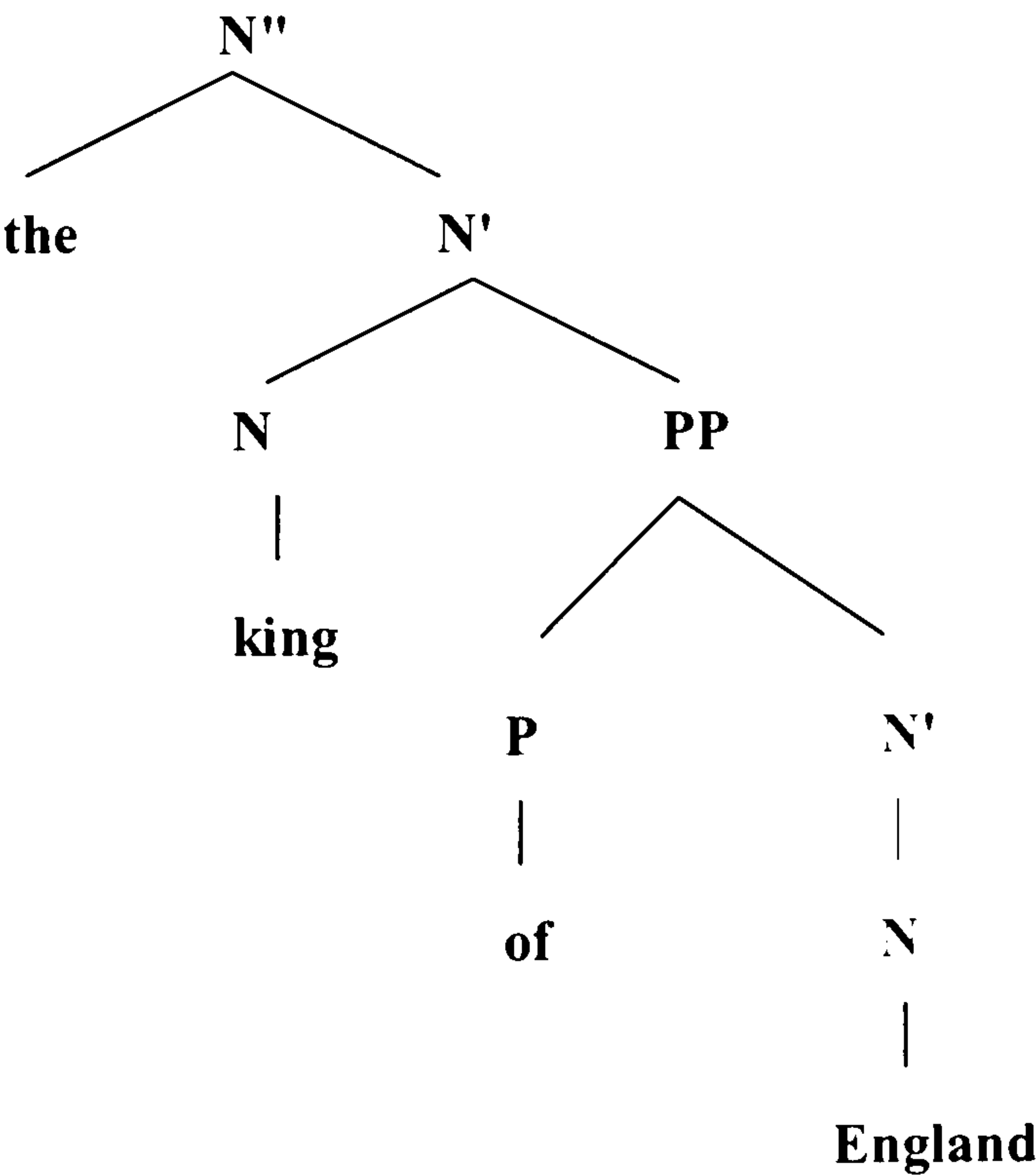
The argument here is that if the full Noun Phrase is *the king of England*, then *king of England* must be a smaller nominal phrase in some way. As shown above, *one* is a proform which can replace this smaller nominal phrase but not the bare Noun *king*. In this way, the proform *one* is argued to be pro N' and provides support for the X' level analysis since proforms can only replace phrasal constituents and not single words. The resultant tree diagram for the Noun Phrase *the king of England* would therefore be as follows:

Diagram 4: Example of a phrase in the phrase structure



The prepositional phrase (PP) *of England* can also be broken down into its constituents as shown below:

Diagram 5: Example of the hierarchy of constituents in phrase structure



Thus, phrase structure is a hierarchy with each constituent consisting of other constituents until only non-expandable items are left. X-bar theory then aims to replace rewrite rules with general principles of phrase structure, its main claim being that every phrase contains a head and other constituents. The head is therefore obligatory and the most significant part of the phrase since it contains the important semantic information and determines the meaning of the whole phrase (Tallerman, 1998).

In terms of both phonology and syntax, the above has shown that both words and sentences can be broken down into their constituent parts and that these parts can be shown diagrammatically in tree-like structures. In both cases there is a hierarchy of constituents. In the case of syllable structure, the nucleus is the central part of the syllable, and in the case of syntax, each phrase has a head which is obligatory and is the most significant part of the phrase.

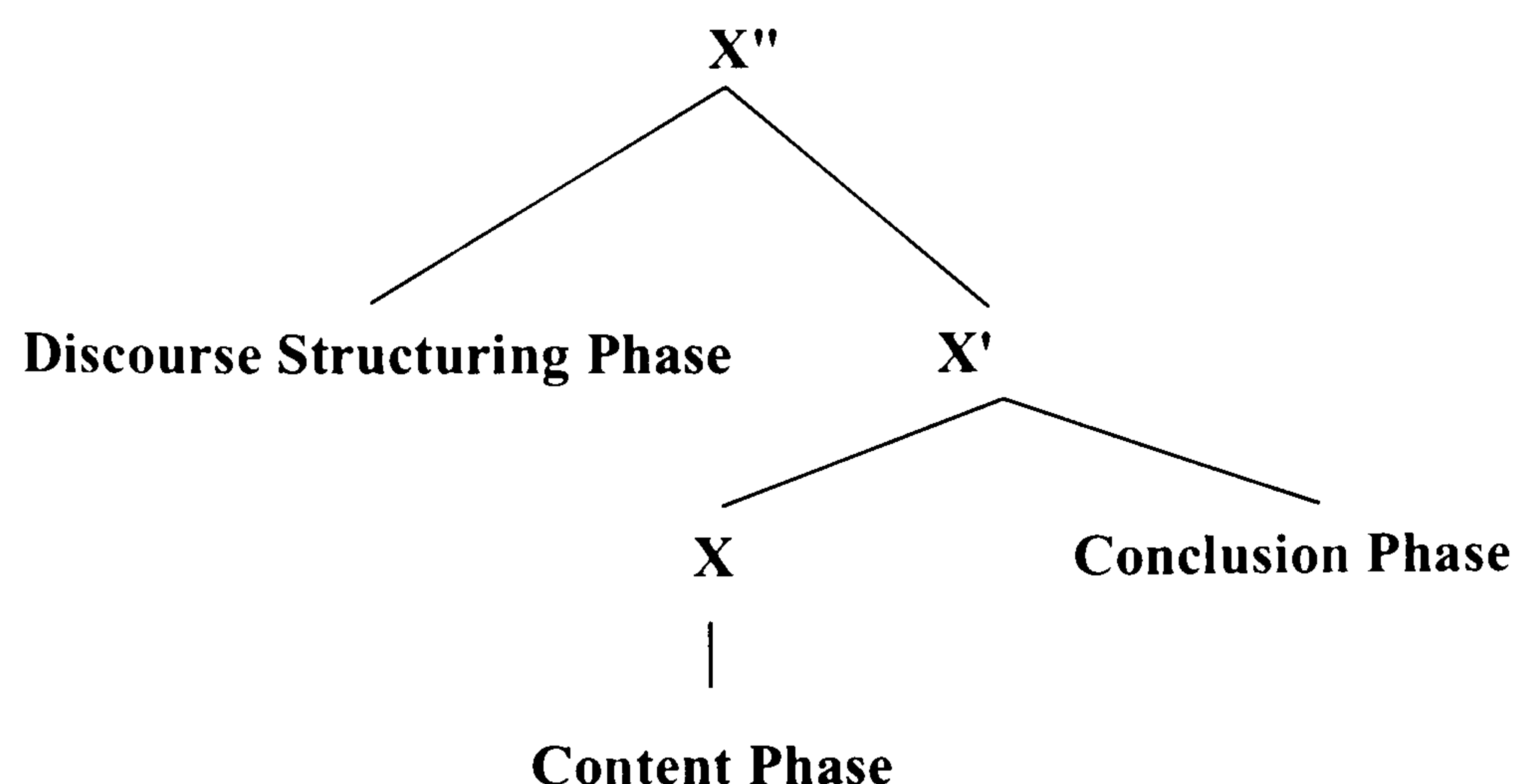
Halliday (1985) points out that through time, the focus of Western linguistics was firstly on the forms of words and was then extended to include investigation of the forms of sentences. In both cases, linguistics has shown that the relationship between constituents is constructional, as seen in the tree diagrams above. Moreover, whilst there is no upper limit to grammar, Halliday argues that this has traditionally stopped at the level of the sentence. He argues that above the sentence, the typical relationship is regarded as non-constructional and this is seen as the norm. It is only in certain exceptional cases with particular kinds of text that recognisable constituents like the structural units lower down can be seen. Part of the problem of this apparent lack of continuity is the claim that 20th century linguistics was

focussed much more on the system and less on the text (Halliday, 1985). As Halliday goes on to say:

There is little point in having an elegant theory of the system if it cannot account for how the system engenders text. Equally, it adds little to expatiate on a text if one cannot relate it to the system that lies behind it since anyone understanding the text only does so because they know the system. (Halliday, 1985:xxii)

The question then is to determine whether the relationship between constituents at the level of text is also constructional. Thus, in the present study, the X-bar model of phrase structure was applied to the data in order to determine to what extent it could account for the structure of the information units in the lecture discourse. The following parallel structure was therefore constructed:

Diagram 6: Possible model for the information unit structure in lecture discourse



This model shows the internal structure of the information unit. The Content phase of the

information unit sequence is equivalent to the Head of a phrase within a phrase structure grammar. The Head refers to the central element which is distributionally equivalent to the phrase as a whole. In the same way as the Head of the phrase is the compulsory element in phrase structure grammar, so the Content phase is the most important part of the information unit. The Content phase contains the main pieces of information that the lecturer imparts to the audience and it is therefore the obligatory element of the information unit.

In X-bar theory, the head is expanded into X-bar by the addition of a Complement. This Complement is optional and dependent on the Head of the phrase. It is selected by the Head, follows it in head-initial languages such as English, and has a close relationship with it. Both the Head and the Complement are immediate constituents or daughters of X-bar. The close relationship between the Head and the Complement is also evident in the information unit. The Conclusion phase is the part of the information unit where the lecturer summarises or comments on the Content or provides further information in response to an implicit question from the audience. This phase then logically follows the Content phase and so attaches at the Complement node on the tree.

In X-bar theory, the X-bar expands into X-double-bar by the addition of a Specifier. The Specifier precedes the Head and is also optional and dependent on the Head of the phrase. In the information unit, the Discourse Structuring phase is the part of the information unit where the lecturer contextualises the Content. With its typical function being to indicate provenance, the Discourse Structuring phase logically precedes the Content phase and so in

the above model attaches at the Specifier node on the tree.

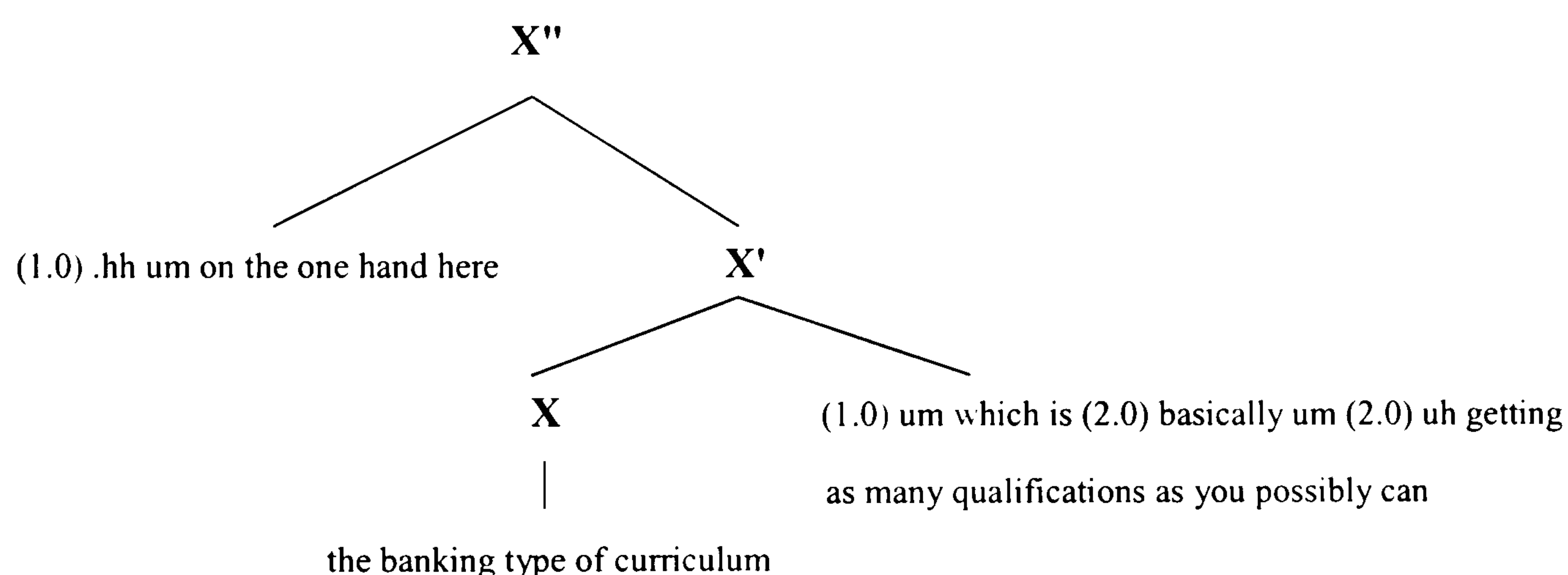
To sum up, phrase structure is a means of illustrating the structural relationships of a sentence through the concept 'consists of', and replacing a large number of rules with general principles to demonstrate the properties of all phrases. In other words, the phrase structure of a sentence is a hierarchy that goes from the largest constituent in the sentence downwards, with each constituent consisting of other constituents, until only single items are left. Thus X'' consists of a head X' and possible specifiers, and X' consists of a head X and possible complements. Whilst this illustrates the route from syntax to the lexicon, it is also important to note how the lexicon influences syntax (Cook, 1988). The lexical entry for a noun phrase, for example, projects onto the structure of the sentence and defines or c-selects (category selects) the possible complements that can go with it. This projection stops at the double bar level, and so X'' is known as the maximal projection.

In terms of the information unit in lecture discourse, we can use this model to make the following proposals. The head X' and its specifier are immediate constituents or daughters of X'' , the instruct sequence. The relationship between X' and the specifier is that the latter, the Discourse Structuring phase, contextualises the former. The head X and its complement are daughters of X' , where the relationship between the two is that the complement or Conclusion phase serves to provide further information about the head or Content phase for the audience in the lecture. Thus, there is co-ordination between the Content phase and the Discourse Structuring phase, and the Content phase and the Conclusion phase. The Content phase also defines its possible complements. In the

examples below, (diagrams 7 and 8) these are a non-restrictive relative clause and a paratactic construction respectively.

Applying this model to an information unit from Lecturer A lines 170-172 where the lecturer introduces two modes of educational curriculum identified by Paolo Freire, the following tree diagram can be constructed:

Diagram 7: Example of Lecturer A information unit using the model

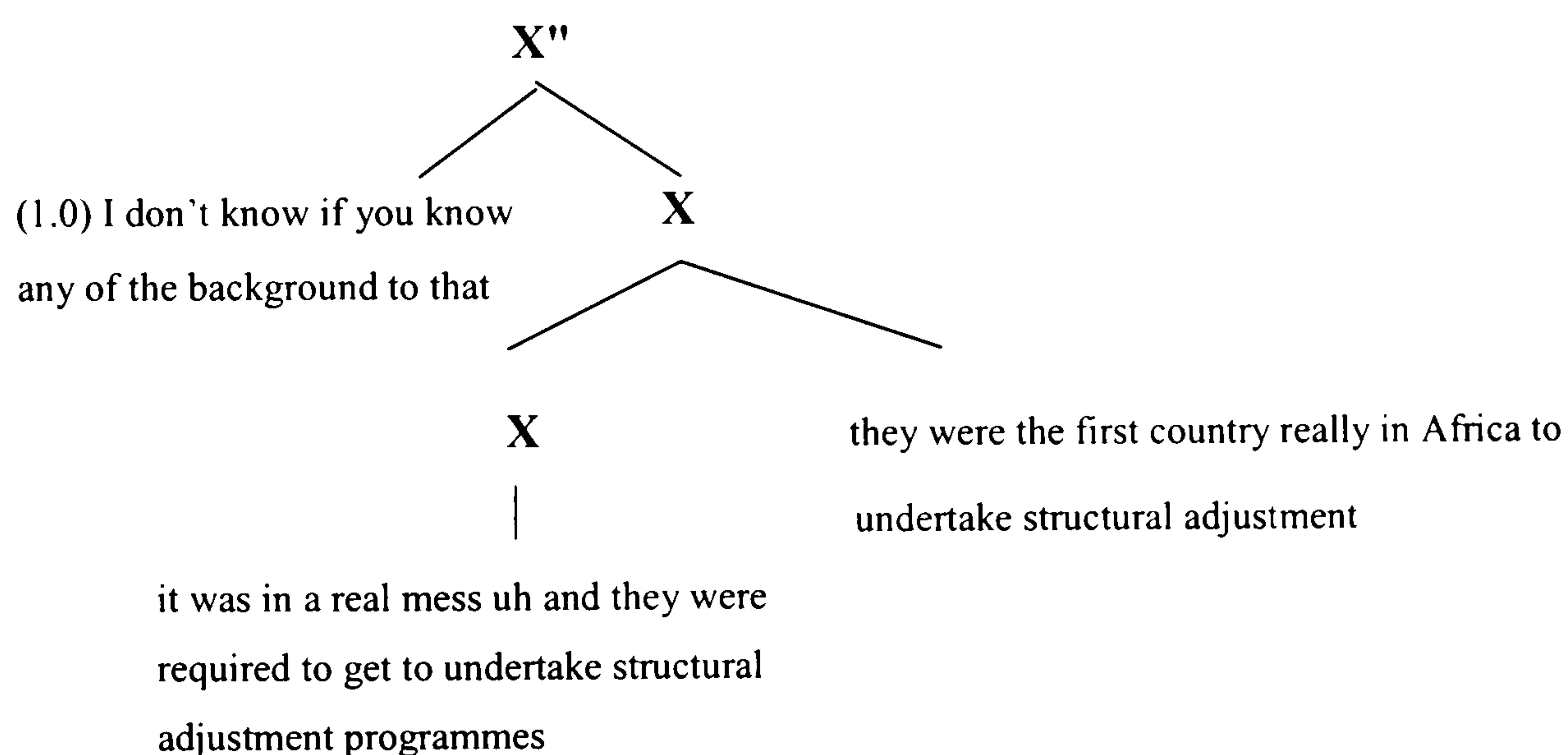


The main Content phase '*the banking type of curriculum*' is equivalent to the Head of a phrase and so attaches at the X node on the tree diagram. After this phase, the lecturer provides a gloss of the main content. This logically follows the Content phase as it is closely related to it and so fills the Complement slot on the tree diagram. It is motivated as a response to an unspoken question by the audience requiring explanation of this new term. The Discourse Structuring phase motivates the Content phase and so precedes it. Thus, the lecturer signals the Content phase with '*(1.0) .hh um on the one hand here*' and this is

represented on the tree diagram at the Specifier node. This phase serves as an implicit instruction to the audience to start taking notes and so sets up expectations among the students of an important new Content phase.

In the Lecturer B data, applying the model to the information unit in lines 99-102 creates the following diagram:

Diagram 8 : Example of Lecturer B information unit using the model

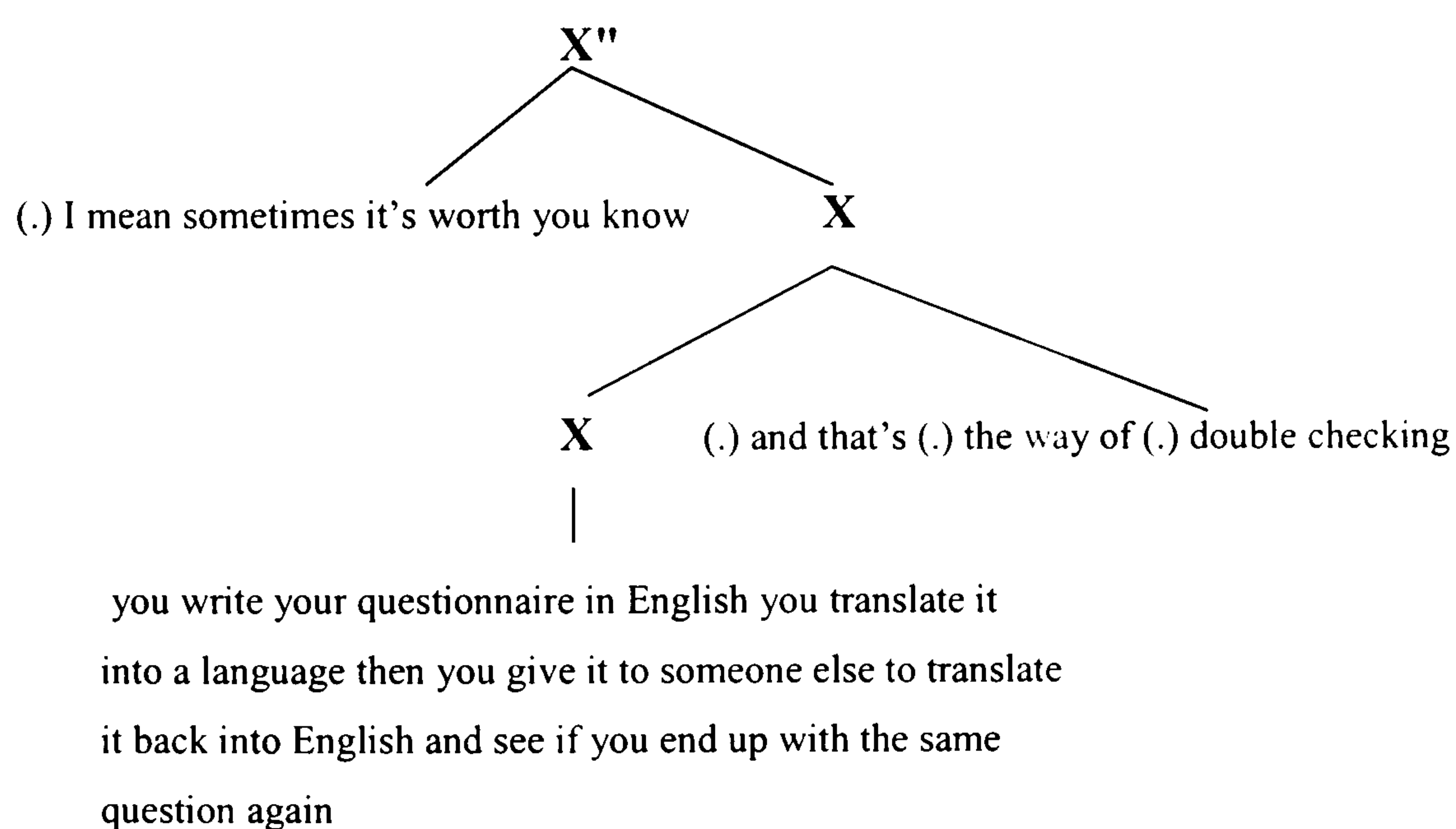


Here, after telling the audience that Ghana has received financial aid from the IMF and the World Bank, the lecturer begins to provide the historical background to this. The Discourse Structuring phase *'(1.0) I don't know if you know any of the background to that'* serves as the motivation for the Content phase and therefore fills the Specifier slot on the diagram. The Content phase is the Head of the phrase and this is followed by a comment from the lecturer. The comment is closely related to the Head, adding to the information given in the

Content phase and attaches at the Complement node on the diagram. This comment appears as a response to an unspoken question asking for the background to the Ghana issue to be set in the wider African context.

In the Lecturer C data, applying the model to the information unit sequence in lines 215-219 derives the following diagram:

Diagram 9: Example of Lecturer C information unit using the model



Here, the lecturer is discussing data collection and questionnaires. A short pause together with the disjunct '*I mean sometimes it's worth you know*' fills the Discourse Structuring phase and divides the stream of speech into separate chunks. As stated earlier in this chapter, a silent pause can function as a discourse marker signalling a completed syntactic construction (Stenström, 1986), marking the organisation of the talk to the audience and

indicating a new unit of information. The Content phase is then followed by an explanation or rationale in the Complement position motivated by an unspoken question asking 'Why do that?'

It can therefore be seen that in the case of each lecturer, there is evidence that the X-bar model of phrase structure can be applied to these data to demonstrate the structure of the information unit sequences in the lectures. The Discourse Structuring phase is the motivation for the Content phase and, as shown in the examples above, can take a variety of forms. '(1.0) .hh on the one hand here' in the Lecturer A extract, line 170, is an implicit instruction to the audience to take notes. The one second silent pause marks the grammatical organisation of the talk and indicates to the audience the start of a new 'paragraph'. The deictic *here* draws the audience's attention to the information set out on the overhead transparency, and '*on the one hand*' sets up expectations and prepares the audience for the two main information units to follow. In the Lecturer B extract, line 99, '(1.0) I don't know if you know any of the background to that', the pause has the same function as that in the Lecturer A extract, line 170 above. The rest of this Discourse Structuring phase is an attempt to minimise a possible face threatening act to the audience. The lecturer expresses her uncertainty about the student's state of knowledge about the situation in Ghana, which could reasonably form part of their general knowledge about the world as much as form part of knowledge gained or not gained from previous academic study. In order to take the edge off any potential face threat to the audience's knowledge, the lecturer uses the mitigating device '*I don't know*'. The inclusion of *any* also saves face in that it implies the audience might know some of the background to the situation rather

than none at all. In the Lecturer C extract, line 215 '(.) *I mean sometimes it's worth you know*' is also an attempt to save face and create a level of solidarity between the lecturer and the audience. Rather than reinforce his own status as expert in the field, the lecturer uses the Discourse Structuring phase as a means of appealing to the audience as peers sharing a similar level of knowledge, who can also judge what is and what is not worth doing.

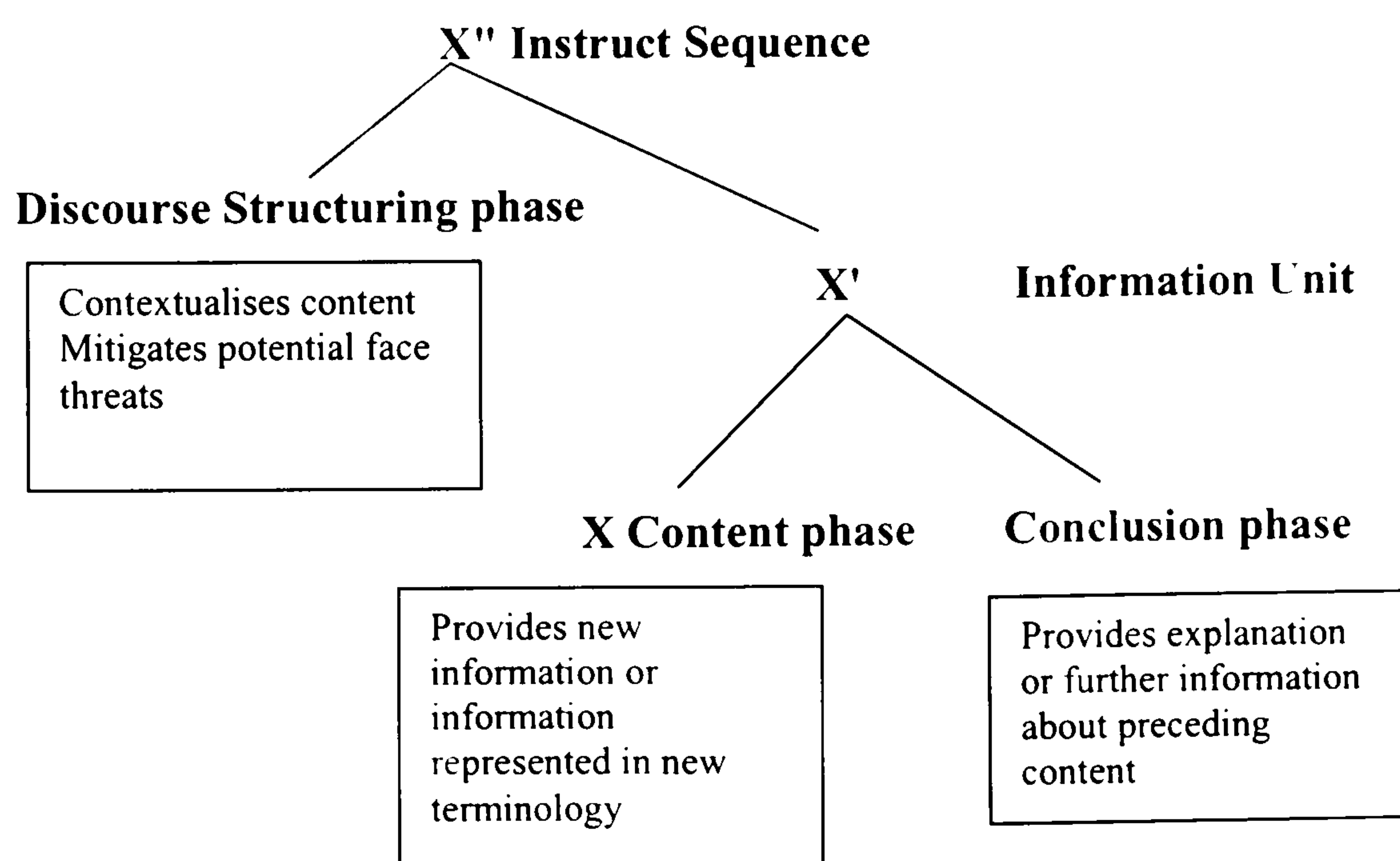
Thus, unlike everyday conversation where participants in talk in interaction establish what information is shared and what is new, the lecturer, confined by the lecture context, can only guess at the state of knowledge of the audience. The lecturer constantly treads a fine line between imparting new information and telling the audience something they already know. The Discourse Structuring phases in the information units discussed above, which also include implicit instructions to take notes, all seem to function as attempts to minimise face threats to the audience as well as contextualising the Content phase to follow.

As the Complement is selected by the Head in X-bar theory, so the Conclusion phase in the instruct sequence has a direct relationship with the Content phase. The Conclusion phase has a variety of functions, and as seen above, can provide supplementary information. The nature of the Conclusion phase is then determined by what the lecturer intuits the audience's response to the Content phase to be. In the Lecturer A extract (diagram 7 above), the Conclusion phase '(1.0) *um which is (2.0) basically um (2.0) uh getting as many qualifications as you can*' glosses the terminology introduced in the Content phase with a non-restrictive relative clause. It serves as a response to an implicit question *What does*

that mean? In the Lecturer B extract (diagram 8 above), the Conclusion phase, a paratactic sentence construction, adds more information to the original Content phase and reinforces the concept introduced in that phase. In other words, it sets the Content phase in the wider context of the African continent rather than just the single country Ghana. In the Lecturer C extract (diagram 9 above), another non-restrictive relative clause is used in the Conclusion phase to reformulate and explain the preceding Content phase. Thus, the Conclusion phase is very closely connected to the Content phase and the information it imparts. The lecturer is again in the position of making assumptions about the audience's state of knowledge before proceeding to provide a Conclusion phase that best suits the need for further explanation or additional information as shown in the extracts above.

We can summarise what has been established so far from the analysis of the extracts from the three different lecturers as follows:

Diagram 10: Structure and function of the model for information units in the data

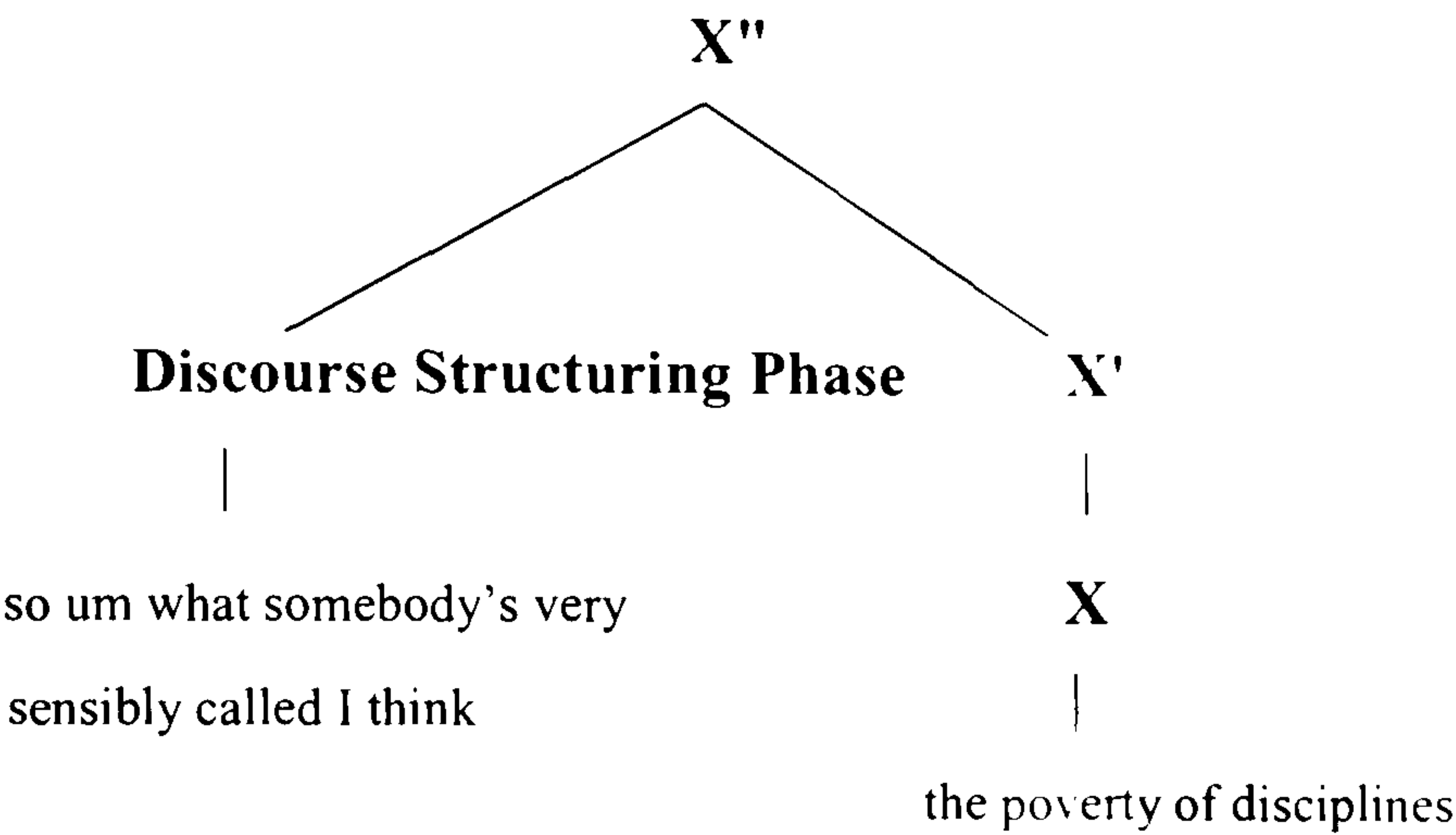


Returning to syntactic theory and constraints on phrase structure constituents, the most frequently cited are that non-head daughters (i.e. Specifiers and Complements) must be maximal projections and are optional (Emonds, 1976). In terms of the information unit, this means that the Discourse Structuring phase and the Conclusion phase may be absent from any particular unit of information. The other point to note in terms of the applicability of X-bar theory to the data, is that, as with recursion in syntax, so the information units are seen to be recursive in lecture discourse.

From the data it seems that the Discourse Structuring phase is rarely absent. The lecturers either signal the Discourse Structuring phase verbally with discourse markers such as '*so*' and '*and*', or with longer phrases such as '*on the one hand*'. This phase is also marked with pauses or a combination of a pause and a discourse marker. Pauses can range from a few seconds to less than a second. Whilst pauses have no contextualising function, they signal to the audience the end of a previous information unit and so project an upcoming sequence, and can function at both the macro and micro level, as discussed in the previous chapter.

Occasionally, the Conclusion phase does not feature in an information unit. For example, in the Lecturer A extract, lines 200-201, the information unit has no Complement:

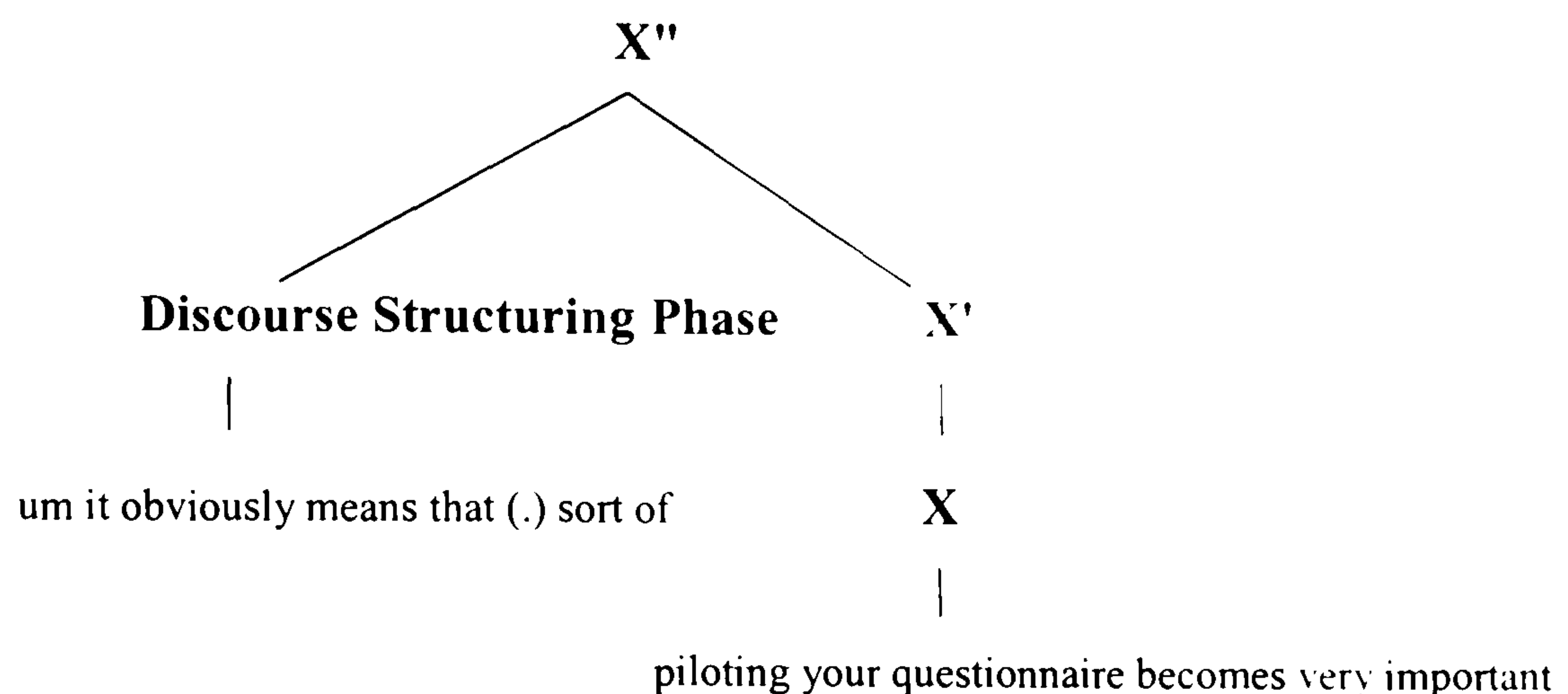
Diagram 11: Example of the three part structure without the Complement phase in Lecturer A data



This information unit is followed by '(1.0) *um in my view anyway*' which signals the start of the next information unit. '*Anyway*' suggests that the utterance to follow is more relevant to the proceedings than the immediately preceding talk (Levinson, 1983). This could also explain the absence of a Conclusion phase in the preceding talk. The lecturer appears to cut short this particular information unit and reformulate it in a way he perceives as more useful and relevant to the audience in the next information unit.

In the Lecturer C extract, lines 219-20, the main Content phase has no Complement:

Diagram 12: Example of the three part structure without the Complement phase in Lecturer C data



This sequence is immediately followed by a lengthy pause. Quirk et al (1985:1605) claim a lengthy pause in talk can often function to signal to an audience that a syntactic construction is complete. '*Sort of*' hedges the technical term '*piloting*', a theme which is developed in the next unit and introduced in the sequence illustrated above, suggesting that a Complement phase is unnecessary at this stage in the talk.

These findings suggest that within the structure of the information unit, there is recursion in that smaller units made up of the same structure. In other words, the findings suggest a system of multiple levels. Moreover, this reinforces the claim that at the level of text, i.e. above the level of the sentence, the relationship between constituents in lecture discourse can be argued as being constructional, in the same way as the relationship between constituents at the phonological and syntactic levels is viewed as constructional.

From the perspective of conversation analysis, the idea is that all talk is orderly and that the interaction between participants is organised. The aim of CA is to demonstrate the methods people use to make sense and be understood by others in everyday social interaction. These methods are meaningful for the participants in the interaction, and they are orderly because participants in social interaction co-ordinate their production of meanings and actions (Schiffrin, 1988). In the posthumous 'Rules of conversational sequence' (1992:3-11), Sacks provided a starting point for much subsequent conversation analysis. He developed the concept of paired actions, with the first part of the pair creating a 'slot' for the next one. These 'adjacency pairs' can be exemplified by the following: 'question-answer', 'complaint-apology', 'greeting-greeting' and so on. The second part of the pair is a response to the first.

5.3.3 Consider how the timing and taking of turns provides for certain understandings of the actions and the matters talked about.

As stated earlier, contributions from the lecturer and the audience in lecture discourse are asymmetrical in nature. The constraints imposed by the one-to-many nature of the talk, together with the need for the lecturer to impart as much information as they can to the audience in the time given, means that the lecturer holds the floor for the majority of the time. In terms of turn taking, the preference is for non-verbal responses from the audience.

Despite the constraints on the lecture, it has been shown that there is an implicit dialogic structure to the lecture. After most of the Content phases in the information units, the

Conclusion phases take the form of a response to implicit, but unspoken questions from the audience. The lecturers seem to anticipate questions from the audience and provide the response that they feel is the most appropriate. The forms of these responses are largely glosses, comments or examples or a combination of these.

The overtly interactive nature of lectures is demonstrated in the talk when a member of the audience takes a turn and verbally contributes to the sequence of talk. In the data, this voluntary interaction from the audience mainly occurs after a Content phase from the lecturer. This feature underlines the participants' orientation to context, in that the only contributions that the audience make without invitation from the lecturer are questions after the Content phase or perhaps a comment on the Content phase of an instruct sequence. Again, the preferred action is a nonverbal response.

One example of a verbal contribution is in the Lecturer A data:

- 179:A um (2.0) I remember this very very clearly as an
180 undergraduate (1.0) that people were competing against each other to the
181 extent of taking books off the shelf (1.0) um from bits of the geography (.)
182 part of the library and putting them elsewhere in the library
183:S1 yeah that's what happens now ((laughs))
184:A still happens now ((laughs)) um I mean the ultimate selfishness (.) really
185:S1 I know people who've actually taken them out of the library and kept them
186 as well
187A: right
188:S1 which is probably even worse ((laughs))

189A: that's very naughty that isn't it

190:S1 um

191:A um it's more difficult to do in this library because of the the security (.)

192 thing but you can always rip out the bar code or whatever can't you

193:S1 well I think I don't know well but but at Loughborough their journals

194 weren't alarmed so you could just walk out with them out of the library if

195 you wanted to I mean obviously people some people didn't know about it

196 they thought they were alarmed but (.) you know

197A: what used to happen in-in the old library here was people used to throw

198 books out of the window down to their friends waiting below ((laughs))

199 .hh shows initiative I suppose but uh it's not very uh (1.0) as it were

200 community minded (1.0) um knowledge is set down in textbooks

In lines 179-182, the lecturer is giving an example from his own days as an undergraduate when students would hide books they needed in different parts of the library. One of the students, S1 takes the floor and states in line 183: *'yeah that's what happens now'*. This turn is taken after the main Content phase and is a comment on that content, as shown in the table below:

Table 4: Example of student-lecturer interaction in Lecturer A data using the model

Discourse Structuring Phase	Content Phase	Conclusion Phase
(.) um (2.0) and I remember this very very clearly as an undergraduate (1.0) that	people were competing against each other to the extent of taking books off the shelf (1.0) um from bits of the geography (.) part of the library and putting them elsewhere in the library	S1: yeah that's what happens now ((laughs))

This raises the question of *Why that now?* and why the student decides to take a turn at this particular point in the talk. In shifting to a real world context, one that is familiar to students, and one in which the lecturer puts his own status on a par with that of the students, there may be a sense of inclusion and solidarity between the participants in the talk. This common ground in terms of both experience and knowledge, and the equating of status, seems to have prompted the student into making a verbal contribution at this particular point.

This contribution is then followed by a sequence of turns taken by the lecturer and the student. The participants orient to a more informal, social context and the context of the lecture becomes momentarily suspended. The language also becomes more informal and the lecturer's talk is punctuated in lines 189 and 192 with question tags: '*that's very naughty that isn't it*' and '*you can always rip out the barcode or whatever can't you*'. Not only do these question tags invite further participation from the audience, but they also suggest that the speaker has less authority. The lecturer seems to shift footing from being a member of the university with the authority that that membership implies, to a peer of the students participating in an informal chat. This part of the discourse is also punctuated with laughter from both the lecturer and the student, which also suggests that their respective institutional roles are being suspended during this informal exchange.

In line 197, the lecturer interrupts the dialogue between himself and the student with the pseudo-cleft: '*what used to happen in-in the old library here*'. This macro-level discourse marker reorients the talk to the lecture context in that it signals an important starting point

and propels the discourse forwards. It also reorients the participants to the presupposed structure of the lecture itself and so signals to the audience that the lecturer is ending the turn taking sequence and about to begin another Content phase. This begins in line 200: '(1.0) *um knowledge is set down in textbooks in the official syllabus*'. Here the lecturer turns his attention back to the OHT and reads off the next point on his list, thus signalling not only verbally but non-verbally that he has reoriented to the lecture context and resumed his role as expert and voice of knowledge and authority.

On limited occasions, the lecturers invite a verbal response from the audience to specific questions which relate to particular experiences the students may or may not have had. In any talk in interaction, it can be argued that participants actively work together to obtain certain outcomes. In terms of a lecture, the talk is focused on achieving a specific outcome, namely the presentation of a large amount of new information within a limited time period. In order to achieve this, the overall preference is for maximum lecturer talk and minimum audience participation. When the lecturer A asks the audience:

- 217 Craig were you in that discussion (.) and Jennifer were you in
218 that discussion we-we had in in Rural South about this (.) education [?]

this is a dispreferred action, inviting the audience to participate in the talk. The lecturer however, needs to establish that the context for the next information unit is shared by the audience. The audience response in line 219 is: '*mm*', and the lecturer responds with a short answer in line 220: '*you were*', which effectively cuts off any further opportunities for turn taking from the audience as he regains the floor and reorients to the lecture context.

This sequence of verbal interaction between the lecturer and the audience forms part of an extended Discourse Structuring phase. Unlike the audience contributions discussed earlier which normally follow a Content phase and are audience initiated as responses to a Content phase, this sequence is overtly initiated by the lecturer in order to establish a shared context for the next information unit. In terms of turn taking, the audience is either invited to take a turn by the lecturer during a contextualising sequence forming part of an extended Discourse Structuring phase, or independently takes a turn after a Content phase.

During the short turntaking sequence in the Lecturer A data, lines 183-197 discussed above, the question tags in lines 189 and 192 admittedly invite audience participation, but by their very nature limit the response to a yes/no answer. This is achieved in line 190 when the student replies with a short '*um*' to the statement from the lecturer: '*that's very naughty that isn't it*' in line 189. However, in line 193, after the lecturer states: '*you can always rip out the barcode or whatever can't you*', the student S1 attempts to take the floor and begins a lengthy sequence which lasts until line 196: '*well I think I don't know well but but at Loughborough their journals weren't alarmed...*'. Whilst the student takes this turn, the use of *well* at the beginning of the turn signals the fact that the speaker is aware that this particular move is a dispreferred response (Pomerantz, 1984). Sacks, Schegloff and Jefferson (1974) observe that *well* often begins turns, but reveals little about the construction of the following turn. This *well* is then followed by several hedges and a further *well*: '*well I think I don't know well but but*', and these features taken together emphasise that this particular move is dispreferred. As stated above, after this turn the

lecturer regains the floor with a pseudo cleft in line 197 and reorients the talk to the lecture context. As stated by Weinert and Miller (1996) the complex syntax of a pseudo cleft has a stronger focusing function and hence a bigger impact on the listener, and in this case emphasises the lecturer's intention to regain the floor.

In the Lecturer C data, after a Content phase from the lecturer in lines 192-4 about the need for care when phrasing questions in questionnaires, the student, S2, takes the floor and suggests a couple of ways to ensure that questions are phrased well.

- 192C: um [?] um but you need to be very particular about (1.0) very careful
193 about how to phrase questions and especially if it's another language
194 and another culture
195:S2 two two alternatives (.) um I guess would be one to to fix the questions (.)
196 you know to get the especially if it's being translated into another
197 language to get them to read off verbatim (1.0) the agreed (.) question [?]
198 trust the the (.) people who are doing the questionnaire to use their own
199 language to get the point across (1.0) I don't know which is (1.0) more
200 reliable [to do that]

Whilst the lecturer does not invite the audience to take a turn, the student takes the turn where a Conclusion phase would normally be. This does not disrupt the information unit as such, but is a dispreferred action. This action is hedged throughout in line 195: '*um I guess*', in line 196: '*you know*' and in line 199: '*I don't know*'. These hedges orient to the fact that the student is not attempting to take on the status of expert or equal to the lecturer,

but is rather attempting to offer a couple of suggestions. The lecturer attempts to regain the floor in line 201 and begins her turn at talk with '*well*', which he reiterates in line 202.

Schiffrin (1987) suggests that speakers often use *well* more frequently when the ideational options offered by questions are not precisely followed in the content of answers. In this case, whilst the lecturer appears to acknowledge the contribution made by the student with: '*well I suppose you can*', the reiteration of *well* suggests that the lecturer is not willing to pursue this theme any further, but wishes to regain the floor and bring the lecture back to his original agenda. Bilmes (1988:173) discusses the concept of 'reluctance markers' which show the speaker's reluctance to express the following response. This response can be a preferred action, but the preceding reluctance marker does not weaken this action or make it lack sincerity. In this instance, *well* also functions as a reluctance marker, signalling the lecturer's intention to regain the floor and cut off any further turns from the audience, and re-orienting the participants to the lecture context.

Thus, it can be seen that whilst the nature of the lectures is essentially interactive, the preferred contributions from the audience are mainly non-verbal. The lecturers respond to implicit non-verbal questions from the audience after the Content phase of an instruct sequence, and then provide an appropriate response to these questions in the Conclusion phase. Occasionally, the lecturers invite the audience to take a turn and respond verbally to direct questions posed to them. These invitations occur during an extended Discourse Structuring phase and function to establish shared knowledge and hence a shared context for a following information unit.

When members of the audience decide to take a turn or give more than the preferred one word answer, these turns always occur after a Content phase. The use of discourse markers such as *well* and hedges imply that the speakers are aware that these turns are dispreferred actions. After these turns, the lecturers attempt to regain the floor and signal this in a variety of ways. The examples above show that these can take the form of a macro level discourse marker such as a pseudo-cleft or the marker *well*. These markers indicate the lecturers' intention to re-orient to the lecture context and continue with their agenda.

5.4 Summary

In the analysis of the data at the micro level, this chapter has explained why a model derived from X-bar theory of phrase structure could be more useful in representing the information units in lecture discourse, how these units are recursive and accounts for the fact that the phases that occupy the Specifier and Complement slots can be optional, whilst the Head or main content of the information unit remains obligatory. This model expands on other models in the literature, particularly those of Young (1994) and Coulthard and Montgomery (1981).

Chapter 6

Exploring the Meta Level of Lecture Discourse

6.1 Introduction

In the previous two chapters we have seen how the information units in lectures consist of a recursive three phase structure at the micro level, and how macro discourse markers and metaphor contribute to cohesion and coherence at the macro level.

This chapter focuses on the metadiscoursal features in the data analysed in the previous two chapters. In accordance with Pomerantz and Fehr's tools of analysis, this chapter aims to consider how the speakers' packaging of actions, including their selection of reference terms, provides for certain understandings of the actions performed and considers the options for the recipients that are set up by that packaging. It also discusses how, through the accomplishment of acts of instruction, certain identities, and roles are implicated for the participants.

6.2 Identities in talk

In order to fully understand a speaker's meaning in talk in interaction, there is a need to go beyond the structure and the propositional content of an utterance and to take into account the way in which a speaker positions him or herself interactionally with others (Bakhtin, 1953/1986:92), the occasion of the production of the utterance, and the local state of affairs at the time of the utterance. An utterance contributes to the speaker's

position with respect to others and this social positioning is essential to the meaning of an utterance. Thus, whenever someone speaks, they enter into a dialogue of social positioning: 'The expression of an utterance always responds to a greater or lesser degree, that is, it expresses the speaker's attitude towards others' utterances and not just his attitude towards the object of his utterance' (Bakhtin, 1953/1986:92).

This view is supported by research in different branches of linguistics: systemic functional linguistics (Halliday, 1994), work on propositional attitudes and higher level explicature in relevance theory, and linguistic anthropology (Gumperz, 1982), for example. The sociologist Erving Goffman (1981) states that the presentation of self and the creation of involvement are mutually constructed through verbal and non-verbal strategies at the level of footing. Footing refers to the linguistic negotiation of participants' social and conversational identities during the ongoing flow of talk, or the contextualisation cues through which participants signal how they see themselves, how they see others and what they are doing at any particular moment in the interaction.

From a conversation analytic perspective, identity does not imply a core self that brings about the actions accomplished in talk in interaction (Widdicombe, 1998). It is not something that people are but rather a resource that is available for use by participants. In conversation analysis, the reality of identities or selves is a product of members' joint actions and of their mutual organisation of verbal interaction. Participants in interaction invoke a particular identity, orient to this identity and make it relevant to the action. Consequently, instead of asking what identities people have, conversation analysis focuses on whether, when and how identities are used in the here and now of talk in

interaction, on the relevance of those identities and on their consequentiality for the talk and the local actions of the speakers.

In this way, what is revealed in a conversation analytic approach to identity is the placement in a category with associated features, for such classification to be indexical and occasioned, for the identity to be relevant and consequential to the interaction, and for this to be made evident through the linguistic choices of the participants (Antaki and Widdicombe, 1998:3). Conversation analysis is not concerned with the criteria which characterise categories, but rather with how speakers appeal either implicitly or explicitly to this knowledge in constructing identities as they talk. Thus, instead of starting off with preconceived notions of categories of identity and the features of those categories which may ultimately limit the ways data are analysed, the data driven approach of conversation analysis does not concern itself with which theory of self is needed to explain how people are able to do things, but simply focuses on what they actually do and how they construct self by doing. It points to a social view of identity in action and interaction, and details how identities are fostered in actual instances of interaction, rather than simply giving an impression of how the world works (Schegloff, 1991). The important analytic question is not whether someone can be described in a particular way, but how identity is brought into play, made relevant and becomes consequential for the interaction.

Working within this framework, Zimmerman (1998) treats identity as an element of context for talk in interaction, and divides the concept of identity into situated identity and discourse identity, similar to Goffman's social and conversational identities. Situated identities remain constant and relate to the setting of the talk and how this

might shape the interaction. As participants engage in talk, they assume different discourse identities. These discourse identities then emerge as a feature of the sequential organisation of talk in interaction, orienting participants to the ongoing activity and to their roles within it. These emerging discourse identities are connected to participants' situated identities and, through the speakers' general social and cultural knowledge, link these local activities to established social actions and institutions (Zimmerman, 1998:94). It is useful to note that although in initiating an action a participant in talk may assume a particular identity and project a reciprocal identity for co-participants, these projections are subject to ratification or revision by those co-participants. In other words, the construction of discourse identities is dynamic, interactionally dependent and mutually negotiated by participants, rather than pre-determined. As participants orient to different discourse identities, these identities provide proximal and distal contexts for social activities. Proximal context means 'the turn by turn orientation to developing sequences of action at the interactional level' and the distal context means 'the oriented to 'extra situational' agendas and concerns accomplished through such endogenously developing sequences of interaction' (Zimmerman, 1998:88). Thus, the notion of identity as context represents the way in which the alignment of discourse and situated identities creates a dynamic and continuously evolving framework within which the verbal and non-verbal actions of participants assume a particular meaning, relevance and interactional consequentiality (Goodwin, 1996:374-6).

This possibility of self reference in speech to different situated and discourse identities and such use of language is reflexive. Moreover, involvement strategies contribute to the meta-message or the level on which a speaker's relationship to the subject of talk

and to other participants are negotiated. The analysis of metadiscourse in the lectures will therefore reveal these features.

6.3 Identities in lecture discourse

Lectures continue to exist as a viable means of education at the tertiary level, because students attend not only to gain an understanding of subject knowledge, but equally importantly to gain access to the lecturer's comments, evaluations, opinions and conclusions about that information. In addition to this, students may also gain access to the specialised literacy or code that consists of the discipline specific rhetorical and linguistic practices of a particular community. Thus, a lecturer's responsibility during this act of academic communication is manifold. The lecturer is required to go beyond the propositional content of the lecture and provide the audience with something more.

Whatever they say, speakers inevitably give off cues about their position with respect to others in the speech situation, cues about their position with respect to types of people in the social world, and/or cues about their position with respect to the ideational content that their utterances convey.

(Wortham and Locher, 1999:110)

For effective communication in terms of cues about their position with respect to others in the speech situation, the lecturer is required to orient to the needs and expectations of the audience. Thus, lecturers need to anticipate the level of background knowledge and adjust their talk accordingly. They also have to respond to and accommodate the expectation that the lecture will be interesting, persuasive, and comprehensible.

In terms of cues with respect the ideational content that their utterances convey, lecturers need to negotiate the academic content in ways which are meaningful and appropriate to the academic community. On one level, they seek to make the propositional content of the lecture more explicit, but on another level they seek to provide students with access to the academic code and socialise them in the ways of speaking appropriate to the academic community. The lecturer needs to assess to what extent the audience is a novice audience and, based on that sounding, decide how far they need to provide examples and explanations to make the material more explicit. In working to make the content more accessible, the lecturer needs to ensure that it is not so oversimplified that it is no longer intellectually challenging. This in turn requires an assessment of the cognitive demands that the content makes on listeners and the resources they already have for interpreting that content. This is particularly difficult in the case of postgraduate students who have already studied in the academic community and may have some practical experience in the field. In this case, lecturers need to assess to what extent they are laying out the principles of a new discipline or convincing an experienced but potentially sceptical audience of new ideas. These considerations in turn influence the different discourse identities adopted by lecturers during the course of the lecture, as well as the linguistic choices made in terms of the organisation of the content of the discourse, and what is explained, expanded and exemplified.

In terms of cues about their position with respect to types of people in the social world, lecturers need to represent both their own beliefs, opinions, experience and attitudes and those of others in the field. Lecturers need not only to reiterate established facts and who originally stated them, but also to signal their own stance towards them. Thus,

lecturers are required to present an appropriate professional persona. In other words, lecturers can defend their own authority as an expert in the field and express their own beliefs, ideas and opinions with a certain amount of assertion, and balance this with a certain amount of tentativeness and humility as befits a 'disciplinary servant' (Hyland, 1998:440). They need both to inform the listeners and persuade them of the truth of their statements.

Therefore, in lecture discourse, lecturers give off cues about their position with respect to the content of their talk, their audience, and their position with respect to other experts in the field. In other words, they give more than the propositional content of the lecture. Anything that goes beyond this propositional content is metadiscourse, although sometimes it may be difficult to distinguish the object discourse and the meta-discourse.

6.4 Metadiscourse

Metadiscourse, or metalanguage, is the use of language to refer to language and can be analysed independently of propositional content. It is a basic property of all language use and refers to the language used to 'bracket the discourse organisation and the expressive implications of what is being said' (Schiffrin, 1980:231). It comments on, examines and critiques what happens on the level of language itself and provides useful information about how discourse is organised, how speakers signal their different discourse identities and attitudes, how they support their arguments, how they conceive of the other participants in talk in interaction and how they build a relationship with them.

In the lecture, metadiscourse establishes and maintains contact between the lecturer and the audience and the lecturer and the lecture content, and so facilitates the interactions which contribute to the transfer of knowledge within academic disciplines in ways that are meaningful and appropriate to the participants. It indicates the lecturers' responsiveness to the audience's needs and expectations, and their awareness of possible processing problems regarding the lecture content. Metadiscourse frequently signals the lecturers' response to possible objection to or rejection of their message by the audience. In this sense, its role could be seen as rhetorical in terms of it being concerned with persuading and influencing the audience, by resolving difficulties and avoiding possible disagreement. Metadiscourse provides cues to the pragmatic presuppositions which help listeners process the content of the lecture, encoding relationships between ideas and organising materials in ways that the audience finds appropriate and convincing (Hyland, 1998:440). It also signals the ways in which lecturers project themselves into their talk via both situated and discourse identities in order to signal their communicative intentions, beliefs, attitudes and opinions.

However, metadiscourse is not an independent stylistic device but is fundamental to the contexts in which it occurs and is closely linked to the norms and expectations of particular cultural and professional communities. It reflects one way in which context and linguistic meaning are integrated to allow the audience to derive intended interpretations and reinforces the idea that the audience has an active role in their construction. The meaning of metadiscourse only becomes operative within a particular context, both invoking and reinforcing that context with regard to audience, purpose and situation. It is a central pragmatic construct which reveals how speakers seek to

influence listeners' understanding of both the content and their attitude towards the content and the audience (Hyland, 1998:437).

Context is therefore no longer viewed as some static reality but as something which is created by participants in talk in interaction through dynamic and interactive negotiation, and through sequential and pragmatic methods. As discussed above, this negotiation is significant in conversation analytic studies of sequencing phenomena as well as in Goffman's (1979) notion of footing and identities in talk. Moreover, as speakers simultaneously index or create context, they demonstrate an awareness of what they are doing when they are using language. In other words, defining language use as the making of conscious linguistic choices, implies that language users know more or less what they are doing not only in obviously conscious or deliberate uses of language but also in the 'automatic' choices they make. Thus, the study of this type of phenomenon is intrinsic to an understanding of verbal behaviour.

While all linguistic choice making implies some degree of consciousness, some choices openly reflect upon themselves. This reflexive function of language is the essential means by which speakers indicate their orientation to the structure of language and thus their awareness of the contexts they create. As Lucy states:

speech is permeated by reflexive activity as speakers remark on language, report utterances, index and describe aspects of the speech event, invoke conventional names and guide listeners in the proper interpretation of their utterances.

(Lucy, 1993:11)

The field described in the systematic study of the metalevel of talk, where indicators of reflexive awareness are to be found in the actual choice making that constitutes language use, is known as metapragmatics. Metalanguage reflects metapragmatic awareness, an essential element contributing to the meaning generating capacity of language in use. All metalanguage is a pragmatic function because it represents language in use and most metalinguistic activity is pragmatic in that it deals with the appropriate use and understanding of language (Lucy, 1993:17). Whatever pragmatic functioning there may be, there is always the possibility of reflexivity, i.e. metapragmatic functioning. Silverstein proposes a theory of metapragmatics which reflects this constant interaction between pragmatic and metapragmatic functioning:

without a metapragmatic function simultaneously in play with whatever pragmatic function(s) there may be in discursive interaction, there is no possibility of interactional coherence since there is no framework of structure [...] in which indexical origins or centerings are relatable one to another as aggregated contributions to some segmentable, accomplishable event(s).

(Silverstein, 1993:36-7)

Metapragmatic activity demonstrates how participants in interaction show implicit awareness of the structure of their talk and of the consequentiality of the contexts involved. It deals with knowledge regarding the control and planning of as well as feedback on talk in interaction. Metapragmatic reflexivity can thus be found in the ways speakers are able to edit their own talk with self, or other, initiated repairs, in the way they can comment on the communication they are engaged in, defining, confirming, and modifying the definitions given by themselves and other participants.

Two ways in which indicators of metapragmatic awareness function in language use are as 'anchoring devices locating linguistic form in relation to context' and as 'signals of the language user's reflexive interpretations of the activities they are engaged in' (Verschueren, 2000:439).

Verschueren states that whilst some indicators of metapragmatic awareness point to a conscious choice on behalf of the speaker, other choices are not as easy to locate. These 'fuzzy definitional boundaries' mean that 'it is not so easy to distinguish reflexive awareness from other aspects of the operation of consciousness in language use' and 'not all reflexive awareness is equally salient and accessible' (Verschueren, 1999:188). In order to make things clearer, Verschueren (2000:447) develops a rough classification of metalinguistic phenomena and assigns a place to the different indicators of metapragmatic awareness under the headings of 'explicit metalanguage' and 'implicit metalanguage' as shown in Table 1 below. In this way, metalanguage can be regarded as a specific object separate from other language use and as a 'dimension' of language found in all language use.

Table 1: Verschueren’s (2000:447) classification of metalinguistic phenomena

Explicit metalanguage	Implicit metalanguage
<ul style="list-style-type: none">- metapragmatic descriptions (e.g. by means of metapragmatic lexical items such as speech act verbs or performative verbs- self-referential expressions- discourse markers/particles or pragmatic markers/particles- sentence adverbs- hedges- explicit intertextual links- quoted and reported speech- 'mention' (vs 'use')- some 'shifters' (e.g. some evidentials)- some 'contextualisation cues' (many of the above can be included in this category)	<ul style="list-style-type: none">- most 'shifters':<ul style="list-style-type: none">• deictic expressions (pronouns, tense, etc)• aspect• mood and modality• (some) evidentials- many 'contextualisation cues' (e.g. prosodic patterns, code switching, etc.)- implicit 'voices' [-proper names, i.e. Jakobson's C/C which may not be fully treatable on a par with the other metalinguistic phenomena]

Hyland (1998:442) lists a variety of metalanguage taxonomies, (e.g. Beauvais, 1989; Crismore, 1989), and develops his own system of classification based on Crismore, Markkanen, and Steffensen (1993) which makes a distinction between indicators of textual metadiscourse and interpersonal metadiscourse and their specific functions. His table is provided below (i.e. Table 2):

Table 2: Hyland’s (1998:442) classification of metalinguistic phenomena

Category	Function	Examples
Textual Metadiscourse		
Logical connectives	express semantic relations between main clauses	in addition/but/therefore / thus thus/and
Frame markers	explicitly refer to discourse acts or text stages	finally/ to repeat/our aim here/we try
Endophoric markers	refer to information in other parts of the text	noted above see Fig 1/ table 2/below
Evidentials	refer to source of information from other texts	according to X/Y, 1990/ Z states
Code glosses	help readers grasp meanings of ideational material	namely/eg/in other words/ such as
Interpersonal Metadiscourse		
Hedges	withhold writer's full commitment to statements	might/perhaps/it is possible/about
Emphatics	emphasise force or writer's certainty in message	in fact/definitely/ it is clear/obvious
Attitude markers	express writer's attitude to propositional content	surprisingly/I agree/ X claims
Relational markers	explicitly refer to or build relationship with reader	frankly/note that/ you can see
Person markers	explicit reference to author(s)	I/we/mine/our

Hyland used the above taxonomy to analyse metadiscourse functions within written academic discourse in textbooks and journal articles (Hyland, 1998; 1999). He suggested that metadiscourse is one way of showing how context and linguistic meaning are integrated to allow readers to derive intended interpretations. His other aim was to show how the writers represent themselves, organise their arguments and signal their attitude to both their statements and their readers.

In this classification, textual metadiscourse refers to the language used to make a text coherent by organising the content in ways that enable the specified audience to recover the writer's intended meanings. Hyland underlines the dialogic nature of this type of communication by suggesting that textual metadiscourse signals the audience's presence in the text. By this he means that as these academic writers construct their text, their use of textual metadiscourse signals their awareness of potential processing difficulties the audience may have, and thus what needs to be made explicit and where specific guidance for the desired interpretation of propositional meaning is required. Logical connectives with more than a purely syntactic role can help readers interpret pragmatic connections between ideas. Frame markers signal text boundaries and show sequencing, announce discourse goals and indicate topic shifts. Endophoric markers make additional material salient and help readers understand the writer's argumentative intentions. Evidentials signal sources of textual information outside the current text and display the writer's knowledge of other texts in the field. Code glosses help the reader understand the text by providing additional information either by explaining, expanding or comparing main content. They signal the writer's assessment about the reader's knowledge base and processing ability (Hyland, 1998:442-3).

Interpersonal metadiscourse signals the author's perspective both towards the propositional content and to the readers. Although controlled to some extent by the academic discourse community, metadiscourse signals the different writer discourse identities in the text and hence factors such as their attitudes, opinions and commitment to the propositional content, and the extent to which they involve the reader in the construction of meaning. Hedges signal the writer's unwillingness or hesitation to present or evaluate propositional content categorically, whilst emphatics indicate

certainty in the force of a proposition. Both of these features of interpersonal metadiscourse take into account the face needs of readers and the need for the writer to acknowledge and respect the views of others in their field. Attitude markers do what they say in more varied ways than hedges, and relational markers address the reader directly by selectively focusing their attention or including them as participants in the text situation. Both attitude and relational markers comment on propositional content. Person markers reflect the importance of the degree of author presence (Hyland, 1998:443-4).

Hyland (1999) reiterates Verschueren's point about the fuzziness of boundaries and admits that there is a certain amount of pragmatic overlap between these categories. He states that this is because writers usually attempt to achieve more than one goal at a time, such as providing a logical argument that is also credible and persuasive to their audience. This in turn can make a definitive interpretation of how these devices are used quite difficult. For example, code glosses may be a response to an assumed need in the audience for further information and explanation, but could equally be used to hint at the writer's superior knowledge compared to that of the novice reader. Hyland concludes:

A classification scheme can therefore only approximate the complexity and fluidity of natural language use. But while it may give no firm evidence about author intentions or reader understandings, it is a useful means of revealing the meanings available in the text and comparing rhetorical strategies employed by different discourse communities and genres. (Hyland, 1999:8)

6.5 Analysis

Taking into account the taxonomies presented in the previous section, it was decided that Hyland's classification of indicators of textual metadiscourse and interpersonal metadiscourse would be applied to the data in the present study. Despite their application to written academic discourse in Hyland's studies, it was clear that they could equally be applied to spoken academic discourse.

In addition to these features, deictic expressions will be included. Repetition will also be considered in this section as a metalevel phenomenon since certain patterns of repetition can act as metadiscourse markers which signal to the listener how to incorporate new information into the ongoing discourse (Tyler, 1994). It is metalinguistic in the sense that it focuses the audience's attention on the structure of the repeated and the earlier discourse and forces listeners to focus on the language itself (Johnstone et. al, 1994).

Following on from and extending the analysis of the data at the macro level for the meta level, our concern in this section of the chapter is initially to analyse data from the introductory phase of the Lecturer A, Instruct Sequence 1 data and then compare this with data from Lecturer B, Sequence 1 and Lecturer C, Sequence 1 in order to assess consistency and similarity in the indicators of textual and interpersonal metadiscourse across the speakers. The aim is to investigate how meaning is generated as the lecturers position themselves socially in the talk. The analysis will focus on situated and discourse identities as products of joint action by participants in the talk in interaction,

and show how they are invoked, oriented to, and made relevant and consequential to the talk through the linguistic choices made at the meta-level.

6.6 Meta-linguistic features at the macro level

As discussed in the macro chapter, the introductory phase of the Lecturer A, Instruct Sequence 1 data begins as follows:

(1) Lecturer A, Instruct Sequence 1 extract

- 125 (1.0) what I want to start with is what I should have done in here item
126 number five last week (.) we didn't get round to it (.) and this was the (.)
127 conscientisation (.) process of Paolo Freire (1.0) and then also the
128 problems of observing and measuring rural poverty (6.0) sorry that's not
129 very good is it (5.0)

The above sequence opens with a pause and a metasequential forward-pointing pseudo cleft indicating important upcoming information in the talk: '*(1.0) what I want to start with*' (Line 125). In terms of textual metadiscourse, the pseudo cleft serves as a frame marker and makes explicit the fact that there is a new element to the talk in interaction. It also forms part of the Specifier phase and both sequences the material and announces the specific discourse goals of the lecturer at this stage of the lecture. The pseudo cleft both glosses the upcoming text and presupposes a context, thus signalling the lecturer's metapragmatic awareness of the structure of his talk and the consequentiality of the contexts invoked.

At the interpersonal level, the person marker in line 125 '*what I want to start with*' signals the situated identity of the speaker as a lecturer of the university and more locally as the provider of this lecture's content. With the next person marker in the same line '*what I should have done in here*' the lecturer orients to another identity of himself as the organiser and provider of an entire course, of which this lecture is one part. The second pseudo cleft also invokes a wider context and orients the audience to the entire series of lectures and where the current one fits into this wider frame. The lecturer's awareness of his institutional self and the obligations this incurs is also reflected in his use of the modal *should*: '*what I should have done*'. The lecturer indicates his awareness of the responsibilities he has regarding his audience and so signals his responsiveness to their needs and expectations.

Deixis is one way of encoding language in context. It helps the addressees understand the context of an utterance and orients participants in talk in interaction to the specific content of the talk (Levinson, 1983). In the above data, *here* in line 125: '*what I should have done in here*' is a proximal place deictic used together with a gesture indicating the relevant section on an OHT. The discourse itself does not give sufficient clues as to the deictic centre, but with the gesture it becomes contextually unambiguous as it is determined by the spatial orientation of the lecturer, so that action and language are seen to be in a mutual reflexive relationship. The lecture structure is signalled as a series of points. The temporal deictic in line 126: '*last week*' is also easily processed by the audience as their contextual knowledge and knowledge of the real world allows them to understand this framing, specifying the lecture they had had in the previous week. In this way context is dynamically and mutually produced between participants.

In line 126 '*We didn't get round to it*' the person marker *we* appeals to the audience and includes them in the discourse. It differs from the use of *we* as a ceremonial substitute for *I* seen in much academic writing in that it is an attempt to signal to the audience that they are viewed as active participants in the talk and that their participation influences the overall structure of both the lecture and the course. This also serves as a face-saving strategy, a representation of metapragmatic awareness, as the lecturer implies that the fact that they are a little behind in the schedule is a product of joint responsibility of all participants and not solely his.

In line 127: '*and then also the problems*' the temporal deictic *then* is a further indication to the audience how the lecture will develop and how the lecturer's talk will succeed his own talk. This feature of textual metadiscourse establishes the succession between events as well as the succession between units of talk. It signals how the discourse is organised and the communicative intentions of the speaker. In this way it also responds to the audience's perceived need for clarity and structure and for the discourse goals to be unambiguously expressed.

In line 128 there is a six second pause as the lecturer changes the OHT. This is followed by an apology for the poor quality of the acetate: '*sorry that's not very good is it*'. This apology is aimed at the audience's face needs, but is more of a polite gesture than an authentic apology. It is a ritual apology for something trivial and is stated with the intensifiers *not very* which add some element of emotion. The lecturer thus acknowledges the need for an apology but the ritual nature of the expression allows him preserve his institutional status and control of the talk. The apology is, however, used with the question tag '*is it*'. This phatic act establishes a harmonious relationship with

the audience and invites a response of confirmation. The tag reinforces the concept of the dialogic nature of lecture discourse, but the participants' awareness of their respective situated identities means that a non-verbal response is preferred. Apologies can also be used as attention-getters (Aijmer, 1996) and together with the distal deictic *that* in line 128: '*sorry that's not very good*' it orients students' attention to the OHT. This frame shift signals the lecturer's orientation to the perspective of the students, and the distal reference is also face-preserving for the lecturer as it enables him to distance from direct responsibility for the problem with the acetate.

Thus, it can be seen in this introductory phase that this combination of textual and interpersonal metadiscourse serves a variety of discourse functions. The textual metadiscourse organises the propositional content in ways that will be coherent for the audience and appropriate to the lecturer's aims. The lecturer is aware that he should respond to the needs of the audience and contextualise the upcoming talk and express how the ensuing discourse will be organised. He also shows the audience he is aware of his responsibilities to both the institution and to the audience to cover all the important areas of the course and that nothing of relevance will be missed out. At this stage of the lecture, most of the indicators of textual metadiscourse are frame markers as the lecturer sets up the organisation of the talk and orients the audience to the relevant contexts. The indicators of interpersonal metadiscourse in this initial phase are largely relational and person markers. Their function is relatively complex. On one level, the lecturer is seen to be establishing a relationship with the audience, signalling their status as participants in the interaction, inviting responses and suggesting solidarity with them, and addressing face. Yet at the same time, the metadiscourse indicates that the lecturer signals the authority, status and responsibilities of a person in his position. This

complex shift of footing or discourse identities provides a delicate balance between the lecturer as expert knower and disciplinary servant. The combination of textual and interpersonal metadiscourse shows how contexts are invoked and ratified by the audience and how the lecturers recognise the consequentiality of their talk for themselves, for the audience and for the wider academic discourse community.

The data from the initial section of Lecturer B, Instruct Sequence 1 is as follows:

(2) Lecturer B: Instruct Sequence 1 extract

66: never mind right so what I'm going to do is (.) just go through the political
67 issues in GIS (.) um which may be (.) you know uh all standard to you you
68 may've thought about it all before there may be nothing new I don't know
69 and then talk specifically about participatory GIS (.) and use the you know
70 the the uh January workshop and the ideas that came out of that (2.0)

In this sequence, in line 66 the aside '*never mind*' and the marker '*right*' signal the closing down of the previous topic and the initiation of a new topic, thus separating different information units. '*So*' acts as a global marker and orients the audience to the lecturer's agenda. This forms part of the Specifier phase. Similar to the lecturer A data analysed above, '*so*' together with the forward pointing pseudo cleft '*what I'm going to do is*' indicates how the lecturer constructs context by describing what she is doing and sequential awareness of the issues to be covered in the lecture. This combination is a clear sign to students to pay attention as the lecturer orients to her situated identity as university lecturer and course provider. It also underlines the complex internal structure of this particular phase.

Metapragmatic awareness may be represented by items of face address as a speaker shows implicit awareness of the structure of their talk and the consequentiality of the contexts invoked. In this extract, the main Head phase '*go through the political issues*' is prefaced by *just* which serves to minimise the action and indicates the lecturer's awareness of the audience's face wants when invoking her discourse goals. The lecturer states that she is aware she might go on to tell the students something they already know and so addresses their negative face in order to mitigate this potential imposition and to make her subsequent actions reasonable. At the same time she preserves her positive face. In the Complement phase (lines 67-8): '*(.) um which may be...*' the modal verb *may* is repeated three times. This reliability hedge also addresses face needs as the lecturer does not make the statement categorically but asserts the content to be true as far as she knows. The hedge signals the lecturer's orientation to the audience and her attention to the interactional effect of her statement. The lecturer signals her dependence on audience ratification of her assumption about their state of knowledge and so the audience are given an active role in the construction of claims.

The sequence of pauses and the metadiscoursal '*you know*' in line 67 signal online editing as the lecturer orients to the text proper and stalls for time whilst performing a lexical search. '*You know*' is a relational marker with underlying face address as it appeals for agreement and attempts to build a relationship with the audience. It may also serve as a headline for the following talk: '*uh all standard to you*'. In line 68 the qualifying statement '*I don't know*' is a face saving move that also closes the frame and ends the context that has been invoked. It is interesting to note that there is no pause between this and the start of the next Specifier phase '*and then...*' in line 69. This may be in order to avoid potential loss of face as the students are not given the chance to

express their actual state of knowledge which may be less than inferred. The lecturer preserves her own face, and the idea that the students possibly do not know but should know the political issues in GIS is left implicit but understood. Thus, it can be seen that face is a mutual construct between participants and that either or both parties may actively work to maintain each other's face. Face is not something that is static but negotiated and renegotiated in interaction (Goffman, 1967).

As in the Lecturer A, Instruct Sequence 1 data (line 127), '*and then*' in line 69 signals the discourse organisation and the sequential structure of units of information. This textual metadiscourse initiates a change of context and orients the students back to the present context of the lecture's agenda: '*talk specifically about participatory GIS...*'. The lecturer then orients to a historical context in lines 69-70: '*the you know the the uh January workshop*' and the relational marker assumes a shared familiarity and the audience's ability to access the relevant context. The anaphoric reference in line 70: '*and the ideas that came out of that*' is reliant on the mutual orientation of participants to the invoked context which is procedurally related to the subsequent talk.

This extract from the Lecturer B data has shown several similarities to the initial phase of the Lecturer A data. In both cases, the lecturers use mainly textual frame markers to organise propositional content, invoke relevant contexts and orient the audience to them. In terms of interpersonal metadiscourse, both use mainly person and relation markers, and, in the Lecturer B data, hedges, to deal with issues of face address, to build a relationship with the audience and at the same time to maintain their institutional authority. The students' lack of verbal participation in the talk in interaction suggests that they ratify the contexts invoked by the lecturer and do not challenge the

assumptions made about their state of knowledge. In this way they adopt the required situated and discourse identities as each context is invoked, and the lecturer is thus free to proceed with the stated agenda.

We will now examine the introductory phase of the Lecturer C, Sequence 1 data:

(3) Lecturer C, Sequence 1 extract

99 actually (4.0) well um let's think um (2.0) let's do this thing logically um
100 (2.0) I said last week didn't I that (2.0) we spend far too-an awful lot of
101 time on rapid rural appraisal and participatory rural appraisal and all that
102 sort of stuff and in a sense questionnaires are more important (.) in terms
103 of how often they're done and here we are we've got one session on
104 questionnaires and it doesn't really reflect the importance of
105 questionnaires so I'm going to do that before it sort of applies here

In this sequence, the combination of global markers and pauses in line 99 signals the closing down of the previous topic and frame the start of a new information unit as part of the Specifier phase. This is followed by two pseudo imperatives or first person imperatives: '*let's think um (2.0) let's do...*' which signal the lecturer's online planning as he comments on what is going on in his mind during the production process. This acts as a metalinguistic hedge before the lecturer selects a specific formulation or way forward with the information unit. The lecturer's verbalising of and response to his own thoughts act as an introductory device and let the students overhear his thinking processes and allows him to build his relationship with the audience. In line 99 the lecturer orients to the topic of the talk with a first mention: '*this thing*'. The proximal deictic and the noun *thing* are speaker oriented as part of the verbalised thought process.

However, in this second analysis, this section could be argued to have a different structure that does not fit as neatly into the Specifier-Head-Complement model. It could be argued that all of line 99 is part of a Specifier phase and that *'I said last week'* is a Head phase but within a longer meta unit at the macro level. In a sense, lines 99-103 are all part of a Specifier phase at the macro level, but constitutes within it a micro level Specifier-Head-Complement unit, although this does not have a specific instructional function.

Returning to the initial analysis, the pause in line 100 signals the end of the thought unit, marks the beginning of the next Specifier phase, indicates a return to lecturing mode and a dynamic shift of context. The speaker orients to his situated identity as course lecturer in line 100 and addresses the audience directly: *'I said last week didn't I'*. As with the Lecturer A data, the audience can easily process the temporal deictic *last week* as their contextual and real world knowledge allows them to understand this newly invoked frame.

Metapragmatic awareness is also signalled by the question tag in line 100 which seems to have a dual purpose in the talk in appealing to the audience. Normally, tags are appended to statements. In other words, a speaker will assert something and then invite listener response. In this case, the lecturer invites confirmation that he said something yet to be stated. The tag therefore might be being used strategically to turn the content of a yet to be heard assertion into a presupposition, making it difficult to disagree with and hence strengthening its argumentative power even further. It also helps turn *said* into a presuppositional trigger. At the same time it serves to reinforce the lecturer's status and identity in the talk in interaction. At another level, the tag might serve as a

signal to the audience that the lecturer has shifted context into lecture mode and is now addressing them directly, i.e. signalling the end of his thinking aloud, and inviting them to become involved in the communication.

In line 100, there is a shift in deictic perspective where the indexical 'we' excludes the addressees and situates the speaker as a member of an academic department or more specifically as part of the lecturing team running the module. This in turn requires reflexive awareness of the process of matching structural properties to contextual properties. Furthermore, the present tense '*spend*' signals a shift or change in the context from *last week* to a more general truth or situation about the course as a whole. Metapragmatic reflexivity is signalled in the sequence in line 100: '*far too-an awful lot of time*' where the lecturer clearly self monitors and initiates a self repair sequence. The lecturer thus changes what appears to be a direct criticism to a less forceful comment. The lecturer might be showing awareness of the need to adopt an appropriate professional identity and be careful about what he says so as not appear to criticise the course, his colleagues or the department.

Whilst the overt criticism is repaired in line 100, there is still an implicit criticism in lines 100-101 and the lecturer continues to make his point but in less direct ways. Here the lecturer uses an abbreviating device to signal the end of a series and suggest that the series has not been given exhaustively: '*and all that sort of stuff*'. The hedge and the non-specific reference marker suggest that the lecturer feels he does not need to be more explicit, and that the audience has sufficient knowledge to access the reference. Both the distal deictic *that* and the hedge *sort of* have a distancing, unspecifying function dissociating the speaker from the content, and, to some extent, the audience and

implying a negative evaluation of the content and an attitude of scepticism. This inexplicitness or saying less than is meant may function to make the message more acceptable and increase its chances of ratification by the audience in more subtle ways. By avoiding precise, technical terms, the lecturer may not want to seem too knowledgeable and less pretentious and by these means gain greater solidarity and common ground with the audience, although to be precise would sit oddly with the claim that too much attention is directed to the topic. In line 102, *'and'* signals the start of a new Specifier phase and the hedged *'in a sense'* restricts the applicability of the following Head phase *'questionnaires are more important'*, and, to some extent, invokes the possibility of different academic frames of reference. Through this, the lecturer provides a further signal of his desire to establish rapport with the audience and to emphasise his personal point of view of the knowledge he is presenting. In lines 102-3 *'in terms of how often they're done'* glosses what is meant by *important*, and so reflexively provides the *sense* in which questionnaires are more important.

In line 103: *'and here we are'* forms part of the next Discourse Structuring Phase and orients the audience to the present 'here and now' context of the lecture, to the matter in hand, with the inclusive person deictic *we* and the proximal indexical marker *here*. The choice of proximal reference also tends to be used when introducing a key feature into the talk. This key feature is: *'questionnaires are more important'*, which is rephrased in lines 104-5: *'the importance of questionnaires'*. This metatextual device is a cohesive tie in the talk and also directs the audience back to this key point and signals that it is still salient and meaningful. Repetition focuses attention, but a slight reformulation also encourages attentiveness in the audience, by suggesting a sense of familiarity and giving the message greater significance or symbolic value. The comment in line 104: *'it*

doesn't really reflect...' could be argued to assert the truth of the utterance, claiming, for the benefit of the audience, that this is at least true.

The macro marker *so* in line 105 is an historic orientation in that it orients the audience to the previously invoked context of the lecture's agenda. As with the Lecturer A and Lecturer B data above: *'I'm going to do that before'* shifts footing and reorients to the lecturer's identity as both course and knowledge provider, and outlines his discourse goals and the structure of subsequent talk. This is followed by a comment: *'it sort of applies here'* with the hedge suggesting that the lecturer is careful and tentative in the setting of his agenda which, he has implied, conflicts to some extent with the overall course agenda. This again, may be a face saving device in that the lecturer introduces some distance to the message and so effaces himself and avoids confrontation in pursuing what seem to be his personal goals. Finally, the proximal deictic *here* reveals mutual orientation between the participants to the immediate context of utterance.

The above analysis of the introductory phases from the three lecturers in the study, shows that, at the metalevel, there are several structural and functional similarities. The metadiscourse in each sequence is used to organise the information units, to establish contact and an implicit dialogue with the audience, to signal the lecturer's attitude and communicative intentions, and to allow them to project themselves into the talk. Lecturers clearly want their message to be both understood and accepted, and metadiscourse is one way in which context and linguistic meaning are integrated to allow the audience to derive the lecturers' intended interpretations. The Specifier phase is meta in relation to the Head phase, and at other levels below the structure of the instruct sequence there is also a wide range of meta phenomena.

At this initial stage of the lecture, lecturers A and B, and lecturer C to a lesser extent, use a combination of textual metadiscoursal devices to indicate their discourse goals and the structure of the talk. This is clearly dialogic in intent in that it signals an awareness of the audience, an assessment of their current level of knowledge and processing ability, and the extent to which the speakers feel they need to be explicit. In each case, the lecturers gauge the need for clarity and directness at the beginning of the lecture. They also equally assess the need to contextualise the upcoming talk within the wider frame of the course as a whole, linking it back to the previous lecture or relating it to knowledge that is shared by all participants. The connectives in the instruct sequences help the audience correctly interpret links between ideas and prepare the audience for the next information unit. The glosses in the Complement phases also ensure that the audience catch the lecturers' intended meanings.

At the interpersonal level, the metadiscourse in each case alerts the audience to the lecturers' evaluation of and attitude towards the propositional content of each information unit and to the audience themselves. Hedges, relation and person markers and footing shifts facilitate the interaction between the lecturer and the audience and helps construct a working relationship. Each lecturer shows awareness of the need to be sensitive to the expectations and reactions of their audience. As the talk progresses, in each case the lecturers show that they want to preserve their credibility as experts in the field and as representatives of the institution. They also demonstrate a desire to be persuasive but not too assertive, aware of the potential for rejection and the need for audience ratification. Whilst the lecturers want to get their point across, the metadiscourse in the talk indicates that they recognise the face needs of their audience and the need for respect for colleagues and so employ different face saving strategies to

minimise any face threatening acts. Thus, metadiscourse functions at the macro level of lecturer discourse to facilitate and contribute to the social interaction and the knowledge transfer.

6.7 Meta-linguistic features at the micro level

The main goal or action to be accomplished in a lecture is the transmission of information from the lecturer to the audience. Goffman states that this action of speaking before an audience presupposes that the lecturer can lay claim to some kind of superior knowledge and supports the idea of intellectual authority in general (1981:195). As the lecture unfolds, so the audience can gain access to the knowledge that the speaker possesses about the world. Moreover, as Goffman claims, the fact that an audience is physically present at a lecture means that there is more to the event than a simple transmission of text. He argues that the lecturer brings to the talk not only the text, but also access to himself/herself and a commitment to the here and now of the lecture. In other words, in the talk the lecturer is not only required by the institution to transfer specific information to the audience, but the audience also expects that the lecturer will refer to his/her expertise and experience acquired in the field and respond to the particular occasion at hand.

The lecturers in the present study accomplish these responsibilities to both the institution and the audience through the three-part instruct sequences or information units identified in the previous section. The lecturers are responsible for transferring a certain amount of information or content to the audience. This information is broken down into smaller units which comprise the main Head phase of each instruct sequence. The lecturer also needs to indicate the provenance for each Head phase and indicate

their place in the overall lecture agenda. This is achieved through the preceding Specifier phase. After each Head phase, the lecturer is then required to respond to assumed but unspoken questions from the audience about the information just introduced. The lecturer thus reacts to the here and now of the lecture and uses their knowledge and expertise gained in the field as the basis for their response to these inferred questions. This makes up the Complement phase of the information unit sequence where the lecturer indicates to the audience that he/she has both the knowledge and skill to interpret the main content, anticipate the audience's questions about that content, and provide the relevant response for the audience to consider. The duties of the lecturer to both institution and audience provide the motivation for the individual instruct sequences that constitute the lecture discourse as a whole.

Cognisant of these responsibilities, the lecturer takes on different roles and identities and relationships with the audience during the process of constructing each part of the instruct sequence. Thus, within the information unit, different participant identities, roles and relationships are re-negotiated and oriented to as the talk progresses. Part of this re-negotiation and orientation is signalled by shifts in footing. This section will detail the shifts in footing made by the different lecturers in the study, where in the information units these footing shifts occur, and their contextualising function.

Goffman was among the first to suggest that the terms *speaker* and *hearer* were oversimplifications for the roles of participants in talk (1981:128-9), and claimed that talk could only be properly analysed in the context of the participation status of each participant in the interaction. Goffman stated that the roles are far more complex, in that the alignment between a speaker and the other participants in talk is constantly

being changed through different self-projections of the speaker. Goffman termed this alignment footing. Changes in footing imply:

a change in alignment we take up to ourselves and the others present as expressed in the way we manage the production or reception of an utterance.

(Goffman, 1981:128)

In other words, shifts in footing have two main functions in talk. Firstly, they act as contextualising cues through which speakers and hearers position themselves in relation to each other, signalling who they are and what they are doing at any given moment in the interaction. Secondly, they set up new interpretive frames for subsequent embedded actions in talk. In the same way that talk flows, so the social and conversational identities of the participants are not static but are dynamic and contextually situated, interactionally emergent and jointly negotiated between participants (Matoesian, 1999: 494).

The need to establish intellectual authority and indeed credibility is associated with a lecturer's 'textual self', that is, the 'sense of the person that seems to stand behind the textual statements made and which incidentally give these statements authority' (Goffman, 1981:173). In terms of production, Goffman classified the main self-projections of the speaker of an utterance as *animator*, *author* and *principal*. The animator is the person who can be identified as the talking machine, the individual who is active in the role of producing an utterance. The author is the mind behind the sentiments expressed, and the person who has scripted the statements and chosen the words to express them. The principal is both animator and author combined, the person

whose position is established by the words spoken, who believes in and is committed to what is being said. Whilst a lecturer is normally all three of these together, it is not the case that all three notions are one, as the term *speaker* implies. For example, a participant in talk may not speak their own words or take the position indicated by the words they speak.

Levinson (1988) claims that this categorisation is a little vague and too activity specific in the sense that Goffman only applies these categories to one kind of talk, the lecture. He takes Goffman's concept of footing and renames it 'participant role' (1988: 163), and sets out to establish a set of categories for all possible participant roles, regardless of the activity participants might be engaged in. In order to do so, Levinson borrows from phonology and breaks down the traditional concepts of speaker and hearer into defining, underlying features which can then be reassembled to demonstrate more specialised participant roles (1988:171). For phonology, Giegerich explains that 'a phoneme cannot by definition be broken up into shorter successive units' but can be seen as 'a bundle of simultaneous units called phonological features: individual properties whose sum makes up the phoneme' (1992:89). He concedes that these features are controversial and not entirely satisfactory since the use of a particular feature is more likely to be determined by the analyst than by phonological fact.

Levinson, in adopting and adapting these theoretical constructs of phonological features, aims to determine the simultaneous underlying features of participant roles in talk. He acknowledges that his own terminology is still wanting, but ultimately the terminology is secondary to identifying and defining the underlying features of participant roles in talk and coming closer to a set of categories that can be used in a

comparative ethnography of speaking (1988: 170). Table 3 below shows Levinson's categories for production roles and their underlying distinctive features:

Table 3: Levinson’s (1988:170) categories for production roles

Term	Participant	Transmission	Motive	Form	Examples
Author	+	+	+	+	Ordinary speaker
Ghostee	+	+	+	-	Ghosted speaker
Spokesman	+	+	-	+	Barrister
Relayer	+	+	-	-	Reader of statement
Deviser	+	-	+	+	Statement maker
Sponsor	+	-	+	-	Defendant in court
Ghostor	+	-	-	+	Co-present ghost writer

Levinson explains that *transmission* is the property that transmitters or utterers have. This relates to Goffman's animator or talking machine. He then breaks down the origin of the message into *motive* and *form*. Motive is the desire to communicate a particular message, related to Goffman's principal, and the form is the format of the message, related to Goffman's author category. Levinson acknowledges that production roles can become quite complex, particularly when participants speak in institutional roles, and can shift from speaking for themselves and for others, to acting as relayers or spokesmen.

In terms of recipient roles, Goffman's notion of *ratified participant* (1981:130) is sufficient to explain the role of an audience in a lecture. They have an official status as ratified participants in a purposely engineered encounter. But whilst their intention as an audience is to listen to the talk, they may choose to listen or not to listen to what is being said. In contrast, an eavesdropper or overhearer unintentionally and inadvertently

gets the opportunity to listen to talk in which they are not ratified participants (Goffman, 1981:131).

In terms of analysing the data in the present study at the micro level for the distinctive features of the roles and responsibilities adopted by the lecturers in the different phases of the instruct sequences, Levinson's production roles of author, spokesman, ghostee and relayer are evident. These roles incorporate the lecturer's responsibilities to provide students with access to their own knowledge and expertise (author), to speak on behalf of the audience (spokesman), and to cite other experts in the field (relayer/ghostee). The next section will now examine the ways in which these different participant roles are oriented to in the information units.

In the Lecturer A, Instruct Sequence 1 data, lines 151-7 will be examined. Table 4 below shows that this sequence consists of two main instruct sequences with two embedded instruct sequences in the Conclusion phase. The different participant roles of the lecturer throughout the extract are also indicated:

Table 4: Example of participant roles of Lecturer A

	Specifier	Head	Complement
Unit 1	RELAYER/ GHOSTEE?→ and he said	part of the problem that people found themselves in was education because education	
Unit 2	(.) as it was in Brazil AUTHOR→ and as it still is in most developing countries (.)**	GHOSTEE→ had been imported and reproduced from the sorts of curriculum that you get in (.) the colonial powers	former colonial powers
Unit 3	(1.0)	education was part of the imperialist process	AUTHOR→ basically
Unit 4	1.0) .hh um and this this actually has occurred to me (1.0) um in South Asia SPOKESMAN→ as I'm sure it must have done with you Craig	AUTHOR→ (.) that the sort of education people get tends to be totally inappropriate to the sorts of things they need to do	which is basically grow enough rice to eat

** Lecturer confirmed as ghostee not relayer in previous instruct sequences.

In the Specifier phase of the first unit, the lecturer signals that he is not the author of the subsequent talk but either the relayer or ghostee, since at this stage his commitment to the message is not indicated in the talk. '*And he said*' signals to the audience that he is not the source of the upcoming content and the anaphoric *he* refers back to Paolo Freire, introduced in line 127. In the next unit, there is a shift in footing in the Specifier phase when the lecturer says: '*and as it still is in most developing countries*'. The shift to the present tense signals to the audience that the lecturer is no longer in the role of relayer/ghostee of Freire's past actions but is referring to his own knowledge and experience as a way of endorsing the content from the previous sequence. This shift in footing puts him not only in the role of author, but also clarifies his previous role as ghostee as opposed to relayer as it signals a commitment on his part to the previous message. The change to the past tense in the subsequent Content phase: '*had been imported...*' indicates to the audience that the lecturer has reprised his role as ghostee.

The silent pause in the third Specifier phase signals a new information unit. The pause does not signal the provenance of the upcoming Content phase, so the audience must assume that the lecturer is continuing talking in the role of ghostee and that the context is the same. The intensifier '*basically*' in the Complement phase of this unit signals a change in the lecturer's participant role from ghostee back to author. It puts the lecturer on record by conveying the idea to the audience that he supports the statement in which it occurs and that he agrees with the expert whom he is citing. In other words, here is one expert agreeing with another.

In the Specifier phase of the fourth unit, the lecturer overtly signals that he is the author of the upcoming content with the self reference: '*(1.0) .hh um and this this actually has*

occurred to me (1.0) um in South Asia '. The textual self at this stage is more than an expert with theoretical knowledge. He is an expert with relevant experience in the field which he can draw on to clarify and accentuate the point made in the previous information unit. In shifting to a real life context in which he is an actor with both experience and expertise, the lecturer reasserts his own intellectual authority to his audience. The intensifier *actually* indicates a sense of certainty and, like *basically*, puts the lecturer on record implicitly by conveying he endorses the statement in which it occurs. The cataphoric *this* is forward pointing and focuses attention on the upcoming Content phase.

The lecturer not only creates a context in which he is an actor in this Specifier phase, but also creates one in which the audience is also an actor: '*as I'm sure it must have done with you Craig*'. His status as expert allows him to shift footing not only to take on the role of spokesman for the audience, but also to speak confidently on their behalf. The status of the students is raised to be not only on a par with that of the lecturer, but also with other experts in the field who all seem to share the same thoughts and processes of interpretation. This gives the students a greater sense of involvement with the content of the lecture and a greater sense of solidarity with the lecturer. The rhetorical statement: '*as I'm sure it must have done with you Craig*' suggests that the lecturer can anticipate the thoughts of the audience and shows him to be responsive to the here and now of the lecture. This in turn reinforces the dialogic and interactive nature of the lecture. Moreover, this sequence of shifts in footing underline the lecturer's role as go-between or link between the world and the students (Goffman, 1981).

In the sequence (lines 151-57) detailed above, the lecturer not only provides the audience with access to expert opinion in the field, but also access to himself as an expert. He shows his commitment to the occasion at hand, the here and now of the lecture by providing a connection between these different areas of expertise and the audience. Goffman (1981) claims that success in lecturing is dependent on the lecturer's ability to create the impression of being fully engaged with both the topic and the audience. This is achieved partly through fresh talk in which the lecturer creates the impression of being responsive to both the audience and the occasion. Smith states:

Speakers create this illusion or impression by constantly 'laminating' or 'rekeying' the textual-self footing with other footings whose functions are to present projections of self which modify the speaker's display of textual-self authority in various ways. (Smith, 1993:150)

Table 4 above shows how the lecturer shifts footing in the information units. The signals of footing shift that switch between the lecturer as ghostee, author and spokesman appear in the form of fresh talk and convey to the audience that the talk has been spontaneously formulated and produced for them in that specific moment in time. These shifts enhance the interactive nature of the lecture, and the impression of responsiveness to the audience's questions about the content of each unit makes the lecturer seem more authoritative because 'it makes him or her look as though s/he has applied his or her intelligence diligently to the presentation of the text for this particular audience' (Goffman, 1981:189). The complexity of footing shifts can also be seen in a later sequence (lines 166-180) in Table 5:

Table 5: Example of participant roles showing complexity of footing shifts of Lecturer A

	Specifier	Head	Complement
Unit 1	GHOSTEE→ (2.0) .hh um so it's in Freire's view anyway	education is part of oppression	
Unit 2	AUTHOR→ and what you really need to do is	to change that (.) that education	or to free people free their minds
Unit 3	GHOSTEE→ (2.0) and so he identified	two modes of educational curriculum	
Unit 4	(1.0) .hh um on the one hand here	the banking type of curriculum	AUTHOR→ (1.0) um which is (2.0) basically um getting as many qualifications as you possibly can
Unit 5	RELAYER→ .hh what has been called	the the diploma disease	
Unit 6	AUTHOR→ (.) um (.)	qualifications are basically a currency in developing countries and people need to achieve as many (.) certificates as they can in order to get on in life	(1.0) and so this is very much true I think
Unit 7		GHOSTEE→ the purpose of school is to gain or bank knowledge and qualifications and knowledge is the property of the individual	AUTHOR→ and it's up to me to learn to get certificates so I can compete against everyone else
Unit 8	(.) um (2.0) I remember this very very clearly as an undergraduate (1.0) that	people were competing against each other...	

In the Specifier phase of the first unit, the lecturer signals that he is not the author of the subsequent talk but the ghostee. We can assume that his participant role is that of ghostee rather than relayer in this instance, based on evidence given above in lines 151-7. The discourse marker *anyway* indicates a return to an earlier point and reinforces the footing shift: '*in Freire's view*' in which the lecturer signals he is about to cite this expert's opinion in the next Head phase. In the next unit, the lecturer shifts footing in the Specifier phase to that of author. This begins with a pseudo cleft: '*and what you*

really need to do is', and the intensifier *really* signals to the audience that the lecturer is using his own words and stressing his own sense of certainty.

The lecturer then shifts footing again in the third sequence: '*and so he identified...*' and reverts to his role of ghostee as established in unit 1. In the following information unit, in the gloss in the Complement phase, the lecturer again reprises his role as author: '*um which is (2.0) basically um (2.0) uh getting as many qualifications as you possibly can*'. In the same way as outlined above, *basically* intensifies the lecturer's own words rather than those of the expert being cited. The pronoun *you* could be understood as deictic, treating the audience as members of a set other than just those physically present in the lecture. The students are no longer put on a par with the experts, as seen in the analysis of the previous extract, but are transported back into the here and now of the real world and their current role of a student audience attending a lecture, like other student audiences.

For the fifth unit, the lecturer shifts footing to that of relayer and cites an unidentified expert in the passive voice: '*hh what has been called*' as the provenance for the subsequent Head phase. The lecturer acknowledges another source, but exerts a certain amount of autonomy in deciding not to cite that source by name. He thus reinforces his own status as expert to the audience, by indicating that he has considered their needs and come to the conclusion that the name of the person he is citing is not relevant to those needs.

In the sixth unit, the lecturer shifts footing to that of author. This is not signalled in the Specifier phase, but is implied in the Head phase when the lecturer uses the intensifier

basically. The lecturer then overtly reasserts his role as expert in the Complement phase: '(1.0) *and so this is very much true I think*' and signals to the audience that he is the author. The anaphoric *this* refers back to the previous Head phase, and the whole Complement phase signals to the audience the lecturer's commitment to and belief in the previous content.

Unit 7 does not have a Specifier phase and the lecturer does not indicate the provenance of the content of this sequence in words. However, in the actual lecture it is clear to the students that he is reading off the content from the overhead projection and in this way signalling to the audience that he has reprised his role as ghostee.

In the Complement phase of unit 7, the lecturer appears to take on the role of an invented persona acting in a hypothetical context: '*and it's up to me (1.0) to learn to get certificates so I can compete against everyone else*'. In terms of Levinson's categories, on the one hand, we could assume that he is the author in the sense that he has chosen the form and has the motive to deliver this particular message to the audience. However, on the other hand, we can also assume that he is the ghostee in the sense that he is citing another source, albeit hypothetical. Thus, it seems that as the lecturer talks and rekeys his textual self with other footings within the information units, this inevitably leads to instances of ambiguity. This is an important feature of footing that is a worthwhile topic of investigation, but is outside the limits of this study.

The fictional *me* in this hypothetical world has a status which is that of peer to the students in the audience. This provides a lead in to a real world context in which the lecturer discusses a previous experience he had as an actual student. This appears in the

Specifier phase of the next information unit: *'I remember this very very clearly as an undergraduate'*. The lecturer signals to the audience that he is the author of this phase, but again, the self referred to is not exactly the same here and now self the lecturer is presenting to the audience in the actual lecture.

The problem of authorship discussed above underlines the enormous complexity of participant roles in talk in interaction. Through these intricate shifts in footing, the lecturer brings the world of experience and knowledge of the experts closer to the students, and acts as a kind of go-between figure connecting the two. In order to make the knowledge of other experts more accessible to the audience, he refers to his own experience and knowledge to clarify and exemplify the message he wants to get across. This also signals to the audience that he is responsive to the present situation and is drawing on his many textual selves to set up contexts in which the content is clearer and more relevant to this particular audience. The success of his actions is evident in subsequent talk when one of the students takes an unprompted turn after a Head phase in line 183: *'yeah that's what happens now'*. The establishment of common ground set up in line 179: *'I remember this very very clearly as an undergraduate'* between the lecturer and the audience is the impetus for this change in role from ratified listener to active participant in the talk.

This section will now examine the different participant roles used by the other lecturers in the study. Firstly, Lecturer B, Instruct Sequence 1, lines 73-82 is analysed.

Table 6: Example of participant roles of Lecturer B

	Specifier	Head	Complement
Unit 1	RELAYER/ GHOSTEE?→ (.) um Harris (.) uh and (.) Coe in ninety five write	GIS empowers the powerful and disenfranchises the weak	
Unit 2	AUTHOR→ (6.0) and essentially the question is (.) uh	knowledge is power (2.0)	SPOKESMAN→ ** <i>but for whom</i>
Unit 3		AUTHOR→ you've got the problem of control at the centre	exploitation control the surveillant society if you like
Unit 4		versus the idea of control at the grass roots	(.) whether GIS can-
Unit 5		GIS can certainly give you control at the centre (.) SPOKESMAN→ <i>but can it instead give you control at grass roots</i>	in which case we're talking about freedom empowerment equality
Unit 6	AUTHOR→ (2.0) so	two different ways of seeing GIS and seeing GIS potential	
Unit 7	and (.) I certainly have seen that played out in Ghana...		

** Levinson's terminology is used here and understood to include men and women.

In the initial Specifier phase, there are parallels with the Lecturer A data (lines 151-157). The lecturer signals a shift in footing by citing a publication by two experts in the field: '*um Harris (.) uh and (.) Coe in ninety five write*', but at this stage it is not clear whether she is acting as relayer or ghostee of the original message. As with the Lecturer A data, the fact that she is in fact taking on the participant role of ghostee is only apparent through subsequent talk. This is most clearly signalled in unit 7 in Table 6 above: '*and (.) I certainly have seen that played out in Ghana*'. The intensifier *certainly* signals that she supports the statement in which it occurs. The anaphoric *that* refers back to the ideas of Harris and Coe previously cited and this sequence serves to indicate to the audience that her own knowledge and experience, which will be revealed in the subsequent content, leads her to agree with these experts.

One difference with this particular lecturer is that she follows the citation in unit 2 with a rhetorical question/answer sequence, '*uh knowledge is power (2.0) but for whom...*' and with another in unit 5: '*GIS can certainly give you control at the centre (.) but can it instead give you control at grass roots...*'. These sequences are a strategy the lecturer uses to present herself as a textual commentator. She shows that she has the intellectual authority and competence to voice the unspoken questions of the audience after a Head phase and then provide the relevant answer for the audience to consider. The lecturer shifts footing to that of expert whose knowledge and expertise allow her to act as a spokesman on behalf of the audience. In the Complement phase of unit 3: '*if you like*' frames the previous proposition as information that the lecturer is offering the audience. The lecturer is offering new information and the audience are viewed as listeners who are fully capable of understanding it. Thus the footing shift focuses attention on the audience and their ability to learn rather than on the lecturer herself and her ability to provide students with new knowledge.

The lecturer continues to act as spokesman for the audience in the Complement phase in unit 5: '*in which case we're talking about...*'. The inclusive *we* suggests that the lecturer and the audience share the same thought processes and come to the same interpretations about the previous Head phase. Since this is not necessarily the case, the use of *we* is an implicit request to the audience to pay attention and agree with the lecturer (Smith, 1993). As the lecturer verbalises the assumed unspoken questions from the audience and provides the relevant response, these particular instances of fresh talk signal to the audience that the lecturer is giving her expert self to the present situation of the lecture. In other words, through this particular footing shift, the audience understand the lecturer as responsive to the here and now of the lecture. This also emphasises the dialogic

nature of the lecture as the lecturer goes through these rhetorical question/answer sequences and the notion that the talk is co-constructed and footing shifts negotiated by all the participants in the interaction. The audience allow the lecturer to speak on their behalf as much as she assumes the role of spokesman.

In the Lecturer C data (lines 219-223), the major difference with the other two lecturers in the study is that the lecturer does not cite any other experts in the field. This is shown in Table 7 below:

Table 7: Example of participant roles of Lecturer C

	Specifier	Head	Complement
Unit 1	AUTHOR→ um it obviously means that (.) sort of	piloting your questionnaire becomes very important	
Unit 2	(.) um (2.0)	if you pilot a questionnaire it helps you	
Unit 3	(2.0) well	the actual sequence of questions is important	SPOKESMAN→ you know um people think in a particular way you know

In the Lecturer C data, the lecturer does not cite any experts in the field. Instead the lecturer's main footing shifts are from textual self as author to self as spokesman on behalf of the audience. In the first information unit , the lecturer states: *'um it obviously means that (.) sort of piloting your questionnaire becomes very important'*. The intensifier *obviously* could suggest that the audience and lecturer both share a certain amount of expert knowledge and have come to the same conclusions. This potentially face threatening act where the lecturer is essentially guessing the current state of knowledge of his audience is mitigated by the hedge *sort of*. The next unit also seems to compensate for the potential face threat. The lecture constructs a hypothetical world in which he places the students as actors: *'if you pilot a questionnaire it helps you'*. This

device not only focuses their attention on the subsequent talk but also brings the world of the experts closer to that of the audience.

The subsequent talk is also littered with several instances of *you know*, as in unit 3, for example: '(2.0) *well the actual sequence of questions is important you know um people think in a particular way you know*'. These instances of *you know* may be idiosyncratic, but their function is clarified by the use of *important* and *particular*. These signal the lecturer as author of the Head and Complement phases and as someone who is committed to the message. The lecturer is not only giving the audience access to his own beliefs, but by using *you know* he suggests that the audience share those beliefs as well.

These features, together with the filled pauses that also appear frequently in the talk, signal to the audience that the talk is spontaneous and that the lecturer is committed to the needs of his audience in this particular instance. By placing the audience as participants in hypothetical worlds and frequently using *you know*, the lecturer focuses the attention of the audience on the talk, and, more importantly, on the information he intends to impart. These footing shifts thus indirectly boost the lecturer's intellectual authority and the knowledge he wishes to convey, as well as indicating his apparent desire to place the audience on a par with himself and other experts in the field.

6.8 Summary

Footing shifts are an important but complex feature of the information units in the lecture. As stated at the beginning of this section, the lecturers not only have the

responsibility of transferring knowledge to the audience, but they must also give the audience access to their own knowledge and expertise as well as showing a commitment to the here and now of the lecture. The footing shifts of ghostee or relayer of information of other expert opinion, author of evaluative statements and spokesman on behalf of the audience across the instruct sequences mean that the lecturers can create different contexts to facilitate these three main responsibilities. These footing shifts not only assert the lecturer's intellectual authority but also act as acknowledgements of the needs of the audience. Each lecturer ensures that as well as content, the students gain access to themselves as experts in the field.

Levinson (1988) acknowledges that his categories of participant roles are not definitive. In the present study, whilst his categories are helpful in signalling the provenance of subsequent talk there are still areas that remain ambiguous and unclear. One issue, raised earlier is the problem of first and second person pronouns and the selves to whom they actually refer. Once that self becomes a hypothetical or invented persona, this raises the question as to whether one can safely claim the participant role to be that of author. It could be equally argued that the footing shift is to that of ghostee for this unreal other. Another issue concerns the lecturer's footing shifts to those of relayer and ghostee. Whilst the lecturers are citing the opinions of other experts, it appears that they have mainly chosen to do so, rather than having been asked or required to do so by the original source or some other official body. Thus the lecturer as relayer of expert opinion in this sense is different to the reader of a statement as relayer of a message in a courtroom. Moreover, when the lecturer acts as ghostee, the distinctive features of motive and form do not give a sense of how committed the speaker is to the message

they are conveying. These are certainly worthwhile areas of investigation, but beyond the scope of the present study.

6.9 Chapter summary

The analysis of data from the three different lecturers has revealed that, despite their individual lecturing styles, there are similarities to be found in the ways they accomplish the act of instruction by packaging information into recursive three part information units.

This chapter has shown how the participants in the study invoke a particular identity, orient to this identity and make it relevant and consequential for the specific action of instruction through metalanguage. Metalinguistic phenomena such as footing shifts have been shown to enable the lecturers to go beyond the basic content of their lectures and provide the audience with information about their own position with respect to the content, their audience, and their position with respect to other experts in the field. In this way, context is indexed or created by the participants through conscious and automatic linguistic choices. Moreover, the metapragmatic reflexivity revealed in the lecturers' editing, self repair, comments and modification has shown how they orient to the structure of language and are aware of the consequentiality of the contexts created.

Chapter 7

Conclusion, Discussion and Implications

Conclusion

Talk is a central feature of our everyday social activities and the lecture is a central feature of everyday academic activity. As such, the lecture is a valid focus of investigation to promote understanding of how this form of talk is organised, and how the participants coordinate their behaviour and generate sequences of activities which achieve the transfer of knowledge. Research into English language lecture discourse is of particular importance, not only because of the rapidly increasing numbers of non-native speaker students studying in English speaking countries or in their own countries through the medium of English, but also because of the difficulties these students have with second language lecture comprehension.

In the context of universities, as discussed in the Literature Review, whilst previous research carried out into lecture discourse raised some interesting and important issues, the tendency of a large part of these studies was to focus on pre-selected features of lecture discourse with specific research questions in mind, often carried out in experimental

settings using inauthentic, scripted talk. The results of these studies were limited and, in many cases, raised more questions than they answered. The motivation for the present study was therefore, to some extent, a response to the demand for more detailed examination of authentic lecture discourse in naturalistic settings. The Methodology chapter justified an exploratory, conversation analytic, empirical pragmatic approach to the study of lecture discourse as a means to this end, and of allowing the analysis to be led by the data rather than the analyst.

Following CA principles, the macro, micro and meta level analysis of the data in this study revealed systematic features and patterns within and across the discourse of the three lecturers under examination. A model of lecture discourse derived from X-bar theory was proposed to represent the features revealed by the analysis, not only to improve on previous models, but also with the ultimate aim of developing a principled account of lecture discourse for use in the development of EAP listening materials to enhance second language lecture comprehension and for use in lecturer training programmes.

The analysis of the data at the macro level revealed that the talk of all three speakers consisted of a number of instruct sequences dealing with one particular theme or topic, and that these sequences contained smaller, recursive three part information units. Transition points between each instruct sequence were consistently signalled by a limited range of conversational markers including pseudo-clefts, discourse markers and pauses. All three speakers used these markers to organise and structure their talk, signal the onset of new content, and dilute the density of the information being presented.

In addition to these cohesive devices, the other systematic features across the data at the macro level were conceptual metaphors. These were shown to have an organising function within the instruct sequences and a direct relation to the content being presented. It was seen that not only abstract knowledge in the lecture was presented and understood by means of conceptual metaphors, but also the macro structure of the lecture agenda within which such abstract knowledge is framed and made coherent was presented and understood through the same metaphors. In this way, for example, lecturer A's discussion about teachers handing over knowledge to students was formulated via the conceptual metaphor 'ideas are objects'.

At the micro level, this exploratory study revealed systematic, recursive three phase information units within the instruct sequences across the data. The function of the first phase was shown to be that of contextualising upcoming content. It also functioned to mitigate any potential face threats to both the audience and the lecturer. The middle phase provided the audience with new information and the final phase provided an explanation or further information about this new content. Moreover, this final phase was shown to be motivated by the lecturers' response to either a non-verbal display of student understanding of the preceding content, or to what the lecturers' assumed to be the students' current state of understanding. This also revealed the talk to be inherently dialogic and interactive despite its apparent asymmetry and the practical constraints placed on the participants in a lecture that tend to discourage two-way communication. Despite the preference for a non-verbal response from the audience, the analysis showed that the students occasionally

participated actively in the talk. Their contributions were seen to occur immediately after a content phase and as a response to that phase. These occurrences reinforced the above idea that the final phase was motivated as a response to the audience's state of understanding. Audience participation was also initiated by the lecturers as part of an extended initial phase as a means of establishing a shared context for a subsequent content phase.

In terms of developing a principled account of lecture discourse, the conversation analytic approach used in this study led to a model that reflected the patterns and features discovered in the talk. The model supported the concept of main and subsidiary discourse claimed by Coulthard and Montgomery (1981) and Young's (1991/1994) phasal analysis of lecture discourse. The present study reinforced Young's claims that there is a three part micro level structure to lecture discourse, and that this structure consists of an initial discourse structuring phase, a subsequent content phase and a final conclusion phase. The present study also supported her argument that this three-part structure is recursive and that the phases recur discontinuously.

However, the present study claimed that a model derived from X-bar theory provides a more comprehensive account of the information units discovered in the data than Young's model. Firstly, in linguistics, the complex structures of both phonology and syntax are represented as consisting of different levels and the relationship between the relevant constituents is constructional. Using a model derived from X-bar theory, the present study showed that in lecture discourse, there are clear constituents and that these constituents have a clearly identifiable constructional relationship which can be accounted for in a

similar, systematic manner. This model clearly allows for recursion of the three part information units and for the fact that the initial discourse structuring phase and the final conclusion phase are optional elements in the model in the same way that the Specifier and Complement are optional elements within a phrase structure grammar.

The analysis of the data at the meta level underlined the fact that lectures continue to be part of university activity because they consist of much more than propositional content. The analysis of metadiscourse revealed the lecturers' responses to the needs and expectations of their audience, their awareness of the problems the audience have with processing such informationally dense talk, as well as their awareness of the structure of their talk and the consequentiality of the contexts involved. Textual metadiscourse, such as frame markers, was shown to organise propositional content in ways that were coherent to the audience and appropriate to the lecturers' aims, and to orient the audience to the relevant context. Self-editing in the shape of repairs, reformulations, repetition and comments indicated the desire for coherence, the perceived need for clarity and for the main ideas to be unambiguously expressed. These features reinforced the notion that lecture discourse is dialogic.

This analysis also illustrated the complexity of the different participant roles in lecture discourse, how these roles are dynamic, interactionally dependent and mutually negotiated by the participants. Different social and discourse identities were also shown to be used by all three speakers as a resource in the transfer of knowledge and relevant and consequential to the interaction. Interpersonal metadiscourse, such as relational and person markers, functioned to signal the lecturers' orientation to their status on the one hand as participants

in the lecture, inviting responses from the audience, suggesting solidarity with the students, and addressing face needs, as well as on the other hand, to signal the lecturers' orientation to their authority in a wider context as representatives of the university and as experts in the field. Complex footing shifts allowed the lecturers to take on the roles of author to provide students with access to their own knowledge and expertise, spokesman to speak on behalf of the students, and relayer and ghostee to cite other experts in the field (Levinson, 1988). These footing shifts signalled the lecturers' position with respect to the content, their audience and other experts in the field. As the talk progressed, these identities were seen to be mutually oriented to and renegotiated, and thus a product of joint members' methods.

However, talk in institutional settings is argued to differ from ordinary, everyday talk in that it is goal oriented, involves constraints on what counts as legitimate contributions from participants to that goal, and produces particular kinds of inferences in the way that participants interpret or orient to utterances (Levinson, 1992). The description of these constraints on institutional talk and the goal oriented nature of this type of interaction has been one of the central concerns of conversation analysis since its very beginnings and there are now several well known studies on the organisation of talk in a range of different institutional settings (cf. Drew and Heritage, 1992; Boden, 1994).

Finally, the fact that CA has naturally occurring, authentic data as its focus rather than inauthentic talk constructed for experimental purposes, also serves to validate the current findings. The issue of validity is reinforced in the way that the present study has shown that the fact that the talk takes place in a lecture theatre, this does not necessarily mean that

it is determined and influenced by it. Rather, a CA approach ensures that any phenomenon arising from the analysis is shown to actually result from the workings of the context and not from any preconceived ideas on the part of the researcher. Moreover, in CA, since the data are in the public arena, the findings of the present study can be further validated or developed by other researchers.

Implications for further research

Whilst this study has proposed a model of lecture discourse based on the analysis of a relatively small database, it would not be wise, at this stage, to advance generalisations about the patterns discovered. This small database was selected in accordance with conversation analytic principles, so that empirical examples could be closely described. Moreover, conversation analysis is reluctant to treat quantification as its ultimate aim, but rather has as its core the idea that from the analysis and careful description of one or a few instances of a phenomenon, more cases can be added so that a description capable of covering a whole collection of cases can be formulated (Hutchby and Wooffitt, 1998:116). Since the present study focused on three lecturers from one discipline, in order to work towards a more principled and robust account of the act of instruction, similar studies need to be carried out in other disciplines and with a range of speakers to determine how far the present account of lecture discourse is capable of covering and representing a wider collection of cases.

Another interesting issue for future research would be based around the concept of possibility discussed in the Methodology chapter. Related research could investigate the possibility of the practice of packaging information in a wide variety of different settings to see how generalisable the sequence found in the present study is to settings that are not university lecture theatres, and to discover how this practice is made possible through the details of the participants' actions. Moreover, although lectures are focused on the accomplishment of the specific goal of instruction, it is also important to acknowledge that such an activity could equally be achieved outside the identifiable institutional context of the lecture theatre. Talk that is regarded as non-institutional could also occur in contexts conventionally defined as institutional. The present study has therefore avoided trying to define the interaction simply in terms of its differences to ordinary, everyday conversation and has taken the view that lecture discourse is a discursive action taken by participants to accomplish a specific communicative goal in this particular setting. Thus, the researcher has been able to describe the act of instruction in lecture discourse not as some deviant form or everyday conversation but rather as a form of talk exhibiting a combination of characteristics made evident through the analysis at the macro, micro and meta levels.

Implications for lecturer training and the development of EAP materials

In the analysis of authentic data, the present study has developed a model of lecture discourse. If, after subsequent research, this model is found to be an appropriate representation of how lecturers 'do' lecturing, then it might be helpful to raise awareness of this structure amongst novice lecturers. For example, they can be made aware of how

macro markers and conceptual metaphor can be used to facilitate student comprehension by clearly signalling the structure of the lecture, the start of a new instruct sequence, and by indicating the relationship between successive moves in the lecture. Whilst some may feel that they know this already, it is not always the case that knowing is realised in actually doing, so practice is imperative on any training courses.

In order for the goal of the transmission of knowledge from lecturer to audience to be achieved, lecture discourse has by necessity to be asymmetrical. The present study has shown that whilst the talk is largely spoken by one participant, the lecturer, the actual structure of the information units found in the data is intrinsically dialogic and that the final phase is motivated as a response to unspoken questions from the audience about the main content of each information unit and their current state of understanding. This finding has important implications for the development of lecturer training courses.

Awareness of the three-part information unit might also help lecturers better structure their lectures, and anticipate areas that might cause confusion or misunderstanding. If lecturers understand the function of the Complement phase in the overall information unit structure, then they can prepare appropriate responses, explanations and comments in advance that can be equally understood by native speakers and non native speakers. Some lecturers might be encouraged to go even further and to actively promote greater interaction in their lectures and more student participation. For example, students could be encouraged to ask questions after any Content or Head phase they do not understand, or perhaps to discuss ideas in groups in order to come up with a particular Complement phase amongst

themselves. Lecturers who fear losing control or wasting time need to be reassured of the benefits of more overt comprehension checks during the lecture, even with large groups, and that increasing the interaction can actually be beneficial and speed up the learning process of all students in the long term. Greater interaction can also help clarify the different identities a lecturer may adopt during a lecture, and at the same time clarify the status of an utterance as being a comment, an evaluation or a statement of fact. This is often a matter of confusion, particularly for non-native speaker students.

As far as the development of EAP materials is concerned, the present study may be useful in presenting to students a schematic framework of lecture discourse. Often students are warned of the lexical and grammatical items they might encounter in this more formal talk on EAP courses, but not of the actual structure of the discourse itself. If this and subsequent studies produce a strong and principled account of the structure of lecture discourse, then perhaps students can be made aware of this in the same way that they learn about the different structures of written academic text. Once we understand what they are listening to, then we can not only develop effective means of facilitating lecture listening comprehension for non-native students but also of improving their note taking skills.

It should however be noted that criticisms of the research done into written academic discourse (Zamel, 1993:28) suggest that it often leads to a description of discourse that is 'reduced to identifying the language conventions and generic forms that supposedly represent the various disciplines and teaching towards these'. This in turn leads to the

development of materials and teaching practices that encourage students to imitate the language of the academic community. As Bartholomae (1986:4-5) states:

students have to appropriate (or be appropriated by) a specialised discourse, and they have to do this as though they were members of the academy, or historians or anthropologists or economists; they have to invent the university by mimicking its language...They must learn to speak our language. (Bartholomae, 1986, 4-5)

However, mimicry should not be the aim of EAP. If this is the case then teaching materials and instructional models will grossly oversimplify academic discourse and reduce it to something that bears little or no relation to reality, and imply that the academic community is a static, unchanging, singular body. Hyland and Hamp-Lyons (2002:9) also argue this point and raise the question as to whether the job of the EAP teacher is to develop a student's language and learning skills so that they can reproduce the language of the community and participate within that community at a relatively superficial level, or whether the job involves greater responsibility in terms of also helping students to develop an understanding of the academic community and its culture so that they can use that knowledge to challenge the 'academic socio-political status quo' and hence the power relations within it.

EAP instruction should instead lead students to a point where they not only understand the discourse of the community, but are also able to use it independently, creatively and purposefully to participate equally within the academic arena. Hyland and Hamp-Lyons

continue that for EAP this has only recently led to a move 'away from an exclusive focus on text features to ways of understanding the social processes in which academic discourses are sited' (2002:9) and to ways of understanding how academic discourse is influenced by the interactive or textual context in which it is produced. Therefore, any further research into academic discourse needs to take into account both text and context if it is to help students understand and use the language of the academic community effectively. As Elbow (1991:138) states, in order to be successful, for all students, native and non-native speakers alike, the task is not just to learn how to 'talk the talk', or indeed write it, but also to enter and understand the culture of the academic community and 'do the discipline'.

It is therefore important for researchers and teachers of EAP to acknowledge that academic discourse, whether it be spoken or written, cannot be generalised across disciplines and that the disciplines themselves are not fixed but subject to changes from within and without over time. The teaching of academic discourse should not reduce it to a set of apparently universal conventions across disciplines. This type of instruction would not only mislead students into thinking that all they needed to learn was a transferable set of rules in order to function in their chosen discipline, but also prevent them from having the types of experiences that show how knowledge is genuinely made in a community. If the teaching of EAP is to be effective then it needs to build on research that analyses authentic data from a wide range of disciplines, and hence establish practices that challenge such generalised assumptions.

At the same time as recognising the differences, it is also important for EAP researchers to look for points of commonality and to establish what is universal to academic discourse within and across disciplines. This would ease the burden of preparing students for a wide range of disciplines and allow teachers to provide clear guidelines about common features of both written and spoken academic discourse. This again emphasises the need for more naturalistic studies of academic discourse because language processes need to be examined and understood in the contexts in which they occur.

The burden on EAP teachers is therefore not only to develop their students' language and study skills to facilitate their understanding of both written and spoken academic discourse, but also to help their students become able users of the code or discourse of the academic community so that they can engage in the activities of the community and enhance their career opportunities beyond their studies.

Appendix

The Transcription

Transcription conventions	
[...]	Previous or subsequent omitted talk
(.)	Short pause of less than (0.5) of a second
(2.0)	Timed pause in seconds
[bar]	Transcriber’s best hearing of indistinct talk
[?]	Indecipherable talk
((laughs))	Paralinguistic features
.hh	Marked intake of breath
hh.	Marked out breath
ar-	Cut off syllable or self-repair

Lecturer A: Instruct Sequence 1

125 A: [...] (1.0) what I want to start with is what I should have done in here item
126 number five last week (.) we didn't get round to it (.) and this was the (.)
127 conscientisation (.) process of Paolo Freire (1.0) and then also the
128 problems of observing and measuring rural poverty (6.0) sorry that's not
129 very good is it (5.0) Paolo Freire was (2.0) till he died relatively recently
130 one of the most famous educators in the third world Brazilian (2.0) um
131 (3.0) educator I think originally for primary schools (2.0) who um was
132 very keen on basic literacy (1.0) in the 1960s (.) but being a political
133 animal (.) um he was not very popular with the regime that was in power
134 then and basically he was kicked out (.) of of Brazil (2.0) but he was then
135 hired as a consultant by a number of governments around the um the
136 world (2.0) uh to attempt to improve the the literacy situation in those
137 countries (2.0) but (1.0) his ideas were not purely about teaching people to
138 read and write (1.0) he developed something which he called
139 conscientisation (2.0) which is an attempt to to make people aware of the
140 situation in which they find themselves (2.0) which is always a political
141 process of course um (.) raising awareness (1.0) w-why is it that you are
142 poor in this particular village (.) well let's discuss all the various issues
143 concerned with the nature of poverty here (.) um and the the oppression of
144 the landlords land ref- problem with land reform Brazil of course was one
145 one of the the worst countries in the world in terms of the polarisation of
146 wealth between the rich and the poor still is actually (.) but it was
147 particularly bad in the 1960s (2.0) ((coughs)) so he regarded literacy then as
148 not just literacy about reading and writing but it as it were literacy about
149 life (1.0) a whole range of life skills that people could then use to become
150 empowered (1.0) to change their own (1.0) uh situation to improve their
151 (.) their lot (2.0) and he said part of the problem that people found
152 themselves in was education because education (.) as it was in Brazil and

153 as it still is in in most developing countries (.) had been imported and
154 reproduced from the sorts of curriculum that you get in (.) in the colonial
155 powers former colonial powers (1.0) education was part of the imperialist
156 process basically (1.0) .hh um and this this actually has occurred to me
157 (1.0) um in South Asia as I'm sure it must have done with you Craig (.)
158 that the sort of education people get tends to be totally inappropriate to the
159 sorts of things they need to do which is basically grow enough rice to eat
160 (1.0) um but in India anyway the curriculum is still (1.0) in some states
161 (1.0) orientated towards a British type education (.) uh lit- uh literacy
162 in terms of of English for instance classics (.) so they'd be reading um
163 let's say Jane Eyre (*laughs*) [you know] and one knows lots of of Indian
164 friends who are incredibly well versed in English literature and can quote
165 you passages from Shakespeare and Chaucer and so forth (.) and yet know
166 less about their own literature which is really quite horrific (2.0) .hh um so
167 it's in in Freire's view anyway education is is part of oppression and what
168 you really need to do is to change that (.) that education or to free people
169 free their minds (2.0) and so he identified two (.) modes (1.0) of
170 educational curriculum (1.0) .hh um on the one hand here the banking type
171 of curriculum (1.0) um which is (2.0) basically um (2.0) uh getting as
172 many qualifications as you possibly can .hh what has been called the the
173 diploma disease (.) um (.) qualifications are basically a currency in
174 developing countries and people need to achieve as many (.) certificates as
175 they possibly can in order to get on in life (1.0) and so this is very much (.)
176 true I think the purpose of school is to gain or bank knowledge and
177 qualifications uh and knowledge is the property of the individual and
178 it's up to me (1.0) to learn to get certificates so I can compete against
179 everyone else (.) um (2.0) I remember this very very clearly as an
180 undergraduate (1.0) that people were competing against each other to the
181 extent of taking books off the shelf (1.0) um from bits of the geography (.)
182 part of the library and putting them elsewhere in the library

183 S1: yeah that's what happens now ((laughs))

184 A: still happens now ((laughs)) um I mean the ultimate selfishness (.) really

185 S1: I know people who've actually taken them out of the library and kept them

186 as well

187 A: right

188 S1: which is probably even worse ((laughs))

189 A: that's very naughty that isn't it

190 S1: um

191 A: um it's more difficult to do in this library because of the the security (.)

192 thing but you can always rip out the bar code or whatever can't you

193 S1: well I think I don't know well but but at Loughborough their journals

194 weren't alarmed so you could just walk out with them out of the library if

195 you wanted to I mean obviously people some people didn't know about it

196 they thought they were alarmed but (.) you know

197 A: what used to happen in-in the old library here was people used to throw

198 books out of the window down to their friends waiting below ((laughs))

199 .hh shows initiative I suppose but uh it's not very uh (1.0) as it were

200 community minded (1.0) um knowledge is set down in textbooks in the

201 official syllabus and it's divided up into subjects so um what somebody's

202 very sensibly called I think the poverty of disciplines (1.0) um in my view

203 anyway this is my own personal view social science (.) is an integrated

204 discipline and really I need to know as much about political science and

205 sociology and and history as I do about geography (.) and yet we are

206 divided up into these separate units and it's actually quite difficult to get

207 departments to talk to each other because they regard themselves as being

208 separate and competitive (.) and similarly in school um (.) you learn about

209 geography but you don't have time to do woodwork or (.) or learn how to

210 to plant rice or whatever it is (1.0) um the teacher hands down knowledge

211 as a gift to the student and the the teacher's emphasis is on the mastery of

212 words and set formulae so you learn things by rote and you are successful

213 if you can rem- if you can memorise these things and reproduce them in an
 214 examination (1.0) um and and problem solving is not really an issue (2.0)
 215 in that type of banking curriculum whereas Freire's idea was a problem
 216 posing curriculum (1.0) in which students and teachers participate as
 217 equals (2.0) Craig were you in that discussion (.) and Jennifer were you in
 218 that discussion we-we had in in Rural South about this (.) education [?]
 219 S1: mm
 220 A: you were and and you will have noticed that that um the students didn't
 221 really react to this (.) I mean it wasn't as if (1.0) you know there was a riot
 222 in the end or anything which um I would have liked to have stimulated
 223 you know for people to get up and shout and say this is not this is really
 224 not right (1.0) just as you did you know about the curriculum for for GID
 225 S1: *(laughs)*
 226 A: which I would encourage you know (.) if you don't like the curriculum
 227 then for goodness sake say so (1.0) but most students are completely (2.0)
 228 you know they're just not aware of that sort of thing they just take it
 229 passively (1.0) um because teacher's right in some way (.) so um there's
 230 [pro-] according to Freire knowledge is gained as a collective property and
 231 you know we we we shou-should share this and discuss it (.) as something
 232 which is is a joint thing (.) when teachers and students design and discuss
 233 the curriculum together the subject boundaries may be ignored (.) um it's
 234 much better to have an iterative sort of curriculum really (.) yes you have
 235 to have something written down in a in a brochure for the university
 236 authorities perhaps but (.) you know you should have some flexibility to
 237 allow changes from week to week and the teacher's a guide to learning
 238 and tries to relate ideas to the practical world of the student (.) in other
 239 words there's greater practice involved in all in all of this (1.0) so Freire
 240 um (.) then (1.0) I think is (1.0) is quite a (.) stimulus anyway to a to a new
 241 sort of thinking about (.) about knowledge and I would suggest to you (.)
 242 although he didn't (1.0) he wasn't aware of it but I would suggest to you

243 that GIS potentially could be part of the (.) um the problem posing type of
244 curriculum because it is a problem posing type of (.) technology (3.0) um
245 potentially it has the ability to absorb data (.) uh and analyse it in a
246 particular format which potentially could give you some answers for the
247 planning process or at least for the raising awareness about the difficulties
248 in that particular area um Robert Chambers (.) makes this point regularly
249 in his writings about his participatory appraisal that people felt that they
250 understood better their situation once they'd been to one of his (.) his
251 workshops than they had done before (.) um I was reading (1.0) within the
252 last few days something where someone was saying I couldn't sleep at
253 night after this workshop because of the um the knowledge we gained you
254 know the (.) words to the effect the greater awareness that we absorbed as
255 a result of this having shared this knowledge all amongst all the people in
256 the room (.) um so for that particular person it was not only exciting but no
257 doubt also alarming to a certain extent having realised just how (.)
258 constrained that particular village was within its social and economic and
259 political environment (2.0) so I think that that's something that we could
260 add here on the left hand side there are a number of these technologies
261 including mobile phones if you like um which could help with that
262 problem posing type of of approach (3.0) [...] um (2.0) ok but having said that

Lecturer A: Instruct Sequence 2

686 A: [...] I've rather lost my way here (5.0) yes the next point I was going to make
687 was about (4.0) the um the mapping process (2.0) damn it I forgot to bring
688 that key (.) document with me (.) there's one particularly interesting (.) um
689 (.) IIED publication I've got in my office if you want to come and see it
690 anytime (.) .hh ((coughs)) is about rapid agro ecosystem zoning (2.0) as it's
691 called rapid agro ecosystem zoning (1.0) .hh and the argument of (2.0) the
692 IDS and the IIED (1.0) is that participatory rural appraisal is perhaps at its
693 best (.) in actually mapping the resources in a village (3.0) .hh because
694 farmers (.) always have a good appreciation of the resources available to
695 them (.) .hh in terms of let's say uh productive resources like um (.) soil
696 soil fertility in particular fields for instance they can always give you
697 chapter and verse on that (1.0) enabling resources such as the water which
698 is available to irrigate a particular part of the village (1.0) and the effect
699 that has upon productivity (.) um constraining (1.0) factors such as (.) do
700 you have a particular area which is which is particularly frost prone (2.0)
701 um and other things such as (.) um difficulties with pests and diseases in
702 particular parts of the of the environment of of that village (.) and as a
703 result of that it's it's possible not just to produce these simple (.) mental
704 maps that we've we've seen but to actually build up quite a detailed um (.)
705 map which potentially anyway (1.0) um could be (1.0) i-in quite a detailed
706 and sophisticated way I think put on to a GIS (.) now Chambers in the in
707 the seminar we had a couple of weeks ago was suggesting (.) that in my
708 group anyway um was suggesting that rapid ecosystem uh agro ecosystem
709 zoning (.) actually can gain results which are more sophisticated than
710 those which you get through traditional questionnaire techniques (1.0) um
711 and he's actually found the planning process where he's been involved
712 with (.) with actually helping (.) uh local authorities to do planning of of a
713 particular um uh agricultural situations that it's given quite good results

714 (1.0) and he said um we-we do this on paper or we-we scratch it in the dirt
 715 or whatever and we really get quite (.) detailed (.) results what we were
 716 saying in that particular group was right i-if that is the case what is to stop
 717 you actually then (.) um connecting that to a GIS and it was quite clear to
 718 me that he'd never really thought about it (.) um in fact I think (.) open
 719 minded a man though he is I think he'd actually set his face against GIS (.)
 720 quite honestly (.) um the impression I got was that he thought it was a
 721 technique that could never really be properly used in his sort of research
 722 (1.0) he thought of it as being a counterproductive modernist core
 723 knowledge type uh technique but we tried to convince him [I don't know
 724 whether we were ((laughs)) success-] uh successful but there is a possibility
 725 of using GIS in a participatory way now with ra-rap-rapid ecosystem (.)
 726 agro ecosystem zoning you could use it to classify the land that you're
 727 dealing with and to zone it in a classificatory spatial way (.) to give better
 728 insights into how those resources are deployed
 729 **S1:** I suppose Harris and uh [?] sort of did it didn't they they had their good
 730 soil areas [?]
 731 **A:** in a relatively simple way they've done it haven't they yes they'd they'd
 732 shown where the local farmers had had i-identified uh fertile patches
 733 which weren't being used to their full potential and which was irritating to
 734 them because the chief was using them for running cattle or whatever it
 735 was I forget now (.) livestock (.) and so forth well it was just fenced off
 736 wasn't it
 737 **S2:** so what's the zoning
 738 **A:** so the zoning is um actually finding out the little um lo-local pe-
 739 peculiarities within the village (.) so the example I was going to bring I've
 740 damn I've forgotten it (.) um oh no did I put a slide in on it (.) was for the
 741 Hunza valley (.) in Northern (1.0) ah think I have (1.0) ah good (5.0) in
 742 Northern (.) oh dear is it India or Pakistan
 743 **S2:** Pakistan

744 A: up in the Himalaya (2.0) where you get a tremendous variation because
745 it's [?] on very steep slopes with a tremendous variation of micro climate
746 from the valley floor right up to the um the pasture next to the glacier (.)
747 and um they did this in a participatory way um basically it's regional
748 geography mi- at a micro scale identifying common characteristics within
749 a particular region which are different from those in a neighbouring region
750 and which could then be used as a basis for uh for planning for instance if
751 you want to put in a new irrigation system (.) which is the best zone to
752 start with for prioritising your scarce resources (3.0) um now that that
753 was done (1.0) simply on scraps of paper in village meetings now why
754 couldn't it be done at least as effectively and I would argue far more
755 powerfully with an interactive GIS (2.0) and because of the of the
756 mapping capabilities of GIS (3.0) um gather the data (.) through village
757 meetings (.) on a number of uh set criteria that you want to know about
758 (2.0) and then map it in the standard x y co-ordinate fashion (5.0) um
759 (2.0) and uh (2.0) I think potentially this could be quite useful in in not
760 just in (.) in um (2.0) steep mountainous sorts of areas but in a whole
761 range of different sorts of (1.0) local ecosystem situation (6.0) uh (2.0) yes
762 the the area's is called [Alikuri] and the factors they identified were water
763 this is all written down in the uh in the notes water altitude climate and
764 soils topography (.) crops and livestock natural vegetation (.) income
765 generation (.) communications land holdings (.) health (.) sharing systems
766 education customs and traditions (3.0) so the secondary data was collected
767 we're on page fourteen now the secondary data was collected and uh along
768 with farmers' perceptions and the regions were then zoned (1.0) and the
769 the characteris-characteristics for each zone (1.0) uh were collected using
770 diagramming and semi structured interviewing (5.0) so it's it can be used
771 as a basis for further research on planning (1.0) potentially I think it could
772 be quite powerful [...] (3.0) right um just coming into the final (1.0) five
773 minutes or so now

Lecturer B: Instruct Sequence 1

- 66 **B:** [...] never mind right so what I'm going to do is (.) just go through the political
67 issues in GIS (.) um which may be (.) you know uh all standard to you you
68 may've thought about it all before there may be nothing new I don't know
69 and then talk specifically about participatory GIS (.) and use the you know
70 the the uh the January workshop and the ideas that came out of that (2.0)
71 um (1.0) so um in terms of political (.) issues (1.0) uh knowledge is power
72 you know this is the whole (.) central core of the debate (.) .hh power for
73 whom (.) um Harris (.) uh and (.) Coe in ninety five write GIS empowers
74 the powerful and disenfranchises the weak (6.0) and essentially the
75 question is (.) uh knowledge is power (2.0) but for whom you've got the
76 problem of control at the centre (1.0) exploitation control the surveillant
77 society if you like versus the idea of control at the grass roots (.) whether
78 GIS can GIS can certainly give you control at the centre (.) but can it
79 instead give you control at grass roots in which case we're talking about
80 freedom empowerment equality (2.0) so two different ways of seeing GIS
81 and seeing GIS potential and (.) I certainly have seen that played out in
82 Ghana (1.0) uh there you've got the um GIS capabilities mainly focused
83 on the remote sensing applications unit (.) at the university of Ghana uh in
84 Nigong and [?] who came to talk was is the GIS person there (1.0) and that
85 unit was set up with funding from uh [DENIDA] the World Bank DFID
86 and the technical expertise is really coming from the university of
87 Copenhagen
- 88 **S1:** [.....]
- 89 **B:** yes yeah um I-I wanted you to come (.) because um I felt that in a way it
90 does (.) sort of (.) um give you a different view doesn't it o-of how people
91 in poor countries can uh use stuff and but he didn't really understand what
92 participatory GIS was about of course his idea of is GIS but with (.)
93 participation in the use of GIS from the people whereas we were talking

94 about participation in a bit of a different way (.) but um (.) I think he's
95 very much the new breed (.) of people who are emerging (.) uh right
96 across (.) Africa and uh the Far East (.) and Ghana is is an interesting case
97 of course because Ghana has got so much money from the World Bank (.)
98 uh IMF (.) and so on you know and the aid agencies it's been the focus of
99 so much (.) assistance (1.0) I don't know if you know any of the
100 background to that it was in a real mess uh and they were required to get
101 to undertake structural adjustment programmes they were the first country
102 really in Africa to undertake structural adjustment and so (.) uh the World
103 Bank put in a lot of money and it's now (.) wedded to the idea that you
104 know Ghana's got to be seen to succeed because (.) if Ghana doesn't
105 succeed nowhere else is going to succeed it's a sort of showcase for
106 structural adjustment so when things go wrong (.) as they have done in
107 Ghana they just keep pumping more and more money in (.) and that's why
108 uh and all the other agencies have followed suit so that's why this remote
109 sensing applications unit in the geography department at the university uh
110 has all this fancy equipment um and all this money spent on training and
111 constant support from (.) the university of Copenhagen (1.0) uh it's very
112 very interesting

113 **S2:** lucky Ghana

114 **B:** yeah (.) well that's right and they are I mean the thing is that they have
115 they put a lot of emphasis on education they're very keen (.) but the
116 danger is of course that if you go into all the government agencies in uh
117 Ghana places like the environmental protection agency they are all very
118 keen on GIS they all want the fancy equipment (.) um the project I was
119 involved in in Ghana initially was about running a management
120 information system and that was with Newcastle university (.) um and
121 essentially they were (.) pushing the idea of providing lots of fancy
122 equipment funded by DFID (1.0) and uh the environmental protection
123 agency were lapping this up (2.0) and it's ver- they very much want to get

124 on to the GIS the information bandwagon and you see this in all the
 125 agencies if you go to the department of wildlife for instance uh it's
 126 another one is at least another one of the more um go go ahead um (.) parts
 127 of the government ministries um again it's the same thing they are
 128 desperate to have all the equipment (.) and there's no doubt (.) it's all
 129 about they want power at the centre they want control (1.0) um they're
 130 very uh (.) keen to make sure that the equipment is there and it was quite
 131 interesting this time when I was going back and taking database um (.)
 132 database information back to communities and districts I went to see
 133 to the regional headquarters and was talking to the um the regional
 134 ministries about the work that we'd been doing so that they know what
 135 we're doing at district level (.) and there they immediately they were
 136 saying when I was talking about what we were trying to do in terms of
 137 development to have access to databases in in the district (.) headquarters
 138 they were saying uh (.) but of course we need this too it shouldn't be all
 139 down there at the districts we need this information we need the
 140 computers
 141 S1: has anyone from Ghana been persuaded to come and do our course [?]
 142 B: they wanted to somebody from uh Nigong wanted to the the problem is
 143 getting funding
 144 S1: mm
 145 B: um (.) because the (.) the British Council will not (.) fund uh (1.0) masters
 146 courses very very often and certainly in Ghana they're not keen to they
 147 want short technical courses I went I talked to the British Council actually
 148 (.) a couple of times about supporting somebody actually um the person
 149 concerned has gone off to Luton (.) they Luton offered um to pay part of
 150 his fees that they would you know whereas Durham is very s- is very slow
 151 off the ground on this and they you know it was too late by the time they
 152 appeared to think well maybe we ought to be doing something about this
 153 um (1.0) so i-it may happen um (.) I think it should I mean I think this sort

154 of course but they they it would be very useful but they want to go for the
155 straight technical (.) GIS you know let's get on with it and I mean the
156 ethics of GIS and so on they're they're much less (1.0) concerned about (.)
157 at this stage (1.0) so which is why I think it's also very important to get [?]
158 here so he's much more aware now and he does a lot of work for the
159 World Bank he's very much involved in all the World Bank projects he's
160 their GIS man in Ghana (.) so I think it's very important to get somebody
161 like that (.) aware (.) of the issues [...] (2.0) um at the January workshop

Lecturer B: Instruct Sequence 2

167 B: [...] Shepherd uh talks about that in uh (.) Ground Truths (5.0) the tendency to
168 rely on secondary data in GI- GIS is another issue of course which comes
169 in when you start to talk about participatory GIS um (.) if you want to do
170 participatory GIS (.) you really want to base uh your GIS more broadly it's
171 very very expensive (.) secondary data is cheap (.) um and if this is what's
172 happening in Ghana at the remote sensing applications unit (1.0) they're
173 saying we've got masses of data (.) secondary data let's use that uh at the
174 moment they're busy with the eighty four census data (2.0) you know this
175 they've got this information (.) why not (.) link it to GIS
176 S2: have they any idea what they want to do with it or are they just [?]
177 B: at the moment it's just getting it in you know not not what will we use it
178 for (.) are there any ethical issues (.) here just let's get it in you know let's
179 make the most of (.) whatever data we can we can get cheaply and easily
180 (3.0) so (2.0) you know the- the-there is this emphasis currently on using
181 secondary data in GIS and also I mean I think related to this there is a
182 tendency to like that because it avoids you having to do field work (1.0)
183 and this is something that I have certainly come across in Ghana (1.0) um
184 (1.0) ground truthing is something that people are not that keen (.) to do
185 and if you can get secondary data that doesn't seem to need (.) any ground
186 truthing then (.) you know they're very happy to use it um I-I-I-m can (.)
187 say a little bit about this from a project which I've actually just heard from
188 DFID that I-I've now got uh another project in Ghana which is on off road
189 communities (.) I it's linked to the um (.) the the database work but it's
190 really looking the database identified specifically the problems of p- of
191 communities settlements which are located off road (.) um I was trying to
192 get Ghanaians in the university to work on this project when I was putting
193 in the application to DFID (.) I could not get (.) a member an established
194 member of staff (.) to work on that project (1.0) because nobody wants

195 to (.) go and work in off road areas because they might have to walk there
196 (.) you know this is terrible (.) uh it takes too long they want places that
197 you can go out to by car (.) uh in a day (.) from Akra (1.0) if you've got to
198 work walk six miles (1.0) that's terrible if you've got to walk twenty miles
199 (.) that's impossible (1.0) so again (.) you know secondary data is just so
200 much easier (4.0) [...] there are uh various questions when you look at
201 participatory GIS

Lecturer C: Instruct Sequence 1

99 C: [...] actually (4.0) well um let's think um (2.0) let's do this thing logically um
100 (2.0) I said last week didn't I that (2.0) we spend far too-an awful lot of
101 time on rapid rural appraisal and participatory rural appraisal and all that
102 sort of stuff and in a sense questionnaires are more important (.) in terms
103 of how often they're done and here we are we've got one session on
104 questionnaires and it doesn't really reflect the importance of
105 questionnaires so I'm going to do that before it sort of applies here um
106 (2.0) have you considered the ethics of questionnaires (3.0)
107 S2: in what sense
108 C: well-
109 S1: you mean how they're delving into people's lives
110 C: yeah (1.0) and you know gathering information (.) and then using it (.)
111 well for example in your case in Burma I mean you were obviously by the
112 sound of it were unhappy with that (2.0) but (.) I don't know what they
113 were going to use that information for [?] but I mean information
114 [certainly] knowledge is power and all that sort of stuff I mean
115 information can be used (.) to change people's lives (2.0) so if you collect
116 information that um [?] [trying to think what] forced labour that (.) I don't
117 know they're doing less forced labour than they should and that leaks out
118 then the government might decide ok right well we'll go in and get them
119 to do it you know they're not doing enough (1.0) so (.) you know the
120 whole ethics of (2.0) how you collect information what it's used for (.) um
121 (.) how it's going to be analysed whether it's going to individual people
122 (1.0) I mean here we obviously have da-data protection act but in most

123 developing countries there's nothing like that (.) um (1.0) you'll often on
124 questionnaires I think you might put you know the house number (1.0)
125 down and maybe the name of the [who are the] households you know
126 you're gathering a lot of potentially very sensitive information (1.0) and
127 (.) you know the whole ethics I mean I think the ethics come into it doing
128 that sort of thing (1.0) haven't um tend not to be addressed people get so
129 involved in (2.0) the sort of methodology achieving your sample and all
130 that sort of stuff (.) that you know you really can't remember what
131 questions are about um (3.0) what you're doing and how the information
132 will be used and who will have access to it and that sort of thing is not
133 really (2.0) not really touched on (6.0) [...]

Lecturer C: Instruct Sequence 2

153 C: [...] I think um (.) sort of a couple of preliminary thoughts (1.0) you know f- (.)
154 the first one which I guess I touched on is asking the right question is at
155 least as important as getting the right answer that you don't get the right
156 answer unless you phrase the question in the right way (.) one aspect of
157 that is (1.0) you [?] knowing what sort of questions are relevant and
158 appropriate and that depends on who you're talking to the context you're
159 talking to them in it may link to cultural concerns it may just link to what
160 they know about I mean you don't ask (.) you know men about things that
161 women are gonna know about and vice versa if you ask (.) men about (.) I
162 don't know the collection of firewood (.) they won't probably won't have
163 a clue you need to ask women about that and you ask children they know
164 much more than men so you know you've got to (.) know (.) what context
165 to ask questions you've also got to obviously phrase it properly and it
166 sounds (.) um (2.0) a pretty banal point but even simple things like um
167 (1.0) you know what level of e-education have you got or how many
168 people are there in your household (2.0) you know that raises makes so
169 many questions about (2.0) you know what (.) is a household at what level
170 were they using the household um (2.0) does it (.) does it include for
171 example members of households who are not (.) living in (.) that
172 household at the time (.) I mean I don't know if someone went to your (.)
173 parents and said how many-well if they said how many people are in your
174 family (1.0) they'd probably include you even though you're living here if
175 they said household they would probably exclude you and say [?] brothers
176 and sisters at home or grannies and stuff but you know they'd probably
177 exclude you (2.0) now you know in Thai family and household the word
178 [?] is really the same (.) so (.) you know you have to be very careful
179 particularly when words are translated into local languages (.) about even
180 things that seem fairly obvious you know how many people are in your

181 household you get different answers you know who's included who's
 182 excluded (.) um (.) you know do you mean the (2.0) the sort of co-
 183 residential dwelling unit you know people who are living in a particular
 184 area do you include people in the compound (.) um you know most (2.0)
 185 most developing country you have a compound with maybe a (.) a mother
 186 and father and then a (.) say an adult couple (.) whose children maybe they
 187 got married or live in a house separate house in the same compound is that
 188 part of the household or is it a separate lot that all needs to be made (.) you
 189 know absolutely clear (.) so asking the right question is you know getting
 190 the words right getting the phrasing right (.) as well (.) um (2.0) on things
 191 like you know I suppose if you ever decided to ask questions on income
 192 um [?] um but you need to be very particular about (1.0) very careful
 193 about how to phrase questions and especially if it's another language
 194 and another culture
 195 S2: two two alternatives (.) um I guess would be one to to fix the questions (.)
 196 you know to get the especially if it's being translated into another
 197 language to get them to read off verbatim (1.0) the agreed (.) question [?]
 198 trust the the (.) people who are doing the questionnaire to use their own
 199 language to get the point across (1.0) I don't know which is (1.0) more
 200 reliable [to do that]
 201 C: well I suppose you can I mean if so if you're using (.) enumerators t-to do
 202 it for you um (2.0) I suppose (2.0) well if they do it in their own language
 203 (2.0) i-if the enumerator's absolutely clear about what you're trying to get
 204 at (1.0) um then that's probably ok but I mean that means that you know
 205 the training of the enumerator (.) becomes (.) extremely important (.) so
 206 that they're crystal clear about what sort of [inf-] I mean when you talk
 207 about households you're talking about you know (1.0) co-residential
 208 dwelling unit the people who are actually there at that time (.) when you're
 209 talking about (.) area of rice land or something [you know] or I mean I
 210 think in Africa it becomes hugely difficult in these households normally (.)

211 people who live out of one (.) um eat out of (.) one cooking pot (.) you
212 know that's the sort of household which may include all hands on all the
213 people who you would not obviously fit into a household um (.) so I
214 suppose your enumerator needs to be made absolutely clear I think reading
215 off I mean if the question's clear to begin with then reading off is ok (.) I
216 mean sometimes it's worth you know you write your questionnaire in
217 English you translate it into a language then you give it to someone else to
218 translate it back into English and see if you end up with the same question
219 again (.) and that's (.) the way of (.) double checking um it obviously
220 means that (.) sort of piloting your questionnaire becomes very important
221 (.) um (2.0) if you pilot a questionnaire it helps you (2.0) well the actual
222 sequence of questions is important you know um people think in a
223 particular way you know if you start off with questions like you know how
224 old are you and what's your name and what level of education you've got
225 and how many people are there in your household or are you married or
226 not [if you feel you] can ask that and then you go on to more detailed
227 questions so the actual flow (.) needs to be sensible there's no point in (.)
228 you know how old are you and then a question about you know (.) do you
229 commute to work and another question about what level of education you
230 have (.) um and that varies between cultures (.) you know what
231 questions go together and what don't (.) um (2.0) and I suppose piloting
232 also (.) picks up things which are gonna be unclear (.) but sometimes they
233 are (.) clear to the enumerator because he or she will be educated [?] local
234 people so I mean assuming that the enumerator somehow is you know
235 local [?] is not necessarily true (.) it'll pick up things that are culturally
236 sensitive (.) and things that really can't be asked (1.0) I remember once I
237 wanted to ask about um (3.0) contraceptive use (.) and you know I thought
238 that would be a sensitive issue and I wasn't quite sure how to go about it
239 and as it proved to be not an is-sensitive thing at all people were quite
240 happy to talk about it (.) um men in front of the women women in front of

241 men [?] not something people have a problem with [?] that you know they
242 use contraception or not um (.) but anyway I suppose piloting gives you (.)
243 an opportunity to do that to work out what's sensitive um and (.) doing a
244 pilot can be critical [...]

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